SEEDS OF EXCHANGE: COLLECTING FOR RUSSIA'S APOTHECARY AND BOTANICAL GARDENS IN THE SEVENTEENTH AND EIGHTEENTH CENTURIES

BY

RACHEL KOROLOFF

DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in History
in the Graduate College of the
University of Illinois at Urbana-Champaign, 2014

Urbana, Illinois

Doctoral Committee:

Associate Professor John W. Randolph, Chair
Professor Mark D. Steinberg
Professor Richard W. Burkhardt
Associate Professor Kelly O'Neill

Abstract

This dissertation follows the collection and cultivation of plants in the Russian Empire for medicinal and botanical purposes from the beginning of the seventeenth to the end of the eighteenth centuries. It focuses on the itineraries of collection and the spaces of cultivation established by herbalists, doctors, and naturalists in the employ of the Apothecary (Medical) Chancellery and the St. Petersburg Academy of Sciences. In doing so it investigates how methods of botanical collection, including specific itineraries, influenced the creation spaces of botanical cultivation, including gardens, collections of correspondence and regional *Floras*. This juxtaposition and analysis of the mutual influence between routes and gardens ultimately attempts to explore how mobility and space intersected with the production of natural knowledge in the early modern Russian context.

The first chapter of this dissertation, "*Travniki* and the Chancellery," details the seventeenth-century network of itinerant herbalists [*travniki*] who collected plants, flowers, roots and seeds seasonally for the Apothecary Chancellery's pharmacies and gardens. The travels of the Chancellery's *travniki* are contrasted with the trade in *materia medica*, which included medicinal plants as well as chemical medicines, found in the herb stalls [*zeleinye riady*] of Moscow's trading quarters. The specter of witchcraft and the role of Chancellery doctors in witchcraft trials concludes the chapter and is used to underscore the perceived threat and power of plants as they were transported from the countryside into the city.

The second chapter, "Via the Volga," then follows the Apothecary Chancellery into the eighteenth century, spanning its reorganization as the Medical Chancellery and detailing the first botanical and medical expeditions of Chancellery doctors down the Don and Volga Rivers. Chancellery expeditions clearly had a strong southern orientation throughout the century in no

small part due to the Chancellery's growing relationship with the Russian military. The existence of a broadly shared botanical imaginary which saw the eastern edges of the Ottoman Empire and the Caucasus as the origin of post-Noachian global plant and animal diversity also fueled the Chancellery's collecting activities there. These itineraries led to collections in Moscow, St. Petersburg and Astrakhan that allowed the Russian Empire to advertise more broadly its own unique access to the botanical wealth and thus the storied landscape at the edges of the Caspian Sea, the Caucasus and the surrounding steppe.

In the third chapter, "Translatio Botanicae," the relationship between the city of St. Petersburg, the St. Petersburg Academy of Sciences (established in 1724) and the idea of Siberia as a site of scientific investigation are presented and explored as a powerful complex of interconnected ideas and images produced by a growing empire desirous of entering the Republic of Letters. Just as the Chancellery doctors travelled south, naturalists from the Academy of Sciences travelled east into Siberia as far as Kamchatka and the Pacific Ocean. These itineraries, the gardens they produced, and the scientific claims they were then used to substantiate show how the scientific image of Siberia was constructed in combination with the establishment of the city of St. Petersburg as the new imperial capital and cosmopolitan city of science.

The fourth and final chapter, "Collecting Europe," follows the mid-eighteenth century travels of Russian students (and one in particular) who were dispatched to collect botanical specimens in the gardens of Europe. It highlights how certain Russian travelers sought to treat Europe as a botanical borderland to be collected, organized, and displayed back in Russia. Rather than reinforcing the imbalance of a "center-periphery" relationship between Russian naturalists and their European counterparts, this chapter focuses on the subtle and dynamic ways in which

Russian students and collectors met, engaged with and benefited from the European botanical community.

This dissertation therefore traces the emergence of a widely-recognized Russian botanical community by the end of the eighteenth century. It details the intersection of three broad but intimately connected processes: the creation of itineraries of collection, the establishment of spaces of cultivation and the production of botanical knowledge, over the course of the seventeenth and eighteenth centuries. The larger role played by Russian imperial policy infiltrated the emergence of this scientific community at every level, but none more so than in the ways in which herbalists, doctors and naturalists chose to travel through the surrounding landscape. This process of actively turning otherwise unassuming products of nature into bona fide botanical objects for circulation and exchange in the global scientific community was as influenced by its Russian imperial context as it as by the plants in which it dealt.

Acknowledgements

A dissertation is a document that is a long time in coming and it inevitably incurs many debts in the process. While these debts can never be fully repaid, they can be acknowledged. I would like begin by thanking those who were a part of this dissertation's beginning: my advisers and colleagues in the program in the History of Science at Oregon State University. Professors Paul Farber, Mary Jo and Robert Nye, Ron Doel, William Husband, Lisa Sarasohn and Ben Mutschler all gave to me a firm scholarly foundation and offered thoughtful, often challenging advice that has served me professionally and personally ever since. My fellow students at Oregon State, Katie Zimmerman, Leandra Swanner, Erica Jensen-Shiflet and Melinda Gormley continue to form the core of my History of Science community and have been unstinting in sharing their energy and their intellect over the years. My great thanks, as well, to the Columbia History of Science Group at Friday Harbor, Washington and the excellent historians and philosophers of science and technology who every year make that meeting one of the most stimulating and hilarious anyone could hope to find.

The seed of this dissertation was generated at Oregon State, but it was lovingly cultivated at the University of Illinois at Urbana-Champaign. I thank the faculty there, especially Professor Diane Koenker, for irrevocably broadening my inquiry and sharpening my analysis while providing me and my research all the support necessary to visit archives and begin writing. The Russian, East European, Eurasian Center on the campus of the University of Illinois, along with its Summer Research Lab and its annual Fisher Forum have been among the greatest resources on campus for me as a developing scholar in Russian history. The expertise and generous aid offered by the staff at the Slavic, East European and Eurasian Collection in the Main Library on

campus contributed immensely to the preparation for and writing of this dissertation. I look forward to many more summers in their utterly pleasant reading room. My fellow graduate students at the University of Illinois, Patryk Reid, Stephanie Seawell, David Greenstein, Zack Poppel, Heidi Dodson, Jay Jordan and T. J. Tallie among many many others have made my years in Champaign a not only intellectually fruitful but truly some of the best in my life so far. I thank you for the Lynn St. barbeques most of all.

There have been far too many archivists and librarians that have contributed their time and their knowledge of collections and institutional holdings to this dissertation to count. The incredible staff at the Archives of the Academy of Sciences, St. Petersburg (SPF ARAN), the St. Petersburg Historical Institute (II SPB) and the State Archives of Ancient Acts (RGADA) in Moscow all kindly show me how to navigate the often confusing seventeenth and eighteenth collections at their archives while helping me to narrow down my broad interests by introducing me to documents and collections I would never would have found other wise. Similarly, the efforts of Eva Nyström at the Linnaean Correspondence Online and the librarians of the Linnaean Society in London went well above the call of duty in helping me to locate rare Linnaean manuscripts and letters.

I am also deeply grateful to the institutional home that was made for me at European University, St. Petersburg by Professors Aleksandra Bekasova and Julia Lajus during my year of research from 2011 to 2012. I am also indebted to professor Andrei Kirilovich Sytin, botanist and historian at the Russian Academy of Sciences Komarov Botanical Institute in St. Petersburg, who acted as my scientific advisor and has long been my inspiration in writing about eighteenth-century Russian botany. I cannot pretend to equal his botanical expertise or his archival skill, but I hope I have begun to attain his level of passion and diligence in the subject.

I have also been lucky to receive writing support for this dissertation from Dumbarton Oaks Research Library and Collections in Washington D.C., where I spent a year in residence as a junior fellow in Garden and Landscape Studies. My colleagues there, especially my director of study, Professor John Beardsley, and my informal adviser on all matters, Anatole Tchikine, were incredibly generous resources to me and my work over the course of the year. No one could ask for a more beautiful setting in which to sit and think about and write on the subjects of gardens, but it was the remarkable community of fellows that assembled over the course of the 2013-2014 academic year who made my time there so remarkably stimulating. The assembled fellows gave their time and put their sharp and varied intellects to strengthening my work not once but three times over the year, and I would remiss if I did not name Alejandra Rojas Silva and Saskia Dirkse as deserving special thanks for keeping me focused and confident in the face of so many academic acrobats.

Of course, my deepest gratitude and most heartfelt thanks goes to the members of my committee, Professors Mark D. Steinberg, Richard W. Burkhardt and Kelly O'Neill, who have taken far more time with me and my project than I could ever rightfully ask for and who have improved it almost beyond the point of recognition. It is my greatest challenge to become their colleague someday and to try and pay forward however I can their investment in me. Extra special thanks goes to Professor John W. Randolph, my adviser and advocate, without whom this dissertation almost certainly would not have existed. I have had an embarrassment of great advisers over the course of my graduate training, but Professor Randolph continues to provide the model for me of a great scholar, who is as intellectually demanding of his students and he is unflagging in his own support of them. Developing this work in collaboration with these four

scholars has been the most rewarding project I have ever undertaken and I can only hope that it had only just begun.

Last, but certainly not least, I would like to thank my family, who have been an unyielding source of support, love and encouragement throughout my research and writing. Mary Hobson, Albert Koroloff and Nora Hobson, there is no doing anything without knowing you are behind me. To Gregory Afinogenov and Sophie, you are in the fabric of this dissertation as you are in my life and both are clearly the better for it. If I were being truly honest in my citations, Greg, your name would be on every other page of this dissertation, but for the sake of brevity I thank you here, from the bottom of my heart.

I dedicate this work to my mother and my father, Nancy Margaret Koroloff and John Michael Koroloff. This is as much your dissertation as it is mine. You never waivered, even when I did, and that has always made the difference between moving forward and falling behind. It goes without saying that any errors are truly my own and do not reflect the remarkable degree to which I have been assisted, inspired, and carried forth by all the people named here and the many others who have gone unmentioned. Thank you everyone.

Note on Transliteration

I have used the Library of Congress system of transliteration, omitting soft signs, diacritical marks in the text but preserving them in the apparatus. Extraneous hard signs, which are common to early modern spellings, have also been omitted. Proper names not otherwise commonly known, including “Petr Tolstoi” and “Vasil’evskii Island,” I have chosen to transliterate directly from their Russian forms. More common names however, like Astrakhan and St. Petersburg, I have continued to use the familiar English spelling.

Table of Contents

Introduction

At the turn of the eighteenth century as the Russian Empire worked to consolidate the expansive territory that had come under its sovereignty over the past century and a half, new scientific communities were taking root in a handful of Russian cities. The remarkable territorial growth of the Russian Empire starting in the sixteenth century has often been understood as an essential backdrop to the later eighteenth century development of Russia's scientific community, providing Russia the raw material for scientific investigation with which to enter the wider Republic of Letters.[1] Conversely, the growth of scientific institutions in Russia are often depicted as facilitating the broader political and cultural ambitions of an expansive and expanding empire.[2] This dissertation aims to investigate the point at which these two processes intersected. It does so by focusing specifically on the scientific practice of botany. Through the study of botanical collection and cultivation this dissertation aims to tease apart Russian imperial and scientific practice in order to get at the ways in which mobility, space and knowledge production interacted in order to help establish both empire and science upon the Russian landscape.

Relying heavily on imperial infrastructures including roads, military networks and merchant trade routes, botanical and medicinal plant collection in early modern Russia both borrowed from and contributed to the processes of imperial consolidation that had long characterized Russian imperial practice.[3] The felt need to physically connect the far-flung ends

[1] Alexander Vucinich, *Science in Russian Culture: A History to 1860* (London: Peter Owen, 1965); E. I. Kolchinskii, A. K. Sytin, and G. I. Smagina, eds., *Estestvennaia istoriia v Rossii* (St. Petersburg: Nestor-Istoriia, 2004).

[2] Michael D. Gordin, "The Importation of Being Earnest: The Early St. Petersburg Academy of Sciences," *Isis* 91 (2000), 1-31.

[3] Andreas Kappeler, *The Russian Empire: a Multiethnic History* (Harlow: Longman, 2001). Particularly in Chapter 2 of this work, "The Gathering of the Lands of the Golden Horde," Kappeler links the fifteenth- and sixteenth-century rise of Muscovy with seventeenth- and eighteenth-century conquest of former khanates of Kazan, Astrakhan and Sibir.

of Russian Empire inspired the creation of military outposts, defensive lines and new towns, as well as led to the dispatch of geodetic and scientific expeditions at the start of the eighteenth century. The travels of doctors and naturalists, as well as of itinerant herbalists and students, connected the countryside to the city, establishing a network of garden spaces facilitating even broader collection. People travelled, but so too did plants, seeds and other botanical objects, taking advantage of roads and networks already in existence. Plant mobility therefore, like the mobility of people and of texts, will be investigated here under the rubrics of collection and cultivation in order to understand precisely how this imperial state worked with this particular scientific practice to achieve a host of ambitious ends.

In this study of botanical collection and cultivation in the early modern Russian Empire, at the intersection of these processes of imperial and scientific practice, lies the deeply imbricated relationship between landscape, movement through it and knowledge of the natural world. This triumvirate of concepts, space, mobility and the production of knowledge, unites imperial and scientific practices in a number of ways. In the context of scientific practice, it is clear that where botanical gardens and botanical expeditions intersected they produced new botanical knowledge in the form of plant description, classification and deeper understanding of plant cultivation.[4] Without collecting expeditions, botanical gardens would be hard pressed to produce much in the way of botanical description, while the absence of gardens would make sustained observation, not to mention the production of seeds for circulation and exchange, impossible. In the Russian imperial context, the ability to move freely through the landscape was a powerful indicator of control over it, while the establishment of new towns, ports and other outposts gave travel direction and worked in concert with increasing state mobility and

[4] See for instance Daniela Bleichmar, *Visible Empire: Botanical Expeditions and Visual Culture in the Hispanic Enlightenment* (Chicago: University of Chicago Press, 2012); Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007).

decreasing individual mobility to unify the immense territory and the diverse peoples under Russian sovereignty.[5] In Russia as elsewhere the advent of scientific expeditions and the creation of botanical gardens not only helped to foster a fundamentally new approach to the natural world but also a new conception of the imperial landscape in which it was located.

This dissertation will show how the consolidation of newly acquired territory and newly subject peoples under the Russian crown was related specifically to the growth of networks of botanical collection and cultivation. The central problem it attempts to address is how Russian imperial forms influenced the adoption and development of botanical practice from the beginning of the seventeenth to the end of the eighteenth centuries. The reverse of this question, how botanical practice may have influenced Russian imperial forms is also of interest, but more difficult to follow and will only be gestured at in this work. Evidence for the close cooperation of botanical practice with the methods and techniques of Russian imperial consolidation can be found in how Russian botanists moved through space, where they created their gardens, and what kinds of new botanical knowledge in the end they produced.

Exploring the intersection of science and empire is particularly crucial in the Russian imperial context. To begin with, it provides a relatively rare juxtaposition of concepts that poses challenging questions about the role of a decidedly intellectual practice, scientific inquiry in the expression of Russian imperial power.[6] In studies that focus on the turn of the eighteenth century

[5] Brian J. Boeck, *Imperial Boundaries: Cossack Communities and Empire-Building in the Age of Peter the Great* (Cambridge: Cambridge University Press, 2009). While Boeck's work is more interested in the restriction of mobility and the creation of boundaries, it shows throughout the Russian Empire's general interest in both controlling and promoting mobility in a variety of ways.

[6] James Cracraft, *The Petrine Revolution in Russian Culture* (Cambridge: Belknap, 2004). Chapter 5, "Science and Literature," in Cracraft's work gives the most thorough and recent treatment in English of the intersections of imperial reform and scientific practice under Peter the Great. For science and empire in the Russian context more generally, see also Loren R. Graham, *Science in the Soviet Union: a short history* (Cambridge: Cambridge University Press, 1993); Ryan Tucker Jones, *Empire of Extinction: Russians and the North Pacific's Strange Beasts of the Sea, 1741-1867* (Oxford: Oxford University Press, 2014); Nikolai Krementsov, *Stalinist Science* (Princeton: Princeton University Press, 1997).

and on the reforms of Peter I, definitions of Russian empire have more often been tied to changing forms of governance, emerging notions of territoriality, and rapidly developing social structures.[7] Adding intellectual endeavor and the development of new approaches to nature to the definition of Russian imperial practice allows for the introduction of new spaces, new actors, and new lights in which that practice can be seen to occur. The inclusion of scientific endeavor to the narrative of early modern Russian imperial practice, for instance, effectively decenters the notion of where imperial practice is thought to take place, emphasizing not just the centers and edges of empire (which are familiar to empire studies from its beginnings) but crucially the long stretches of travel between them. The focus on botany, medicine, gardens and routes of collection here, for example, has brought to the fore the role of Russia's southern periphery and of the city of Astrakhan specifically in consolidating itineraries of botanical travel through military networks. Astrakhan is usually considered a secondary imperial conquest after the more significant and slightly earlier seizure of the city of Kazan.[8] However, when analyzed in terms of garden creation and plant movement Astrakhan immediately follows Moscow and St. Petersburg in terms of connectedness and scientific significance.

A focus on scientific endeavor in imperial practice also widens the lens to so to speak and includes a range of Russian imperial subjects, those with professional profiles that stress travel, cultural encounter and knowledge acquisition, into the group of individuals who enact and therefore shape imperial practice. Introducing the often unnamed pharmacists and doctors of the Medical Chancellery who ferried medicine to military outposts while bringing back local

[7] Jane Burbank, Mark von Hagen, and Anatolyi Remnev, eds., *Russian Empire: Space, People, Power, 1700-1930* (Bloomington: Indiana University Press, 2007).

[8] Matthew P. Romaniello, *The Elusive Empire: Kazan and the Creation of Russian, 1552-1671* (Madison: University of Wisconsin Press, 2012).

knowledge and expertise to the center clearly points to decidedly medical methods by which the Russian Empire worked to consolidate its territories.

Likewise, to investigate how scientific and imperial practice interacted, borrowed forms, and influenced one another, as this dissertation attempts to do, is to historicize scientific endeavor while allowing for the real existence of the natural world in relation to these practices. It suggests, in the end, that scientific endeavor was itself an expression of imperial power, a realm in which this power was reliably generated, and an essential not an accidental element to eighteenth-century Russia's numerous reforms. Putting the focus on landscape and the natural world helps to connect the importation of European scientific practice with Russian cultural traditions surrounding nature.

This dissertation illustrates how ways of moving through landscape combined with ways of organizing space to generate new forms of botanical knowledge key to the early modern Russian Empire. The most basic question that it tries to answer is how were botanical gardens and itineraries of botanical collection organized in the Russian Empire? Answering this question generates others, including where did botanists, naturalists, students and others choose to travel, or more accurately, where were they sent? Because this dissertation aims to recreate the network of botanical and medical gardens in the early Russian Empire, where plant collectors went is as important as how and why. Each chapter, therefore, will be primarily concerned with tracing routes of plant collection, describing spaces of cultivation, and then relating these processes to specific forms of knowledge production. The key terms in this investigation, terms which I use rather syncretically to combine a range of ideas, arguments, and literatures are first and foremost "collection" and "cultivation."

"Collection" as I use it here refers to a range of physical acts that are required when travelling through space and amassing large quantities of objects from nature. Under the rubric of collection the individual chapters of this dissertation focus on what people chose to collect, the routes along which they collected and the methods they used in order to move their objects through space. Mine is clearly not the first such attempt to understand scientific collection in this multifaceted way, for instance some have seen it as essentially concerned with the idea of creating a representative microcosm of the natural world.[9] Others note the acts of collection, observation and description served as an important avenue for seeing and studying the divine in natural creation.[10] Still others have shown it to have been a method for representing the political body in the natural assemblage.[11] The collections concentrated in St. Petersburg have been given a considered analysis by several historians who see in Peter I's Kunstkamera a familiar European cabinet of curiosities, while in the collections of D. G. Messerschmidt, a marked adaptability to the hazards of collecting in the first place.[12] In a related vein, an international group of historians has highlighted the remarkable work of collection preservation, that is the extensive drawing and painting the Kunstkamera's various objects, that formed a collection in itself.[13] One of the insights provided by studies such as these is the suggestion that how collectors chose to move their privileged objects through space provides a great deal of information about how these

[9] Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994).

[10]Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967).

[11] Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006).

[12] Oleg Yakovlevich Neverov, "'His Majesty's Cabinet' and Peter I's *Kunstkamer*," in *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe,* eds. Oliver Impey and Arthur MacGregor (Oxford, Clarendon Press, 1985), 54-61; Anke te Heesen, "Boxes in Nature," *Studies in History and Philosophy of Science* 31A (2000), 381-403.

[13] Renee E. Kistemaker et al., *The Paper Museum of the Academy of Sciences in St Petersburg c. 1725-1760: Introduction and Interpretation* (Amsterdam: Royal Netherlands Academy of Arts and Sciences, 2005).

collectors interacted with their immediate surroundings. Though oftentimes treated as the neutral scaffolding upon which scientific knowledge was built, modes of travel including horseback, letter and packet, affected not just ultimate travel time, but reception of those scientific objects as well.[14]

By using the term "cultivation" this work tries to invoke all the ways in which specimens from nature were pinned down and located in space. This includes the procedures by which they helped to grow in gardens, as well as how once in gardens they were organized and displayed for others.[15] My work expands upon the notion of gardens as spaces of cultivation by including a wider array of such spaces. The market stalls of Muscovy, for instance, appear as spaces of the cultivation of a certain kind of knowledge about nature based largely on plants. I include textual spaces as well, dwelling at length on published and manuscript *floras* as well as collected correspondence. This treatment of "cultivation" runs the gamut from geographical to textual locations and has as much to do with systems of citation as it does with seeds and soil.

The unifying factor however is the intentional creation over time of the botanical object. In the edited volume *Biographies of Scientific Objects*, Bruno Latour suggests in a concluding chapter that "for science, *and for science only*, we forget the local, material, and practical networks that accompany artifacts through the whole duration of their lives."[16] Latour and his fellow contributors throughout their volume trace the ways in which scientific objects are constructed through techniques of description, quantification and circulation. Recognizing scientific objects as objects that have to be made scientific allows the historian to remember,

[14] Marie-Noelle Bourguet, Christian Licoppe and H. Otto Sibum, eds., *Instruments, Travel and Science: Itineraries of precision from the seventeenth to the twentieth century* (London: Routledge, 2002).

[15] Elizabeth Hyde, *Cultivated Power: flowers, culture, and politics in the reign of Louis XIV* (Philadelphia: University of Pennsylvania Press, 2005); Nuala C. Johnson, *Nature Displaced, Nature Displayed: Order and Beauty in Botanical Gardens* (London: I. B. Tauris, 2011).

[16] Bruno Latour, "On the Partial Existence of Existing and Nonexisting Objects," in *Biographies of Scientific Objects,* ed. Lorraine Daston, 247-269 (Chicago: University of Chicago Press, 2000), 250.

investigate and include those local, material, and practical networks. That this can and should be done for botanical objects, for seeds, seedlings, herbaria leaves and other artifacts, is well established.[17] In this way gardens alone are not sufficient as sites of cultivation, but require other techniques of description and depiction, reproduction and circulation, in the course of creating the recognizable botanical object. In focusing on Russia's botanical and apothecary gardens as spaces where objects (plants) were made to be botanical, this dissertation takes advantage of Latour's implicit call to remember the "local, material and practical networks" that accompanied them on their journey.

In addition to these key terms of 'collection' and 'cultivation,' which have evolved over the course of my research and are heavily influenced by the contents of my own documents, there are several conceptual categories on which I base many of my interpretations. These conceptual categories require some explanation and scholarly context in order to serve as key interpretive nodes throughout the dissertation. Throughout this work I consistently engage with the core concepts of "empire," "space" and "the production of knowledge," each of which comes with extensive debates and voluminous literatures attached to them which have shaped both my understanding and my use of them.

"Space" has recently become an increasingly useful concept in Russian history. As the editors of the volume *Space, Place, and Power in Modern Russia* have argued the standard treatments of space offered by earlier historians often share certain assumptions about both the tangibility and the neutral character of space in history. Most presuppose it to be, they write, "an objective, real-existing constellation of material conditions … located entirely beyond the realm

[17] Ursula Klein, "Shifting ontologies, changing classifications: plant materials from 1700 to 1830," *Studies in History and Philosophy of Science* 36 (2005), 261-329.

of social determination."[18] Space as setting, scene or background is, however, an unsatisfying approach for many more recent historians, who are "attentive to spatial phenomena such as borders and frontiers, population distributions and migrations, and the formation and re-formation of urban and rural landscapes."[19] As the editors of *Space, Place, and Power* go on to explain, and as this dissertation fundamentally assumes, space far from being merely a geographically bounded portion of the globe, is both culturally and socially determined and shaped by movement through it. Based on the work of historical geographers like David Harvey and Denis Cosgrove, as well as the French historian Henri Lefebvre, spatial approaches to historical problems have come to offer new ways of understanding landscape as more of a historical actor than historical scene, contributing to and changing as a result of cultural developments.[20]

"The production of knowledge" is another concept used throughout this dissertation that issues from a broad literature but carries with it a relatively narrow meaning in this dissertation. In general by knowledge production I mean the methods, practices and habits necessary for asserting and defending truth claims about the natural world. This is a definition that comes out of the literature of the history of science as it has been influenced by the work of Michel Foucault.[21] Within that historiographically limited perspective, previous understandings of 'natural knowledge' were based on a model of 'scientific discovery,' where the immutable laws

[18] Mark Bassin, Christopher Ely, and Melissa Stockdale, eds., *Space, Place, and Power in Modern Russia: Essays in the New Spatial History* (DeKalb: Northern Illinois University Press, 2010), 6-7.

[19] Nick Baron, "New Spatial Histories of Twentieth-Century Russia and the Soviet Union: Surveying the Landscape," *Jahrbücher für Geschichte Osteuropas* 55 (2007), 377.

[20] Denis Cosgrove and Stephen Daniels, eds., *The Iconography of Landscape: Essays on the symbolic representations, designs and use of past environments* (Cambridge: Cambridge University Press, 1988); David Harvey, *David Harvey: a critical reader* (Malden, MA: Blackwell, 2006); Henri Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991).

[21] Michel Foucault, *The Order of Things. An Archaeology of the Human Sciences* (New York: Vintage Books, 1970).

of nature were said to be uncovered through rational, scientific experimentation, not constructed by social and cultural processes. With arguments favoring the social and cultural construction of scientific knowledge have come studies on the modes of that production, offering closer examinations of just how social and cultural forces came to bear on the creation and articulation of scientific knowledge.[22] This dissertation certainly falls within the 'social constructivist' camp in the history of science, focusing on the production of botanical knowledge as it occurred simultaneously while in motion across the landscape and in the space of the garden. It stops short, however, of the more radical forms of constructivism, preferring to remain mute on whether 'nature' itself is a construction.[23]

The final, and possibly the most difficult conceptual category dealt with here is that of "empire." Empire studies form a solid block of scholarly endeavor in Russian history. The literature on "empire" has proposed, engaged in, and even at times resolved, major debates in the field.[24] For my purposes, 'empire' as it is used here, refers to the sum of state, religious and cultural processes that were engaged in order to unite broad swaths of territory and diverse peoples under the reign of the Russian tsar. My invocations of 'imperial processes' and 'imperial landscape' are based on a rather straight forward assessment of the cultural and political context in which the events of my dissertation take place. "Empire" is also invoked to indicate a connection of local processes to larger, regional and state processes. Such that, while buying rhubarb from a local Tatar, for instance, may not have been an imperial act, the system of

---

[22] Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Cambridge: Cambridge University Press, 1998); Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1994).

[23] For me, the touchstone essay in thinking about the distance between the natural world and the naturalist and the cultural construction of the idea of 'nature' is William Cronon's essay, "The Trouble with Wilderness; or, Getting back to the Wrong Nature," in *Uncommon Ground: Toward Reinventing Nature,* ed. William Cronon, 69-90 (New York: W. W. Norton & Co., 1995).

[24] Mark R. Beissinger, "The Persistence of Empire in Eurasia," *AAASS NewsNet* 48 (2008), 1-8.

rhubarb collection, the state monopoly on its trade and the restriction against Russian imperial subjects (but not Tatars from certain groups) from trading in it, all are decidedly imperial processes.[25] And thus, the lens of the imperial calls forth the systems and practices that make something as simple as buying a useful and well known herb a element in a broadly imperial chain of events.

One of the more contested ways in which I use the term 'empire' however is in applying it to seventeenth-century Muscovite state. In this case as in many others, I take my cues from Valerie Kivelson who has written extensively about Muscovy's attempt to articulate "a sense of the tsardom's unique location [in the world] and imperial ambitions." That Muscovy saw itself as an empire, uniquely located between other empires, suggests to me as it does to Kivelson the powerful role played by landscape in the definition of Muscovite and later Russian imperial state. Moreover, Kivelson's work on Muscovite mapping practices shows that "Muscovite cosmographers and geographers generally assigned to their realm … a connective [position]: the tsardom lay proudly between points on the globe; it linked vastly different lands and peoples; and it contained within its purview a heterogeneous assortment of peoples, faiths, tongues and cultures."[26] The validating influence of other empires here is key. While Muscovite officials may not have been thinking about the adoption of 'imperial' techniques of governance or state organization, they did see their own polity on a level with Ottoman and Persian Empires to the south, as well as European empires with the west.

An important step therefore in re-conceptualizing the strategies of early Russian Empire has been a thorough reassessment of the role of the Ottoman and Persian Empires in Russian

[25] Clifford M. Foust, *Rhubarb: The Wondrous Drug* (Princeton: Princeton University Press, 1992).

[26] Valerie A. Kivelson, "'Between All Parts of the Universe': Russian Cosmographies and Imperial Strategies in Early Modern Siberia and Ukraine," *Imago Mundi* 60 (2008), 166.

history.[27] Armenian, Persian, and Indian traders coming into Russia through the port of Astrakhan, and Ottoman merchants working through Azov, were clearly important to Russian imperial practice by helping to cement diplomatic protocol and by encouraging cross-cultural encounter along the extensive trade networks that they helped to build within the Russian Empire.[28] Because the dispatch of botanical expeditions, the creation and supply of botanical gardens, and the wider scientific profile of the Russian botanical community relied so heavily on access to these networks and these other empires, the story of cultivation, collection, and knowledge production is an imperial one if for no other reason than it was structured upon and buoyed by imperial networks of trade and expansion.

On a smaller scale, asserting the nature of botanical practice and the appearance of botanical gardens in general in the seventeenth and eighteenth centuries as essentially imperial practices is well-reasoned throughout the literature.[29] In the Russian Empire as well scientific expedition and garden creation have been seen as fundamentally imperial processes, relying on the expansion of the state and the colonization of new lands while supporting that expansion with scientific validation and offering real, palliative aid to military regiments. Andreas Schönle's analysis of late eighteenth-century landscape design and Catherinian imperial politics

[27] Dominic Lieven, *Empire: The Russian Empire and Its Rivals* (New Haven: Yale University Press, 2000).

[28] Surrendra Gopal, *Indians in Russia in the Seventeenth and Eighteenth Centuries* (Calcutta: Naya Prokash, 1988); Idem, "Marwari Barayev: An Indian Trader in Russia in the Eighteenth Century," in *The Indian Trade at the Asian Frontier*, ed. S. Jeyaseela Setphen, 231-239 (New Delhi: Gyan Publishing House, 2008).

[29] Lucile Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New Haven: Yale University Press, 2002); David Philip Miller and Peter Hanns Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature* (Cambridge: Cambridge University Press, 1996); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic* (Cambridge: Harvard University Press, 2009).

corroborates the claims of historians in numerous other national and chronological frameworks who find imperial strategy at every level of garden creation and design.[30]

This dissertation is based on both archival as well as published primary source documents. The bulk of the archival research was done at the St. Petersburg branch of the Archives of the Russian Academy of Sciences (SPF ARAN), where I used several *fondy*, including the *fond* 3, *opis* 1: "Chancellery of the Academy of Sciences (1725-1766)," *fond* 3, *opis* 14, "Botanical Garden," and *fond* 21, *opis 1* the so-called "Müller files." Much of *razriad* I, *opisi* 14, 15, and 19 containing the manuscript works of Amman, Gmelin, and Siegesbeck and other Academy naturalists were either lost or under restoration, however I was able to access several mid-century manuscript catalogues describing the Academy's botanical garden and surrounding areas. Extensive scientific correspondence was located through out the Academy archives and therefore was not concentrated in any one or any series of *fondy,* but was made accessible through a card catalogue of all Academy correspondence located in the reading room of the Archives.

I used several other institutions while in St. Petersburg, including the archives of the St. Petersburg Institute of History (SPB II), where I worked primarily with the Likhachev collections of manuscript books. This collection, specifically *kollektsia* 115 and *kollektsia* 238, *opis* 1 contained a number of very early works, including several manuscript herbals, medical texts, cosmologies, and books on natural philosophy, as well as a manuscript copy of the journeys of Sheremetev and Tolstoi (see chapter four). I also consulted a number of rare botanical publications, many of which were published by the Academy of Sciences and are located nowhere outside of Russia, while working in the Russian National Library (RNB) and the Library of the Academy of Sciences (BAN) in St. Petersburg.

[30] Andreas Schönle, *The Ruler in the Garden: politics and landscape design in Imperial Russia* (Oxford: Peter Land, 2007). See also Hyde, *Cultivated Power* for the vast literature on French imperial strategy as expressed through gardens.

In Moscow I conducted research exclusively in the Russian State Archives of Ancient Acts (RGADA), where I focused primarily on *fond* 143, *opisi* 1, 2, and 3, the "Apothecary Chancellery" archives and *fond* 346, *opis* 1, part 1, and *opis* 2, the "Medical Chancellery" archives. The year 1737 is particularly well represented in my archive notes in part because making up for a fire earlier that year many Chancellery documents actually summarize earlier documents saved in St. Petersburg or elsewhere in order to re-establish the Chancellery's archives. *Fond* 27, *opis* 1, "Secret Matters" [*Tainykh del*] contained several important maps and illustrations of the Apothecary Garden in Moscow (see figure 3).

Some research was conducted at the Linnaean Society in London (LS MSS), which was aided immeasurably by the online project, *The Linnaean Correspondence* (http://linaeus.c18.net). This collection of all the extant Linnaean correspondence, along with many translations and references to rare or little known publications in the Linnaean literature is a remarkable resource and informed chapters two, thee, and four significantly. Another online collection of manuscripts, the Waller Manuscript Collections at the University of Uppsala (http://cerl.epc.ub.uu.se/) provided me with essential correspondence penned by the directors of Moscow's apothecary garden. While the europeana.eu online portal connected me with a number of digitized rare publications from various libraries and universities across Europe.

I have also used a number of archival document collections that were published in Russia starting at the end of the nineteenth century. Along with the 42-volume collection of Russian laws, the *Polnoe sobranie zakonov* (PSZ) I have relied heavily on the documents transcribed and published in the series *Akty Istoricheskie* (AI) and *Dopolneniie k aktam istoricheskim* (DAI).[31]

[31] *Akty Istoricheskie, sobrannye i izdannye Arkheograficheskogo kommissiei*, 5 vols. (St. Petersburg: Ekspeditsii zagotovleniia Gosudarstvennykh bumag, 1841-1842); *Dopolneniia k Aktam Istoricheskim, sobrannye i izdannye arkheograficheskoi komissiei*, 12 vols. (St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kantseliarii, 1746-

Collections of primary sources from the archives of the Apothecary (Medical) Chancellery have also been collected by N. E. Mamonov and published under the title *Materialy dlia istorii meditsiny v Rossii*. These volumes, along with N. Novombergskii's equally valuable *Materialy po istorii meditsiny v Rossii*, formed the basis of chapter one.[32]

Russian traditions of plant collection and cultivation transformed into the botanical disciplines of classification and organization from the middle of the seventeenth to the end of the eighteenth centuries. This transformation of collection, cultivation, and knowledge production is also crucially a spatial story, revolving around the physical, geographical relations between gardens and the itineraries of collection that supplied them. How this relative geography of botanical practice across time and through space affected the production of botanical knowledge reveals how the landscape of the Russian Empire entered into early modern scientific discourse. To work towards a longer arc of the history of the imperial Russian approach to nature is to reveal the ways in which beliefs are both imposed upon and derived from the natural world and in turn, how the natural world is shaped by human perception, belief, and practices around it. While this dissertation may not have distilled the entire imperial Russian approach to nature, it has taken a step in the direction of understanding gardens as spaces defined by mobility, and scientific knowledge as the distinct combination of collection and cultivation. Moreover, it begins to show how regimes of mobility were equally fundamental to scientific and imperial practice in the early modern Russian Empire.

1872); M. M. Speranskii, ed., *Polnoe Sobranie Zakonov Rossiiskoi Imperii,* 45 vols. (St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kantseliarii, 1830).

[32] N. E. Mamonov, *Materialy dlia istorii meditsiny v Rossii*, 4 vols. (St. Petersburg: B. G. Ianpol'skago, 1881-1885); N. Novombergskii, *Materialy po istorii meditsiny v Rossii*, 5 vols. (St. Petersburg: M. M. Stasiulevicha, 1905-1910).

Chapter One:

Travniki and the Chancellery:

The Collection and Cultivation of Medicinal Plants in Muscovy ca. 1630 – 1700

On April 3, 1630 tsar Mikhail Fedorovich issued an order to prince Aleksei L'vov directing him to provision four *travniki*, or herbalists, from the Apothecary Chancellery for their summer expedition "into the forest for herbs, roots and flowers."[1] Throughout the seventeenth and early eighteenth centuries *travniki* such as these formed an important part of early medical practice in Muscovy serving as crucial and highly mobile liaisons between folk knowledge of medicinal plants and elite institutionalized medical practice. Historians have written extensively on the use of foreign physicians in the Apothecary Chancellery and on the curious mix of foreign medical knowledge and folk belief that characterized a great deal of early Russian medicine.[2] The use of *travniki*, however, as seasonal herbalists hired not just to collect but to identify and prepare local plants for the Chancellery's pharmacy and gardens has rarely been acknowledged.[3] *Travniki*, though essentially seasonal workers, were nevertheless valued for their local knowledge and for their unique ability to navigate the regulated spaces of city, field and forest to

[1] RGADA, F. 143, op. 1, No. 35; N. E. Mamonov, *Materialy dlia istorii meditsiny v Rossii*, vol. 1, (St. Petersburg: B. G. Ianpol'skago, 1881), 4-5.

[2] M. V. Unkovskaya, *Brief Lives: a handbook of medical practitioners in Muscovy, 1620-1701* (London: Wellcome Trust, 1999); N. A. Bogoiavlenskii, *Drevnerusskoe vrachevanie v XI-XVII vv. Istochniki dlia izucheniia istorii russkoi meditsiny* (Moscow: Medgiz, 1960); N. N. Koroteeva, "Aptekarskii Prikaz – pervyi organ upravleniia medistinskim delom v russkom gosudarstve v XVI-nachale XVIII veka," *Vestnik Tiumenskogo gosudarstvennogo universiteta* 2 (2011), 90-95.

[3] P. A. Simonov, V. K. Kuzakov and M. K. Kuz'min, "Estestvenno-Nauchnye znaniia," in *Ocherki russkoi kul'tury XVII v.,* vol. 2*,* ed. A. V. Artsikhovskii, 47-70 (Moscow: Moskovskii Universitet, 1979); N. Novombergskii, *Ocherki po istorii aptechnago dela v do-Petrovskoi Rusi* (St. Petersburg: Ministerstva vnutrennykh del, 1902), 9-15; M. O. Perfil'ev, "Meditsinskoe delo v Rossii v pervuiu polovinu XVII stoletiia," *Istoricheskii vestnik* 13 (1993), 372-385. Novombergskii devotes an entire subsection of a chapter on apothecary gardens to the itinerant herbalists of the Apothecary Chancellery. His is the fullest treatment of *travniki* and their fellow travellers that I have been able to locate in the literature.

provide the Moscow-bound doctors of the Apothecary Chancellery the fresh plants they and their gardens required.

This practice of using itinerant local herbalists as essential go-betweens suggests the powerful role mobility had to play in creating and shaping medical and botanical knowledge in seventeenth-century Muscovy. Not surprisingly, the control of mobility became a key issue in validating the knowledge produced by the collection and cultivation of medicinal plants. While *travniki* enjoyed a degree of state support in their travels and immunity from certain criminal accusations, which the illicit transport of plant materials usually brought, other groups were not so lucky. The traders of Moscow's herb stalls [*zeleinye riady*] form a distinct contrast to the Chancellery's *travniki* in this regard. As they provided fresh herbs, roots and flowers to the markets of Moscow, they continually came under the suspicion of Muscovite authorities. Even while the Chancellery purchased plants from the herb stalls in Moscow's squares, stall holders and herb traders appear regularly in trial records as potential threats to the health and well-being of the city's populace.

This chapter attempts to set the establishment of apothecary gardens [*aptekarskie ogorody*] in Moscow and the creation of a corresponding network of itinerant herbalists, or *travniki*, within the context of the political and cultural changes of seventeenth-century Muscovy. It highlights the mutual influence of mobility and space within Moscow's early medical community in order to investigate the concept of plant mobility. Attempts to tease apart the mobility of the *travniki* and the space of the apothecary garden show in detail how *travniki* and their collections were integrated into the gardens of the Apothecary Chancellery. If the Chancellery's *travniki* were mobile agents of collection development, the collections themselves,

the gardens at the base of the Kremlin, were also constantly on the move, traversing the city in 1657.

This chapter concludes with illicit plant trade of Moscow's herb stalls [*zeleinye riady*], focusing briefly on this quasi-legal network of plant collection and distribution that worried Muscovite authorities and sparked fears of poisoning and witchcraft. The herbs sold in the *zeleinye riady* often ended up as evidence in witchcraft trials, a fate which the *travniki* by and large managed to avoid. Even if using, collecting, or having on one's person an unidentified plant was not necessarily a marker of witchcraft (though it was very often treated as such), witchcraft is certainly key to understanding the particular anxiety seventeenth-century Russians had concerning the power of plants, the role of mobility and need for sanctioned garden spaces in the city of Moscow.

Unlike the other chapters in this dissertation, the documents on which this chapter is based issue largely from a number of monumental nineteenth-century publications that transcribe and make available scores of archival documents. By far the most important among them has been N. E. Mamonov's *Materialy dlia istorii meditsiny v Rossii*, which in four volumes presents over a thousand individual documents attesting to nearly every area of Chancellery life between 1630 through 1682.[4] While these volumes are clearly valuable they are, in the assessment of one medical historian, "oddly compiled, full of small errors, and occasionally marred by misreading of the originals."[5] Therefore, wherever possible, Mamonov's documents have been checked with the manuscript originals currently held in the Russian State Archives of Ancient Acts (RGADA).

[4] N. E. Mamonov, *Materialy dlia istorii meditsiny v Rossii*, 4 vols. (St. Petersburg: B. G. Ianpol'skago, 1881-1885).

[5] M. V. Unkovskaya, "Learning the foreign mysteries: Russian pupils of the Aptekarskii Prikaz, 1650-1700," *Oxford Slavonic Papers* 30 (1997), 2.

Surveying Mamonov's collections specifically for Chancellery orders relating to the activity of *travniki* and their associates makes possible and inquiry into the geographical breadth of the Chancellery's network of collection. Such a survey, however, necessarily leaves out the intentions of the Chancellery as an institution, the lived experience of its herbalists and gardeners, and the organization and appearance of the garden spaces they produced. Therefore, along with Mamonov's volumes, this chapter uses several works in N. Novombergskii's corpus, including the first volume of his *Materialy po istorii meditsiny v Rossii* and his later *Vrachebnoe stroenie v do-petrovskoi Rusi*. Both of these volumes offer a more narrative conception of early modern medico-botanical practice while relying on many of the same archival documents as does Mamonov's work.[6] In addition, this chapter has tried to survey the series, *Akty istoricheskie* (5 volumes, 1841-1842), *Dopolneniia k aktam istoricheskim* (12 volumes, 1846-1872) and Speranskii's *Polnoe sobranie zakonov rossiiskoi imperii* (45 volumes, 1830) for clues as to the unlisted aspects of the interplay between gardens, collection and botanical knowledge.[7]

The establishment of the Apothecary Chancellery, the creation of apothecary gardens in Moscow, and the emergence of a collection network of itinerant herbalists or *travniki* is a distinct phenomenon of Russia's seventeenth century. For a period characterized by the increasing autocratic power in the person of the tsar, religious schism, territorial expansion and the growth of foreign trade, it is perhaps not surprising that the Muscovite state sought to invest in a system by which natural resources, both local and exotic, were collected and cultivated in close proximity to the capital and in service to the tsar. Many of the constituent elements of this system,

[6] N. Novombergskii, *Materialy po Istorii Meditsiny v Rossii*, vol. 1 (St. Petersburg: Tipografiia M. M. Stasiulevicha, 1905); Idem, *Vrachebnoe delo v Rossii v polovine XVIII stoletiia* (Tomsk: Iakovleva, 1910).

[7] *Akty Istoricheskie sobrannye i izdannye Arkheograficheskoiu Kommisieiu,* 5 vols. (St. Petersburg: Ekspeditsiia zagotovleniia Gosudarstvennykh bumag, 1841-1842), hereafter *AI*; *Dopolneniia k Aktam Istoricheskim sobrannyia i izdannyia Arkheograficheskoiu Kommissieiu,* 12 vols. (St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kansteliarii, 1846-1872), hereafter *DAI*; M. M. Speranskii, ed., *Polnoe Sobranie Zakonov Rossiiskoi Imperii,* 45 vols. (St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kansteliarii, 1830), hereafter *PSZ*.

medico-herbal practices, garden cultivation, and the trade in plants predated the establishment of the Apothecary Chancellery and the use of *travniki* as herb collectors. It was the unique mix of political calm, religious shift, and the consolidation of Muscovy's most recent territorial acquisitions that helped foster the growth of this particular system of plant mobility.

Moscow at the beginning of the seventeenth century was a city that had only recently known political calm. The protracted civil war known as the Time of Troubles that had begun with the death of the last Riurikid tsar, Feodor Ivanovich in 1598, had only just ended with the election of Mikhail Romanov to the throne in 1613.[8] The significant territorial expansion of Russia in the sixteenth century down the Volga River basin and the seizures of the cities of Kazan (1552) and Astrakhan (1556) had brought new horizons of collection as well as access to long-established trading networks with the Persian and Ottoman Empires.[9] However this expansion also increased the many stresses already affecting the emerging Muscovite state. The introduction of Siberia in the latter half of the century made holding the country together, while stemming the loss of labor through peasant flight and justifying Russian hegemony over non-Orthodox subject peoples, immediately important.[10]

Russia's widespread domain and its ethnically and confessionally diverse population were held together by an increasingly strict system of social and political hierarchy, partially expressed in the Law Code of 1649. With this code serfdom became an official institution,

---

[8] Chester S. L. Dunning, *Russia's First Civil War: The Time of Troubles and the Founding of the Romanov Dynasty* (University Park: Pennsylvania State University Press, 2001).

[9] Brian J. Boeck, *Imperial Boundaries: Cossack Communities and Empire-Building in the Age of Peter the Great* (Cambridge: Cambridge University Press, 2009); Michael Khodarkovsky, *Russia's Steppe Frontier: The Making of a Colonial Empire, 1500-1800* (Bloomington: Indiana University Press, 2002); Matthew P. Romaniello, *The Elusive Empire: Kazan and the Creation of Russia, 1552-1671* (Madison: University of Wisconsin Press, 2012).

[10] Andreas Kappeler, *The Russian Empire: A Multiethnic History* (Harlow: Longman, 2001); V. O. Kliuchevsky, *A Course in Russian History: The Seventeenth Century* (Chicago: Quadrangle Books, 1968). Both Kappeler and Kliuchevsky in their relatively broad overviews of the seventeenth century emphasize that while the period saw some expansion and increasing contact with foreign states, the overriding concern for Muscovy's tsars was consolidating and controlling the territory they had already gained.

effectively tying the 'enserfed' portion of the Russian peasantry to the land and binding most of Russia's population to increasingly strict social categories.[11] And yet, with expansion and consolidation came a need for increased mobility of certain Muscovite servitors.[12] Military detachments, traders, and government officials and even some peasant laborers were granted the right to move about the countryside and from town to town within limits. While enserfed agricultural laborers were generally denied the freedom of mobility, even they found ways of migrating to seek seasonal labor.[13] While the seventeenth century saw the enserfment of a significant portion of the Russian population, mobility on a number of levels continued to be important to the growth and development of Muscovy's state and economy.

If the seventeenth century saw marked territorial expansion, political consolidation and enserfment in combination with the emergence of new regimes of mobility, it was also a time when the traditional structures for codifying and articulating knowledge about the natural world were fundamentally changing. The threat posed by other-belief within Orthodoxy, such as could be found in the dissenting writings of the Old Believers, had been swiftly if violently dealt with over the course of the seventeenth century. The prosecution of witchcraft was similar, in that it sought to eradicate the pernicious use of otherwise familiar plants and objects as poison or *materia magica*.[14] That Church officials both distrusted and yet worked closely with foreign doctors of the Apothecary Chancellery, who represented profoundly other religious belief and

[11] Peter Kolchin, *Unfree Labor: American Slavery and Russian Serfdom* (Cambridge: Harvard University Press, 1987), 10.

[12] Christoph Witzenrath, *Cossacks and the Russian Empire: Manipulation, Rebellion and Expansion into Siberia* (New York: Routledge, 2007).

[13] Richard Hellie, *Enserfment and Military Change in Muscovy* (Chicago: University of Chicago Press, 1971); David Moon, "Peasant Migration and the Settlement of Russia's Frontiers, 1550-1897," *The Historical Journal* 40 (1997), 859-893; M. A. D'iakonov, *Bobyli v XVI i XVII vekakh* (St. Petersburg: V. S. Balasheva, 1896).

[14] Valerie Kivelson, *Desperate Magic: The Moral Economy of Witchcraft in Seventeenth-Century Russia* (Ithaca: Cornell University Press, 2013); W. F. Ryan, *The Bathhouse at Midnight: an historical survey of magic and divination in Russia* (University Park: Pennsylvania State University Press, 1999).

readily traded in the very stuff of poison and magic, is a particularly illustrative of how foreign knowledge could conflict with and yet ultimately be absorbed by Muscovite institutions. Organized medical practice before the establishment of the Apothecary Chancellery had been the provenance of the Orthodox Church, which had long understood disease to have distinctly spiritual origins.[15] Physical ailment was either due to individual sin, to evil influence or divine retribution, and in any case, prayer was the best medicine.[16] The *Domostroi*, a sixteenth-century Russian handbook for domestic life, suggests that "if God sends someone illness … that person should seek a cure in God's mercy, in tears and prayer."[17] Seeking any kind of external medicine was strictly forbidden, for "anyone who tries to defeat death with sorcery, herbs, roots or grasses," would be, the *Domostroi* promises, "condemned to perdition."[18] Practicing herbal medicine had therefore become intimately if not inexorably connected with the sin of witchcraft.

However, the Church was clearly invested in its own medico-herbal traditions, grounded in the creation and maintenance of apothecary gardens primarily within monasteries dating back to the Kievan period.[19] If these gardens were maintained by monks, they were often supplied by local peasants. Folk medical practice, largely based on the collection and preparation of herbs, though reliant as well on practices of incantation and the use of non-herbal remedies, existed in intimate connection with Church medicine.[20] As one nineteenth-century historian of medicine

---

[15] A. S. Lavrov, *Koldovstvo i Religiia v Rossii, 1700-1740 gg*. (Moscow: Drevlekhranilishche, 2000); N. Novombergskii, *Koldovstvo v Moskovskoi Rusi XVII-go stoletiia* (St. Petersburg: Altshuler, 1906).

[16] Russell Zguta, "Monastic Medicine in Kievan Rus' and Early Muscovy," in *Medieval Russian Culture*, eds. Michael S. Flier and Henrik Birnbaum, 54-70 (Berkeley: University of California Press, 1984).

[17] Carolyn Johnston Pouncy, *The Domostroi: Rules for Russian Households in the Time of Ivan the Terrible* (Ithaca: Cornell University Press, 1994), 111.

[18] Pouncy, *Domostroi*, 113.

[19] Per-Arne Bodin, "The Terrestrial Paradise: the garden as topos in Russian medieval culture," in *Byzantine Gardens and Beyond,* eds. Helena Bodin and Ragnar Hedlung, 175-183 (Uppsala: Uppsala Universitet, 2013); V. D. Chernyi, *Russkie Srednevekovye Sady: opyty klassifikatsii* (Moscow: Rukopisnye Pamiatniki Drevnei Rusi, 2010).

[20] A. B. Ippolitova, *Russkie rukopisnye travniki XVII-XVIII vekov: Issledovanie fol'klora i etnobotaniki* (Moscow: Indrik, 2008). See especially Part II of this book, "Predstavleniia o rasteniiakh" (pp. 129-399) for an extensive

has written, the early modern Russian "belief in secret-magical and health-granting effects of plants and trees is a mix of religious [Christian] and pagan characteristics."[21] Even after the creation of the Chancellery and the establishment of more elite chemical medicine, noblemen, Muscovite servitors, and peasants alike continued to trust the kind of spiritual and herbal medicine associated with traditional healers and the Church. It was this heady mix of Orthodox and peasant belief and practice around the identification, collection and use of medicinal herbs that informed the Apothecary Chancellery's approach to collecting and cultivating Russian medicinal flora at the turn of the seventeenth century.

A great deal of this hybrid, Orthodox-folk knowledge of medicinal plants was codified in sixteenth- and seventeenth-century herbals. Monasteries and high ranking Church officials often collected, copied and distributed manuscript herbals, which the Apothecary Chancellery in turn collected and housed in its impressive library.[22] V. M. Florinskii has suggested that before the appearance of the Apothecary Chancellery, the Church was the natural repository for the collection and re-production of these texts due to the literacy in Greek and Latin enjoyed by monks and Church officials.[23] In 1695 Afanasii of Kholmogory drafted his "*Lechebnik*," or "Register of medical sciences," [*Reestr iz doktorskikh nauk*] with the help of Chancellery doctor, Danil Gurchin. This work blended foreign medical expertise with Russian herbal practices, outlining essentially folk herbal remedies for a series of common ailments and was intended for use "by any literate person, in the absence of a doctor."[24]

---

discussion on how methods of collection, incantations, and the use of water and other non-herbal elements were important to imbuing medicinal herbs with healing powers for folk healers.

[21] G. Popov, *Russkaia narodno-bytovaia meditsina* (St. Petersburg: A. S. Surovina, 1903), 201.

[22] E. A. Saveleva, *Katalog knig iz sobraniia Aptekarskogo prikaza* (St. Petersburg: BAN, 2006).

[23] V. M. Florinskii, *Russkie prostonarodnye travniki* (1880), VI.

[24] T. V. Panich, *Literaturnoe Tvorchestvo Afanasiia Kholmogorskogo* (Novosibirsk: Sibirskii Khronograf, 1996), 124-125.

When the Apothecary Chancellery did happen upon a copy of an older, foreign language herbal, a Greek copy of Dioscorides's 1656 *Materia Medica*, for example, it would append Russian common names to the plants featured. This particular copy of Dioscorides, described by E. A. Saveleva in her catalogue of the library of the Apothecary Chancellery, apparently circulated through the Chancellery as a particularly rich palimpsest, linking the medicine of the ancient world with Russian herbal practices. This particular herbal was given a seventeenth-century Russian binding and included numerous marginalia consisting of Russian common names against the Latin originals. Furthermore, the marginalia itself includes old Slavic numerals (as opposed to Arabic numerals), a fact which strongly indicates that the note taker was likely a Russian and not a foreign doctor.[25]

Not all of the Chancellery's herbals came from Latin, Greek or German originals, though many did. In 1673 a collection of at least nine different herbals of varying lengths, all in Slavic languages [*slovenskii iazyk*], were sent to Preobrazhenskoe village from the Apothecary Chancellery.[26] Numerous orders indicate that Russian language herbals were regularly collected, organized and even recopied by the Chancellery. Though these orders rarely describe what is in these herbals as they are being copied and moved, one document generated in 1677 does mention the contents of the nine herbals mentioned above. Among them was one, just five pages long, that apparently began "with an herb called: the male Peony and on the opposite page, an herb called: the female Peony, with no garden varieties noted."[27] The use of Russian names "*peoniia muzhska*" and the indication that the herbs described were not garden plants, suggests that this was indeed a Russian herbal based on medicinal plants found in the wild.

[25] Saveleva, *Katalog knig*, 113-116.

[26] Mamonov, *Materialy*, vol. 3, 839; Ibid., vol. 4, 897-899.

[27] Mamonov, *Materialy,* vol. 4, 899.

It is worth stopping here to emphasize that the term *travnik* referred in the seventeenth century to both the itinerant herbalist and to the herbal, to the person as well as the text, each employed in their own way in the identification and collection of medicinal plants. Russian manuscript herbals however seem to have the longer history of the two. Herbals in the broadest sense of the term seem to have been called by a variety of names in Russian, including *vertograd*, *zeleinik*, and *lechebnik*, derived from the words for gardens, greens or herbs, and medicine, respectively.[28] The name *travnik*, which appears to have been the most common moniker in general denoted a manuscript text that was often a translation from a Latin or German original to which Russian common names or well-used Russian medicinal plants had sometimes been added. The circulation of herbals [*travniki*] and the travels of herbalists [*travniki*] mirrored the movement of medicinal plants [*travy*] from the countryside into Moscow. Aside from creating some confusion for the historian, when at times it is not clear from the archival documents whether a group of people or a collection of texts is being called for, this shared terminology between the *travnik* as text and the *travnik* as person presents a far more interesting question about the way early modern Russians conceived of the circulation of natural knowledge. It is possible to think, but difficult to prove that the fundamental similarity between the two was the nature of the knowledge they both provided and were able to transport from one place to another.

The use of *travniki* as plant collectors underscores the reliance of the Apothecary Chancellery on local go-betweens, a reliance that permeated Chancellery activities at every level. The foreign doctors of the Apothecary Chancellery worked with Russian-speaking colleagues and support staff at all levels of their activity. Secretaries [*diaki*] and their assistants [*podiachie*] were generally Russian-speakers who formed a corps of career bureaucrats possessing the skill

[28] Agnes Arber, *Herbals: The Origin and Evolution. A chapter in the history of botany, 1470-1670*. Cambridge: [Cambridge] University Press, 1953. I am using the term "herbal" quite broadly here to refer to a number of somewhat different texts that are all loosely concerned with herbal therapeutics and the study of nature.

of literacy which they turned towards producing and copying the Chancellery's numerous records. Translators [*perevodchiki*] could be either Russians or foreigners, depending on the circumstances, while interpreters [*tolmachi*] generally spoke but often did not write in languages other than Russian, all of whom worked to render Latin, German and Greek texts into Russian and vice versa. Those with a high level of technological proficiency (alchemists [*alkhimisty*] and distillers [*dishtiliatory*] among them) tended to be foreign, while those with less technological positions (like gardeners [*sadovniki* and *ogorodniki*]) seem to have comprised a mix of Russian and non-Russian speakers, all residents of Moscow and its environs.[29] At the lowest level of the Chancellery's hierarchy, the guards [*storozhi*] and the fire stokers [*istopniki*] were joined after 1653 by students [*ucheniki*] who were exclusively Russians from the servitor classes unique to the city of Moscow.[30]

In the realm of plant collection the Chancellery relied on two relatively different networks of collection to stock its medicines and keep its gardens full. Firstly, the Chancellery engaged in long-distance trade by importing important medicines from pharmaceutical manufacturers abroad. Medicines, compound and simple, as well as seeds, roots and plant parts were imported regularly through the ports of London, Amsterdam, and Arkhangelsk into Moscow.[31] Medicines also occasionally came from the south-east, or "Persia," brought by Armenian and Indian traders through Astrakhan and up the Volga River. Armenian traders were known to carry "medicines" along with cloth, dyes and their other, more traditional wares as they

[29] Mikhail Sokolovskii, "Kharakter i znachenie deiatelnosti Aptekarskago Prikaza," *Vestnik Arkheologii i Istorii* 16 (1904), 70-73.

[30] Sokolovskii, "Kharakter i znachenie," 73.

[31] Richard Hellie, *The Economy and Material Culture of Russia, 1600-1725* (Chicago: University of Chicago Press, 1999), 188-193; Jarmo Kotilaine, *Russia's Foreign Trade and Economic Expansion in the Seventeenth Century* (Leiden: Brill, 2005).

plied the Volga River from Astrakhan to Moscow.[32] Thanks to a robust network of long-distance trade, enabled in no small part by English, Dutch, and Armenian intermediaries, the Apothecary Chancellery maintained a host of both chemical and herbal remedies that were decidedly exotic in origin: cinnamon, sarsaparilla and 'unicorn horn' (narwhal tusk), were just a few of the pharmacy staples that originated outside of Russia and marked the Apothecary Chancellery as a significant importer of goods and expertise.[33]

Obtaining certain medicinal goods from within Russia or through Russian markets required a slightly different network of trade. Items like honey and salt had long been produced and circulated throughout Russia along well-established trading routes and were purchased, along with other necessarily dried goods from local traders.[34] The acquisition and trade in fresh or living plants required access to yet another form of plant mobility: the slow movements through the countryside of individuals who could identify and properly collect the plants that were needed and then see them back to Moscow unharmed. Matching local knowledge of where medicinally useful plants could be found with the needs of the Chancellery required an interlocutor proficient in herbs. The *travnik* and his friends satisfied that need, bringing knowledge of local plants to the Chancellery's gardens every summer.

Travniki, Russia's group of itinerant plant collectors comprised what N. Novombergskii has called "a special rank of people," bridging the gap between "the Royal Pharmacy, as the

[32] K. A. Antonova et al. eds., *Russko-indiiskie otnosheniia v XVII v., sbornik dokumentov* (Moscow: Vostochnaia literatura, 1958), 149-150. On 2 September 1663 the Foreign Affairs Chancellery [*Posolskii priakz*] issued a *gramota* to the governor of Astrakhan, Ia. N. Odoevskii, concerning the son and nephew of an Armenian merchant, S. Chekhatunova, who were to be dispatched to Moscow in order to sell "medicines and other goods brought from India and Persia."

[33] Clare Griffin, "Rog edinoroga: meditsina i tainye sredstva pri Moskovskom dvore," *GIIM: Doklady po istorii 18 i 19 veka* (2010), http://www.perspectivia.net/content/publikationen/vortraege-moskau/griffin_medizin.

[34] Novombergskii, *Ocherki po istorii*, 6. Novombergskii states that the Apothecary Chancellery would have obtained many of its materials "from Moscow's markets: dried goods, vegetables, herbs, honey, salt and others."

center of imported medical practice, and native knowledge [*narodnoe znakharstvo*]."[35] As hired labor for the Apothecary Chancellery, *travniki* formed not so much an estate, with its attendant rights and responsibilities, as an ad-hoc collection of seasonal laborers, appearing and disappearing from Chancellery documents at a steady clip and probably engaged in a variety of jobs outside their work for the Chancellery.[36] However, unlike guards, fire-stokers and even some gardeners, *travniki* (like students) are named in Chancellery documents, suggesting that while they were not 'Chancellery people,' they were important to Chancellery activities as individuals with a special skill set.

Because "the foundation of [medicinal] therapy in the seventeenth century was in the use of plants," G. N. Lokhteva asserts, it therefore stands to reason that "an important function of the Apothecary Chancellery was in the collection and preparation of medicinal plants."[37] Thus, the role of *travniki* as plant collectors was far more important to Chancellery activities than their relative absence in the secondary literature might suggest. Novombergskii uses even stronger rhetoric on this point, arguing for the role of *travniki* not just as collectors and preparers of local plants, but as cultural liaisons and knowledge brokers. "The service of the *travniki*," he writes

> not only cut down the expense of supplying the Royal Pharmacy with medicines, but to a larger extent they made it possible for imported medicine to take root in Russian soil. Centuries' old belief in local herbs and roots followed the *travniki* into pharmacies that were built by foreign hands.[38]

---

[35] N. Novombergskii, *Vrachebnoe stroenie v do-Petrovskoi Rusi* (Tomsk: Parovaia tipo-lit. Sibirsk, 1907), 124.

[36] Gregory L. Freeze, "The *Soslovie* (Estate) Paradigm and Russian Social History," *The American Historical Review* 91 (1986), 11-36.

[37] Lokhteva, "Materialy Aptekarskogo Prikaza," 153.

[38] Novombergskii, *Vrachebnoe stroenie*, 211.

Moreover, their well-worn peregrinations introduce a sense of balance between the elite medical knowledge of the Chancellery and the informal, folk knowledge of the peasant herbal practice. Indeed, in seventeenth-century Russia Western European medical practice did not necessarily have an outright advantage over local herbal traditions, as Chancellery physicians became well aware. While the foreign physician's expertise was certainly respected, it was combined with a deep-seated reliance on local traditions of herbal medicine, traditions which royal physicians, as servants of the tsar, were expected by him to recognize and use.

Documents from the archives of the Apothecary Chancellery show that *travniki* were often assembled by the Apothecary Chancellery in small groups of four to six people in the spring and were given orders to collect specific plants, as well as herbs, roots and flowers more generally over the course of the following summer.[39] They were often accompanied by an array of other lower level servitors, including *pomiasy*, people from the royal kitchens [*kormovy dvor*], who were associated with the care and preparation of meat.[40] Novombergskii maintains that *pomiasy* were given extra responsibilities at the time of collection, handling the preparation and the transport of the materials back to the Chancellery in Moscow.[41] As these special duties appear in the documents they will be noted, but in general, pomiasy and *travniki*, in the context of plant collection for the Chancellery, appear to have been interchangeable and will thus be named together throughout.

Dating from 1630 on Apothecary Chancellery documents show that *travniki* were routinely dispatched across Muscovy's countryside and to specific regional centers, from

[39] M. O. Perfil'ev, "Meditsinskoe delo v Rossii v Pervuiu Polovinu XVII Stoletiia," *Istoricheskii Vestnik* 13 (1883), 373.

[40] *Slovar' tserkovno-slavianskogo i russkogo iazyka*, vol. 3 (St. Petersburg: Imperatorskaia Akademii Nauk, 1847), 331.

[41] Novombergskii, *Ocherki po istorii*, 12.

Arkhangelsk to Kazan, to perform a variety of duties associated with collecting plants. *Travniki* travelled in groups and were headed by a single person usually named in the documents, often attended by 'friends,' or in one case, by the travnik's own children.[42] It is unclear what social group or estate *travniki* were taken from, nor is it possible to say what other forms of work they might have engaged in during the off-season. Given horses and provisions as well as letters of introduction to local state servitors [*prikazchiki*] and governors, they were expected to be experienced in their craft and sufficiently self-directed not to need extensive instructions or constant oversight. Nonetheless, those local state servitors and governors were routinely enjoined to watch over the *travniki* as they performed their summer duties.[43] Truancy was not an uncommon problem, it occurs throughout the documents and was lamented by *prikazchiki* who occasionally complained that the assigned herbalists had 'gone walking' or 'drinking' and neglected their Chancellery duties.[44]

In so far as the Chancellery was often looking for specific herbs, flowers, roots or seeds, to either use or to transplant into their own gardens, the *travniki* were often told what to collect. Their 'lists' [*rospisi*] were usually mentioned specifically in the letters of introduction so as to make clear to all those involved the Chancellery's (and the tsar's) expectations. When plants were not collected, or when quotas went unfilled, both the *travniki* and the local servitors watching over them came into disfavor. The consequences for failure could included demotion, arrest and even forms of corporal punishment [*pravezh*].[45] *Travniki* were also expected to collect

[42] Mamonov, *Materialy*, vol. 4, 247.

[43] V. I. Lipskii, *Istoricheskii Ocherk Imperatorskago S.-Peterburgskago Botanicheskago Sada (1713 – 1913)* (St. Petersburg: Gerol'd, 1913), 37.

[44] Mamonov, *Materialy*, vol. 3, 577-578.

[45] Novombergskii, *Vrachebnoe stroenie,* 130; Inna Liubimenko, "Vrachebnoe i lekarstvennoe delo v Moskovskom gosudarstve," *Russkii Istoricheskii Zhurnal* 1 (1917), 29.

more generally and widely, their orders at times calling upon them to collect "the plants that they know," as well as the items listed.

One the earliest documents attesting to the use of *travniki* and *pomiasy*, or otherwise designated plant collectors by the Apothecary Chancellery dates to the spring of 1630.[46] An ukaz, issued on April 3rd by Mikhail Fedorovich directs Aleksei Mikhailovich L'vov, director of the Great Palace [*Prikaz bol'shogo dvortsa*] to provide from the Royal Palace's reserves provisions for four *travniki*, Ivashka Feodorov and friends, who were preparing in the Apothecary Chancellery to leave Moscow for the summer to "go into the forest after herbs and roots and flowers." A second order was issued on the same day to the *iasel'nichi* Bogdan Matveevich Glebov (of the Horses Chancellery), to secure for Ivashka Fedorov and his friends horses for the entire summer in pursuit of their duties.[47]

Again in the early spring of 1631, 1632, and 1633 orders went out securing for different groups of *travniki* horses, food, and lists of plants. In April of 1632, a brief order from the Chancellery calls for providing the *travnik*, Dmitrii Ivanov and friends with food "according to previous years," suggesting a longer history, if not to collecting, then at least to Dmitrii Ivanov.[48] Otherwise, orders from the early 1630s tend to be short and vague, appearing around April and arranging for a group of several *travniki* with provisions and horses to spend the summer either in the field [*v pole*] or in the forest [*v lesu*] collecting herbs, roots and flowers. While none of these early decrees indicates where, exactly, the *travniki* were expected to go, their provisions and the duration of their travels indicate that indeed it could have been quite far.

[46] RGADA, F. 143, op. 1, No. 35; Mamonov, *Materialy,* vol. 1, 4-5.

[47] Mamonov, *Materialy,* vol. 1, 5.

[48] Mamonov, *Materialy*, vol. 1, xii.

Though they are vague at first, by the 1660s Chancellery documents begin to describe a network of places in which to find and obtain specific plants, embracing the breadth of the seventeenth-century Muscovite Empire. In the 1660s and 1670s *travniki* were sent to Kazan to collect *chechuinye* plants,[49] and to Smolensk and Polotsk to collect a kind of Larkspur.[50] In the village of Dmitrova[51] they were asked to uproot various kinds of berry bushes for transplantation back in the tsar's gardens. In Kolomna they collected a great deal of the entirely poisonous plant, black *chemeritsa*, commonly known in English as the False Hellebore or Corn Lilly.[52]

While all the places that appear regularly as sites of plant collection by *travnik*-led expedition are generally rural or remote, in 1677 the fairly cosmopolitan city of Kiev appears in Chancellery documents as a medicinal destination. In that spring a Chancellery alchemist, Tikhan Ananin along with his student, Aleskha Ivanov, were sent to Kiev to purchase "trees, flowers and seeds for the state's apothecary garden."[53] Ananin and Ivanov's meticulous accounting for the one hundred rubles they were entrusted with shows that they purchased elderberry bushes, pear trees both large and small, cherry, plum and apple trees as well as a plant they call "*kievskie orekhi*" for just over 6 rubles. A harness, rope, bast matting, along with a sled and a wagon [*drovnei i teleg*], all materials "to keep the trees from the cold," cost just over 2 rubles. By far the greatest amount was spent on purchasing horses in Moscow and feeding them along the way, accounting for just under half of their budget. Upon their return, they spent

[49] Mamonov, *Materialy*, vol. 2, 266-267; Ibid., vol. 3, 714-719; N. Novombergskii, *Materialy po istorii Meditsiny v Rossii* (St. Petersburg: Altusher, 1905), 97. *Chechuinye* plants cannot be identified from this text, but *chechuinye* doctors generally specialized in venereal disease, with a focus on syphilis.

[50] Novombergskii, *Materialy*, 92.

[51] Mamonov, *Materialy*, vol. 3, 773.

[52] Novombergskii, *Materialy*, 98.

[53] Mamonov, *Materialy,* vol. 4, 903.

another 30 rubles on the garden itself, in the end accounting for 76 rubles spent in the name of bolstering the apothecary garden's plant collections.

While some places were associated with certain, specific plants, other destinations were invoked for collection more generally. Omelke Mukhanovskii, for example, was sent to Nizhnii Novogorod simply to collect herbs, roots and flowers.[54] Mukhanovskii's trip in 1663 generated a second document in which he complained that the local governor had offered him no assistance and that he had to spend his own money buying baskets [*lukoshok*], barrels, linen, and firewood: materials not just for the collection but also for the drying or possibly distilling of the plants, both necessary steps before dispatching them safely back to Moscow.[55] Three years later, in 1666, a different Mukhaovskii by the name of Eroshka was sent to Nizhnii Novgorod to collect "the roots that he knows."[56]

Travniki travelled far and wide, collecting from field and forest, village and city. The link to the apothecary garden in Moscow is often implicit, and in at least one case, the *travniki* who were clearly collecting for gardens appear to have been trained in them as well. In March of 1682 a group of townspeople [*tiaglets*], several of whom were associated with the Apothecary Chancellery gardens, gave their surety to one Ivan Grigoriev, asking that he be admitted to the Apothecary Chancellery and the apothecary garden as a *travnik*.[57] They attest to Grigoriev's previous good behavior describing him as one who "neither drinks nor carouses." They write that while in government service, having "successfully collected herbs, flowers, seeds and roots for the tsar's use … he, along with an apothecary, successfully dried those things, never burning,

[54] Ibid., vol. 2, 246-247.

[55] Mukhanovskii claims to have bought these materials and collected plants for "vodochnago stroenia," or distillation of alcohol.

[56] Mamonov, *Materialy*, vol. 3, 797.

[57] Ibid., vol. 4, 1285-1286.

over-drying, or spoiling them in anyway, but always delivering them, fresh or dried, absolutely clean, so that they kept their greatest potency."[58] Neither, they assert, had Grigoriev ever tainted his collection with any adulterations, nor had he given them away to friends or stolen them for his own use. So that, on the strength of this group testimony, and on their collective agreement to a stipulated fee should he run away or prove unsatisfactory, Ivan Grigoriev was put up for Chancellery employment as a *travnik* in the apothecary garden.

The result of this petition is not included in Mamonov's collection, however it does show that even though *travniki* could be hired into the garden permanently, it seems to have been the exception rather than the rule. Even if the work Grigoriev performed before this petition was drafted may have been skilled it was essentially seasonal. Though Grigoriev was not yet in the employ of the Chancellery, there was already a small community of Chancellery workers willing to risk collective responsibility of what was likely an onerous fee to bring him into their fold. The skills of *travniki* in the field and in the garden, which may not have been so different, were likely both housed and honed by the gardens in Moscow.

All of the above patterns have been distilled from essentially incomplete if numerous documents illustrating the itineraries and the collections of the Chancellery's *travniki*. They suggest how crucial to Chancellery activities in Moscow the *travniki* were. The work of the *travnik*, however, is captured in great detail in a whole series of documents relating to a single summer collection event, to which we turn now. In the summer of 1672 a group of *pomiasy*, *travniki* and *khlebniki* (individuals from the Royal Bakery [*khlebnoi dvor*]) was dispatched by the Apothecary Chancellery to collect medicinal plants and herbs to the village of Chashnikovo,

[58] Ibid., vol. 4, 1285.

approximately 40 kilometers northwest of Moscow.[59] This particular collection event, like many others before it, begins its documentary trail with an order addressed to Chashnikovo's local official, Nikita Nefedev Nepostavov, informing him that

> the great Sovereign has decreed to send from Moscow to the village of Chashnikovo for the collection … and for the drying of herbs, flowers and roots for his Sovereign's state pharmaceutical stores … [Antoshka] Ivanov and friends.[60]

The order directs Nepostavov to render housing to these men, to provide them with "children of peasants" to help with their collecting and emphasizes that Nepostavov is "to help in every capacity and not to hinder their search in any way." It was not only Nepostavov's duty to provision the men from Moscow with horses and carts and a local guide, but to pay them a set rate for the items they collected and to watch over their work.

Nepostavov is informed that the *pomiasy* and *khlebniki* have been sent with lists of what to collect, including strawberries [*zemlianny iagody*], of which 20-30 *chetvertei* were ordered.[61] Specifying the rate at which Nepostavov was to pay for these herbs and berries (about 5 *altyn* or 2 *grivny* per chetvert), the order concludes, enjoining him to then secure the safe travel of the herbs, flowers, roots and berries, back to Moscow to the Apothecary Chancellery with some kind of envoy or overseer.[62] "And if," the order warns "you do not commit to watching over the *travniki*, and the *travniki* do not collect the herbs, and waste time, and strawberries are not sent with an overseer, then you Nikita, will be in disfavor with the Great Sovereign Tsar."[63]

---

[59] Ibid., vol. 2, 458-469.

[60] Ibid., vol. 2, 458.

[61] One *chetvert'* is an old Russian unit of volume, which for dry, friable substances ~ 209 liters, and for liquids ~ 3 liters. A. M. Prokhorov, ed., *Bolshaia Entsiklopedicheskaia Slovar'* (Moscow: Sov. entsiklopediia, 2000), http://www.vedu.ru/bigencdic/70688/.

[62] Mamonov, *Materialy,* vol. 2, 458.

[63] Ibid., vol. 2, 458.

Of the nine people who were sent by the original ukaz, seven were named, including the *travniki* Tereshka Dementev, Vaska Ivanov, Ivashko Ivanov, and Volodka Semenov from the *Kormovyi dvor,* and the *pomiasy* Antoshka Ivanov and Filimoshko Ivanov from the *Khlebnoi dvor*. The first installment of collected plants came just five days after the original order, arriving in Moscow on June 30, 1672. With this dispatch of berries Nepostavov sent a report to the Chancellery informing them as to why not as many had been collected as had been ordered. He writes, "the peasants of the village Chashnikovo and the village Cherkizova have said that they collected the berries without any delay, and now, Sovereign, I, your servant, have paid the contracted servants, and have sent the berries … forthwith [*bezsprestanno*]." However, he continues,

> few berries have been collected … for they say there are none; and I your servant [have written] a report [*otpiska*] about this and have sent the elder of the village Chashnikovo, Evtiushka Alekseev, to Moscow to you Great Sovereign, and have directed the report to be given and the berries to be presented to the Apothecary Chancellery.[64]

Appended to this was an official note from the Chancellery, also dated June 30, remarking that while 100 barrels of strawberries had been asked for, the village elder, Evtiushka Alekseev, had only arrived with 1½.[65] The consequences of not having met the Chancellery's pre-determined quotas so radically were, in theory, serious, and so the Chancellery forwarded the matter on to the tsar asking how to proceed.

Nepostavov tries to offer mitigating circumstances for the remarkably low yield, providing with his report a second document also dated June 30, 1672 where he claims that while originally nine people were supposed to have been sent, only seven arrived. And of those seven

[64] Ibid., vol. 2, 459.

[65] Ibid., vol. 2, 460.

one *travnik*, Tereshka Dementev, immediately left for Moscow, against the directions of the Chancellery, taking two (unnamed) *travniki* with him.[66] Four of the remaining *travniki* claimed, according to Nepostavov, that they "did not know [how] to search out herbs and seeds,"[67] leaving only two, Antoshka Ivanov and Volotka Semenov, to do the bulk of the identification and collection required by the Chancellery and delegated, in part, to Nepostavov.

Antoshka Ivanov, for his part, attests to his and the other *travniki's* faithful service, describing how they travelled up to ten versts, or approximately six miles at a time looking for herbs, but found very few.[68] Many of the herbs on the list of what they were tasked with collecting were simply not available. What they did find, of course, they packaged and sent to Moscow with the village elder, Evtiushka Alekseev.[69] This list, provided by Antoshka, detailing the plants he and Volotka were able to send to the Chancellery by mid-summer shows how broadly the *travniki* were willing and able to collect. By July 6 they had deposited in the Chancellery over 1,700 bunches [*puchkov*] of approximately 40 different kinds of plants, separated under the headings "herbs collected," "flowers collected," and "roots collected." Indeed, the *travniki* did not let the lack of strawberries deter them. What they brought back included many plants long familiar to the kitchen including: beet roots [*listu svekolnago*], horse mint [*miaty koshechi*], common mint [*miaty prostoi*], common sorrel [*konskogo shchavliu*], sheep's sorrel [*shchavliu-liudtskogo*] and dandelion [*popovyi skufi*]. There was also a kind of 'ginger' [*inberik*], a plant called 'live-long' [*molodila*], and another called 'eye-bright' [*onaia pomoch*], the latter a common medicinal herb in Western Europe as well as Russia, and many

[66] Ibid., vol. 2, 464.

[67] Ibid., vol. 2, 464.

[68] Ibid., vol. 2, 461.

[69] Ibid., vol. 2, 461.

other plants besides.[70] Some of the common plant names Antoshka and Volotka used were so common as to render them currently unidentifiable with names like *zhabnoi*, 'Bears ears' [*medvezhia ukha*] and 'God's tree' [*bozhiia derevo*] which were names used multiple times for different plants in other settings.

The detailed collection event at Chashnikovo reaffirms much of what has already been suggested about *travniki* here, but it also shows how variable the return could be on a simple order for strawberries. The Chancellery apparently got what the *travniki* could provide and not always what it ordered, suggesting that it was ultimately up the *travniki* to curate the collections they dispatched back to the pharmacy and the gardens of the Apothecary Chancellery.

Another revealing detail contained in the Chashnikovo documents as well as in others from the Chancellery archives suggests that the Chancellery's *travniki* and *pomiasy* did not always collect alone. "All the dirty work [*chernaia rabota*]," Novombergskii writes "was done by hired labor, 'contractors' [taken] from the local peasants, who local officials 'hired according to an agreed upon rate.'"[71] Either the *travniki* or the local officials were expected to organize these peasants to help with the collection and the preparation of particularly large orders. As mentioned above, Nikita Nepostavov, the local official in Chashnikovo, was instructed to provide the *travniki* specifically with "the children of peasants," a phrasing which Novombergskii takes to mean the actual children of local peasants, who, appropriately aged and relatively unoccupied, could potentially learn to identify and collect local medicinal plants on their own in the future.[72] Even if *travniki* themselves, being Moscow residents and quite possibly low level servitors, therefore did not issue from local peasant communities, peasant knowledge

[70] N. Annenkov, *Botanicheskii Slovar'* (St. Petersburg: Imperatorskoi Akademii Nauk, 1878), 141. Annenkov identifies this plant as *Euphrasia offinicalis*, L.

[71] Novombergskii, *Vrachebnoe stroenie*, 124-125.

[72] Ibid., 133.

of plants nevertheless played an increasingly important role in plant collection for the Chancellery.[73]

Many Chancellery orders forego the *travniki* entirely, directing peasants alone to collect certain well known or common plants, usually in nearby locations. Just one month before the earliest *travniki* set out in 1630 to collect "in the forest," Mikhail Fedorovich issued a directive to the same L'vov mentioned before, over the collection of black poplar cones [*shishek osokornykh*] "from the villages of Moscow."[74] This decree does not dispatch a *travnik*, whose ability to recognize a variety of medicinally useful plants presumably would not have been necessary, but rather a "stoker-man" [*istopnik*] named Peter, who would have known how to boil the cones in large quantities of water, spirits or oil (in this case, *popilemye* oil is mentioned specifically) to extract their medicinal properties.[75] A few months later a report was generated only after the collection itself, when a group of peasants "from the villages of Moscow," brought 10 *chetverti* of a kind of wild rose [*shipovnik*] before the Apothecary Chancellery instead.[76] In general, Moscow's peasants collected a wide range of plants, seeds, flowers and roots for the Chancellery, which in addition to wild roses and black poplar cones, also included white water lilies [*kubyshek belykh*],[77] and the flowers of pea plants [*bobovago tsveta*].[78]

In farther flung locales, governors were asked to assemble local people who either knew what to collect, or who could reliably identify and collect the few plants that had been ordered. In Iakutsk, because the location was so far outside the Chancellery's realm of experience, a

[73] Liubimenko, "Vrachebnoe i lekarstvennoe," 26-27. Liubimenko ventures, without citing archival evidence, that *travniki* were towns people [*tiaglets*] attached to other chancelleries during the off seasons.

[74] Mamonov, *Materialy,* vol. 1, 4.

[75] Ibid., vol. 1, 4.

[76] Ibid., vol. 1, vii.

[77] Ibid., vol. 1, 7, 116.

[78] Ibid., vol. 1, 7, 143-144.

request sent to the local governor in 1672 asked for local people to be identified who could collect plants that they knew to be medicinal and dispatch them to Moscow. Remarkably, a single individual, Senka Epishev, not only collected and prepared a number of different plants to be sent to Moscow, but he included a thorough description of each in his subsequent missive along with their medicinal uses.[79] In Saratov the local governor was not quite so lucky, having to assemble peasants himself to collect the roots of the *solodka* plant, or Glycyrrhiza, known for its slightly sweet, edible root.[80] Quantities of this root were also ordered from the town of Korotiak on the Don, however there the Cossack communities complained about the added responsibility not otherwise included in their official obligations to the state.[81] Writing in 1662 that the recent order for *solodka* root was impossible to fill, they claimed that what little they could provide they had to purchase themselves with their own money.[82]All of this is to suggest that while the Chancellery clearly relied on the skills of the *travnik*, they also cast their net rather broadly, calling upon peasants and others to collect and send back to Moscow 'the plants that they know.'

In some cases the appointment of certain people to collect was less important than appointing the plant to be collected. In Iaroslavl, juniper berry collection was apparently quite important and the long-standing *mozhzhevelnaia povinnost'* or "juniper obligation" of the peasants in that region has therefore been remarkably well-documented.[83] In the fall 1661 over 10 *chetverti*, or over 2,000 dry liters were collected and sent to Moscow, a task that required "hundreds of people."[84] Such large amounts were no doubt required because juniper berries were

[79] *DAI,* vol. 6, 360-364.

[80] Mamonov, *Materialy*, vol. 3, 738.

[81] Ibid., vol. 2, 247-248.

[82] Novombergskii*, Materialy,* 1905, 758.

[83] I. Ia. Gurliand, *Mozhzhevelovaia povinnost': Materialy po istorii administratsii Moskovskogo gosudarstva vtoroi poloviny XVII veka* (Iaroslavl: Gubernskoe Pravlenie, 1903).

[84] Mamonov, *Materialy*, vol. 3, 752.

the primary ingredient for the distillation of spirits, which were essential to the Chancellery's medicinal preparations. The standing order for juniper berries transformed over time into an articulated and long-standing service obligation for a certain set of geographically defined peasant communities – those in the Iaroslavl region – and influenced the ways in which other, commonly ordered plants were collected. In 1672, for instance, tsar Aleksei Mikhailovich tried to establish a yearly collection and dispatch of St. John's Wort [*zveroboi*] from Tobolsk.[85] *Zveroboi* appears throughout the Chancellery documents and was widely sought if not always found. Apparently it was the Siberian varieties, like those the Chancellery had already been receiving from Tomsk since 1648, that were the most keenly desired.[86]

The Chancellery's *travniki* were sent upon their summer expeditions with various forms of state support including horses and carts, as well as documents allowing them to use the system of post-roads and giving them permission to requisition housing, food, and peasant labor. While the *travniki* were clearly expected to use their own knowledge of the landscape and to work independently without close supervision, the Chancellery repeatedly attempted to plug them into these more official systems of moving people and things between Moscow and the countryside. By virtue of the documents they carried, letters, lists and decrees, the Chancellery attempted to hold the activities of the *travniki* in check by a system of collective responsibility that bound the *travniki* to local state servitors. These same state servitors were then expected to ensure the often wayward *travnik*'s collecting success. Apparently this system worked better on paper than in the field, for as the events in Chashnikovo show, *travniki* were difficult to control, peasants could resist being corralled, and even the plants themselves refused to obey Chancellery orders. By turning the collection of certain plants into a *povinnost'*, or an obligation, the tsar and the

[85] Novombergskii, *Materialy*, 181-182.

[86] Mamonov, *Materialy*, vol. 3, 607.

Chancellery tried to harness imperial forms of peasant labor and production to supply the growing pharmacy. Either way, opening state resources and attempting to impose state control onto small groups of itinerant herbalists was a way of repurposing preexisting imperial infrastructure to facilitate real and lasting plant mobility, to supply the growth of medical and botanical practice in Russia.

While many of the items collected by *travniki*, *pomiasy* and peasants were intended for making medicines directly, whether they were to be dried, distilled into spirit or steeped in oils, the intention of supplying apothecary gardens back in Moscow with living plants was also an important part of these collecting activities. In the middle of the list provided by the *travniki* Ivanov and Semenov from Chashnikovo, there appears a note remarking "the herbs included on the list for the *travniki* to collect, which are planted in the medical garden [*aptekarskii ogorod*], could not be found in the meadows, fields or forests."[87] It seems likely that the Chancellery's *travniki,* Semenov and Ivanov had been in Moscow's apothecary gardens, that they had consulted varieties already there, perhaps in preparation for their summer collection, and that they were collecting with transplantation to that garden in mind. There are entries in their lists under the headings "Flowers: garden" and "Roots: garden" that appear at the end of the list, separated from "Flowers" and "Roots" in general, marking the plants specifically collected for the gardens in Moscow. This included *mak krashnyi*, presumably a kind of poppy as well as what Ivanov and Semenov call *finikolnovo,* a name which generally refers to dates and the seeds of date palms. These were both on theirs lists of plants to collect whole for the garden. Finally, they list *Satiri-onis,* a kind orchid with edible bulbs, and *rutnovo*, a plant currently in the *Fabaciae* or

[87] Ibid., vol. 2, 462.

pea family, with edible, yellow flowers among the plants collected for the apothecary garden in Moscow.[88]

Indeed, plants collected for direct transplantation by various *travniki* that appear throughout the Mamonov's documents and include *boragova* (*Borago officinalis*, L.), borage or star-flower, which, when fresh, is edible and has the scent and flavor of cucumbers,[89] and *Zuba lvova*, or common dandelion,[90] which, along with chicory was a common part of the Russian peasant diet. Medicinally, a decoction was made from fresh dandelions that was supposed to alleviate kidney stones and was widely used against stomach pains in general.[91]

Novombergskii emphasizes that the plants growing in Moscow's apothecary gardens constituted the plants the Chancellery could not easily collect or import and thus preferred to cultivate on their own. It is also possible, however, that these were plants in constant use, that may not have been able to replaces themselves in the garden, and therefore were in need of regular resupply. The kitchen-garden nature of Ivanov and Semenov's lists suggest this may have been the case the with plants they collected. In any event, they were included in the travels of collection led by the Chancellery's *travniki* and in turn helped to populate the numerous apothecary gardens back in Moscow.

The gardens that the *travniki* collected for have a long history in and around the city of Moscow, one that dates back to at least the early sixteenth century, when there was still little distinction between medicinal plants and kitchen garden staples. Garden culture in the broadest sense goes back even further. The *Domostroi*, for instance, dwells on gardens at length on "how

[88] Ibid., 233, 121.

[89] Annenkov, *Botanicheskii Slovar'*, 68.

[90] Ibid., 349.

[91] Ibid., 350.

to cultivate a garden and orchard," [*rak ogorod i sady voditi*][92] advising first and foremost that in order to keep a garden a wall must be built to keep out both animals and neighbors. This advice is followed by a series of simple injunctions to dig beds in spring, to protect young seedlings from frost, and to plant a variety of vegetables so that they need not be purchased at market. The idealized garden of the *Domostroi* is an enclosed, domestic space, full of fruits and vegetables, including orchard trees (apples and pears) and berry bushes that was to be watched over closely by the master of the house and his servants.[93]

Apothecary or pharmacy gardens [*aptekarskie ogorody*], which followed the same basic parameters of producing an enclose space for the cultivation of something useful, began to appear in monasteries in the sixteenth century and by the seventeenth, could be found in Moscow and its environs as well as in Suzdal, Vladimir, Kursk, Orel, Murov and Tula.[94] These garden spaces have a long history in Russian culture predating the appearance of the Apothecary Chancellery itself, ensured that the Chancellery (and the tsar) enjoyed access to fresh herbs for medicinal as well as culinary preparations. One historian suggests that the Chancellery's Apothecary garden had a "kitchen," [*povarnaia*] located in the middle of the garden, "distilled … all manner of spirits … and syrups, plasters and salves and other medicines, which were intended for storage. These medicines were supposed to be made from fresh plants to ensure the efficacy of the medicines ordered by the doctors."[95] Gardens served as a means to freshness by guaranteeing proximity to living plants. By the beginning of the seventeenth century, the

[92] V. Iakovlev, *Domostroi: po rukopisiam Imperatorskoi Publichnaia Biblioteki* (St. Petersburg: Imperatorskaia Akademiia Nauk, 1867), 108.

[93] Pouncy, *The Domostroi*, 153-155.

[94] A. A. Shcherbakova, "Razvitie botanicheskikh znanii v Rossii do XVIII veka," *Trudy Istorii Estestvoznaniia i Tekhniki AN SSSR* 36 (1961), 141; Margery Rowell, "Russian Medical Botany before the time of Peter the Great," *Sudhoffs Archiv* 62 (1978), 341.

[95] V. S. Kurchen-Golubov, ed., *Stoletie Voennago Ministerstva Glavnoe Voenno-Meditsinskoe Upravleniie* (St. Petersburg: Ministerstva vnutrennykh del, 1902), xxiii.

apothecary gardens of Moscow had started to become increasingly ambitious places of cultural and intellectual exchange as well, combining the practical knowledge of plant cultivation and the more rarified knowledge of the doctors' recipes. The creation of gardens at Izmailovo and Kolomenskoe during the reign of Aleksei Michailovich (1645-1676) meant that the fresh plants and of these hybrid cultural spaces were never very far from the tsar and his retinue.

What these gardens were like, how they were laid out, and what kind of daily activities went on in them is difficult to know. Some of the earliest data suggesting the physical presence of an apothecary garden in Moscow stems from the Sigismund Map of Moscow (1601), which depicted an unnamed, small enclosure filled with trees just outside the Kremlin and along the Neglinnaia River (see figure 1).[96] An apothecary garden at that time would have been attached to the *aptechnaia izba* and would have narrowly served the tsar and his family. Though there is little from the beginning of the century to corroborate the designation of this sketchy enclosure as an apothecary garden, Adam Olearius followed the Sigismund Map closely when he published his own map of Moscow in 1647 included the Chancellery's apothecary garden (see figure 2).[97] In this reproduction of the Sigismund Map, Olearius even labels the space "Apoteker garten," a detail which curiously does not appear in his narrative which the map accompanies.[98] Having visited Moscow for extended periods in the 1630s, Adam Olearius would certainly have had the opportunity to visit the Apothecary Chancellery and its apothecary gardens during his extended stays. Furthermore, he was definitely interested in plants, horticulture and fertility of Russian soil in general, noting that "in some places, especially in Moscow, there are … fine garden plants, such as apples, pears, cherries, plums, and red currants." Kitchen vegetables in particular, he

[96] P. V. Sytin, *Istoriia planirovka i zastroiki Moskvy*, vol. 1 (Moskva: s.p., 1950), 75.

[97] Sytin, *Istoriia planirovka*, 96.

[98] Adam Olearius, *The Travels of Olearius in Seventeenth-Century Russia*, Samuel H. Baron trans. and ed. (Stanford: Stanford University Press, 1967), 12. Olearius visited Moscow in 1634, 1636, 1639 and 1643.

writes, were common and of good quality, including "asparagus as thick as a thumb … good cucumbers, onions, and garlic, in great quantities."[99] For reasons that remain unclear, however, Olearius never mentions the apothecary garden in the narrative of his work.

By the spring of 1645 the apothecary garden of the Apothecary Chancellery appears, by name, in Chancellery documents. On May 20, 1645 Aleksei Mikhailovich sought the consultation Aleksei L'vov, head of the Office of the Great Palace [*Prikaz bol'shogo dvortsa*] and a powerful man, on the building of a high wall for the Chancellery and its apothecary garden.[100] A sketch of the Chancellery's courtyard [*dvor*] and garden from the seventeenth century suggests how it may have been laid out (see figure 3). Later, in June of that year the presence of gardeners [*sadovniki*] was confirmed by a request from the tsar having the Chancellery task them to collect *bobovye* flowers and red poppies, presumably from the garden itself, in order to dry and preserve them in spirits.[101]

On April 15, 1657 Aleksei Mikhailovich sent a decree to the boyar Il'ia Danilovich Miloslavskii, ordering him to plant in the tsar's own upper garden [*verkhnii sad*], "various and different flowers … like those of the apothecary garden, without delay."[102] In this same year Chancellery documents indicate that the apothecary was moved from its location along the walls of the Kremlin fronting the Neglinnaia River to "the garden quarters" of the city further down the same river.[103] However, as later documents show, the old space of the original apothecary garden, at the foot of the Kremlin, continued to exist as a working apothecary garden into the eighteenth century. While the plants within the garden were clearly mobile, garden spaces themselves it

[99] Olearius, *Travels*, 121.

[100] Mamonov, *Materialy,* vol. 1, xxii.

[101] Ibid., vol. 1, 113-114.

[102] Ibid., vol. 3, 667.

[103] Ibid., vol. 2, 206.

turns out were also fairly malleable – they could be moved and split, or patterned off one another, as the tsar saw fit.

The fact that the apothecary garden of the Chancellery was essentially the tsar's personal property, at least as long as the pharmacy served him and his family alone, that he took pains to protect is underscored by a document issuing from the summer of 1658. This document established a guard outside the apothecary garden walls to keep people from stealing the gardens apples and scaring the Chancellery's horses.[104] Indeed, thieves were not the only threat to the garden. In 1663 an appeal was made on behalf of the gardener, Mikolai Petrov, to Aleksei Mikhailovich, complaining that birds had been eating the freshly sown seeds and tender shoots in the apothecary garden and that, "as these birds continue to pluck out every flower and herb, it is necessary to shoot them … but without the Sovereign's permission he, Mikolai, cannot do so."[105]

The old apothecary garden, before it was moved down the Neglinnaia in 1657, had been relatively large, being approximately 500 feet long and 100 feet wide. In order to maintain this precedent in the new garden, two plots of empty land were identified next to the already established garden of Prokofii Vraskov and were purchased and cleared for the project. The decree detailing this transaction directs the individual labor obtained from local peasant communities, as well as the Musketeers Chancellery and the Troitsa-Sergeev Lavra to lay the foundations for a new garden and pharmacy. Two years later the garden must have taken root in the neighborhood for the Chancellery dispatched its own people to collect from local 'elders' [*starostam*] *bobovy* and *tumakovy* flowers from the "garden quarters" [*sadovye i ogordnye*

[104] Ibid., vol. 3, 722.

[105] Ibid., vol. 2, 262-263.

slobody] of the city for the Apothecary Chancellery.[106] While moving a garden itself is fairly remarkable, this move called upon the action of numerous others, including a wide variety of peasants and townspeople who came and went through the Apothecary Chancellery, preforming light construction, selling necessary goods, and working in the garden.

Apothecary gardens benefitted from well-established, surprisingly cosmopolitan traditions of garden design in Russia. In general Russian gardens, including monastery, apothecary and pleasure gardens, were laid out as a square, sometimes as a circle, and organized according to a plan that consisted of two pathways intersecting at right angles, forming a cross in the middle of the garden space. In the center of the garden, where the paths met, would usually be located a small church or area in which to rest, depending on the size and the purpose of the garden. One of the earliest gardens known to conform to this layout was Ivan III's garden, or "the tsar's garden," established in 1495 and located just outside the Kremlin along the Moscow River (see figures 1 and 2). This space, dedicated to the pleasure of the tsar, hosted fruit trees and berry bushes as well as vegetables for the tsar's table and included a pavilion, or *besedka* in the middle with a fountain. Small animals from the tsar's menagerie were kept here and some even suggest the presence of an orangery by the end of the seventeenth century.[107]

During the reign of Aleksei Michailovich there were at least two other apothecary gardens within the city of Moscow. Aside from the new and the old apothecary gardens on either end the Neglinnaia, there was an apothecary garden at what was then known as the Frolov gates (located on the edge of Red Square where the Spasskii tower of the Kremlin is now) and the

[106] Ibid., vol. 3, 714. The document states the garden to have been 72 *sazhens* long and 14 *sazhens* wide. 1 *sazhen* is roughly equivalent to 7 feet.

[107] I. E. Zabelin, "Moskovskie sady XVII stoletii," pp. 266-321 in Idem, *Opyty izucheniia russkikh drevnostei i istoriia,* vol. 2 (Moskva: Gracheva, 1873).

apothecary garden in the German Quarters [*nemetskaia sloboda*] of the city.[108] Over the course of his reign Aleksei Mikhailovich founded two more apothecary gardens, one each at Izmailovo and at Kolomenskoe. The apothecary garden at Izmailovo is particularly notable because, unlike the other apothecary gardens from this era, it survives in plans and descriptions. One plan in particular shows a garden that consisted of several concentric circles connected by paths radiating from the center. Each section within the garden created by this plan was marked as having different plants growing within, including many fruit trees and quite a few "medicinal herbs."[109] N. A. Bogoiavlenskii points out the similarity between the plan for Izmailovo's apothecary garden and the circular calendar drawn in the sixteenth century by Russian traveller to India, Kozma Indikoplov. Bogoiavlenskii goes so far as to link this garden plan with what he calls "the general influence of foreign, and in particular Indian, medicines on Russian medicinal practice" in the sixteenth century.[110]

Izmailovo's curious circular apothecary garden was part of a larger project to create an 'experimental farm' at Izmailovo, which included a vineyard, a garden "in the Italian style," as well a terraced garden, all located around Aleksei Mikhailovich's wooden suburban palace and all forming a unified 'architectural style' that combined aesthetic values with utilitarian goals.[111] This 'experiment' included an effort to import Mulberry trees and grapes from Astrakhan in order to create a silk-manufactory and a working vineyard on the edge of Moscow.[112] In a similar

[108] Sytin, *Istoriia i planirovki*, 159.

[109] RGADA F. 27, op. 1, No. 12. This archival reference only refers to the mimeographed copy of the original map. The original, which has an archival citation of F. 27, op. 1, No. 484, Pt. 2, pg. 484 was not available for consultation while I was used the Moscow archives. It is, however, reproduced in a number of publications, including in Bogoiavlenskii, *Drevnerusskoe vrachevanie*, 245 and in Chernyi, *Russkie Srednevekovye Sady,* ill. 21.

[110] Bogoiavlenskii, *Drevnerusskoe vrachevanie*, 244.

[111] S. Palentreer, "Sady XVII veka v Izmailove," *Soobshcheniia Instituta istorii iskusstva AN SSSR* 7 (1956), 80-104.

[112] "Stat'i o tutovykh dereviakh i o prizyve iz-za moria sadovnikov," *Zapiski otdeleniia Russkii i Slavianskoi Arkheologii Imperatorskago Russkago Arkheologicheskago Obshchestva* 2 (1861), 376-387; T. B. Dubiago, *Russkie*

vein, a Chancellery report from 1661 details a request made to the military governor of Kadom, Boris Ermolaevich Bogichev, to send fresh tobacco seeds, taken that year from the field, to the Chancellery, presumably to propagate the plant (for medicinal purposes) within the apothecary gardens.[113]

The botanical ambitions for gardens were, in general, fairly high the age. While the gardens at Izmailovo struggled to cultivate mulberry trees, grapes and tobacco, the apothecary gardens of the Chancellery were transplanting whole berry bushes first from the village of Dmitrova in 1662, and then year earlier the garden the courtyard of Nikita Ivanovich Romanov had been divested of all his fruiting plants.[114] Romanov's "cherry and plumb [trees], white, red and black currant [bushes], and various medicinal herbs" were to be uprooted, Aleksei Mikhailovich ordered, and transplanted in the new apothecary garden at Kamennyi bridge, another name for the second, lesser known Chancellery garden at the Frolov gates. The evidence for transplantation into the gardens of Izmailovo as well as into the apothecary gardens of the Chancellery mark an early high tide in plant flows into Moscow and remarkably optimistic investment by Aleksei Mikhailovich in the ability of plants to flourish even after being radically displaces. Both plants and gardens, it would see, were destined to move and their ability to do so with even marginal success meant no small amount of botanical re-shuffling throughout Moscow in the late seventeenth century.

---

reguliarnye sady i parky (Leningrad: Gosudarstvennoe Izdatelstvo po stroitelstvu, arkhitekture i stroitelstvu materialisma, 1963), 24.

[113] Mamonov, *Materialy*, vol. 3, 738; Eve Levin, "Tobacco and Health in Early Modern Russia," pp. 43 - 60 in Matthew P. Romaniello and Trisha Starks, eds., *Tobacco in Russian History and Culture: From seventeenth century to the present* (New York: Routledge, 2009), 53.

[114] Mamonov, *Materialy*, vol. 3, 773.

If *travniki* linked the countryside to the city, combining peasant knowledge with elite medical practice, they did so both through their itineraries and through their contributions to the rapidly expanding garden culture of the time. This comprised the licit, sanctioned, and approved side of plant mobility in seventeenth-century Muscovy. There was, however, an illicit side to the collection and exchange of plants, to their distribution within the city of Moscow, and to their eventual use as curative agents. The trade in plants at the city's herb stalls [*zeleinye riady*] along with the detection and prosecution of poisoning and witchcraft form the basic components of illicit plant mobility at this time. This darker side to the collection and circulation of plants poses a distinct and important contrast to the travels and collecting activities of the Chancellery's *travniki*, for it reveals the very real and powerful anxiety felt towards uncontrolled mobility, informal spaces of cultivation, and unsanctioned knowledge about the natural world.

The city's herb stalls, like the Chancellery's gardens, formed an important space in which fresh herbs, seeds and other materials could be obtained relatively reliably. Also like the gardens, the stalls were part of a longer historical arc that linked the first appearance of pharmacies in Russia with the expansion of military medicine at the end of the sixteenth and beginning of the seventeenth centuries.[115] Unlike the gardens, however, the city's herb stalls became increasingly problematic for the state, dispensing poisons and sapping the market for state-sanctioned pharmacies. Transported along peasant networks of trade that were diffuse, extensive and little documented, the plants of Moscow's herb stalls made it to market directly counter the controlled and scripted travels of the Chancellery's *travniki*. Correspondingly, there were significant differences in the reaction of the state to the activity of the *travniki* as opposed to the activity of the city's stall-holders.

[115] L. F. Zmeev, "Pervyi v Rossii voenno-vremennyi gospital'," *Istoricheskii Vestnik* 25 (1886), 104-113.

No matter how unfavorably the state looked upon the stall holders at the herb stalls, the Apothecary Chancellery had no qualms buying plants and herbs from them, provided they could be identified. Somewhat oddly the doctors of the Chancellery were also often called upon to issue judgments against the stall holders, testifying as to whether or not particular items among their wares were poisonous or magical. In this way doctors of the Apothecary Chancellery became active participants in drawing the line between licit and illicit plant use in seventeenth-century Muscovy. Giving testimony in a series of poisoning and witchcraft trials that emanated from the city's problematic herb stalls, the Apothecary Chancellery became as embedded in the Russian world of black plant magic, just as Russian plants had become in the foreign pharmacopoeia of Dioscorides and others.

Moscow's market stalls were nothing if not convenient. Adam Olearius's description of the stalls in Moscow evokes both their variety and their vitality, as well as their clever spatial organization, tying certain wares to certain streets. He writes:

> Before the Kremlin is the largest and best market square in the city. All day long it is full of tradespeople, both men and women, and slaves and idlers … In the market place and in the neighboring streets, the wares and craft articles are displayed in stalls in popular locations, so that articles of one kind are all found in a single place. … [They each] have their special streets where they sell their wares. This arrangement is very convenient, for everyone knows where to go to find [what he wants].[116]

While in general market stalls were important to provisioning a dense and growing urban center, the herb stalls came under a specific kind of suspicion. Scattered throughout the city and populated with peasants, traders, wise-men [*znakhary*] as well as pharmacists and other mid-

[116] Olearius, *Travels*, 114-115.

level Muscovite servitors, the herb stalls "sold everything necessary to treat any illness," including "herbs, roots, oils, infusions and even salves."[117] Things began to change however with the appearance of state-sanctioned private pharmacies that given a monopoly on medicinal trade with city-dwellers.[118] Soon these monopoly holders began to issue complaints to the tsar, saying they were being undersold by illegitimate healers in the city's herb stalls. Aleksei Mikhailovich (later followed by his son Peter I) therefore actively decreed first the control and then the destruction of Moscow's herb stalls.

Despite the real breadth of the collection networks forged by the Chancellery's *travniki* and the peasants' *povinnost'*, the Apothecary Chancellery still took advantage of the resources local to Moscow, including trade with the problematic stalls selling herbs, plants, and daily necessities on the streets. One year in which the Chancellery's minor expenses were captured in detail, 1656-1657, shows the Chancellery buying necessary household items quite widely.[119] In September, for instance, the Chancellery ordered 13 *altyn* worth of the root *deviasil* from a trader, Ivaskha Vasilev who worked at the Honey stalls [*Medovye riady*]. From the vegetable stalls [*ovoshchnye riady*], however, the Chancellery only purchased glass bottles [*sklianitsy*] and funnels.[120] Also in that year a townsman [*posadskii chelovek*] by the name of Ivaskha Maksimov sold to the Chancellery a wagonload of herbs, roots and seeds for 20 *altyn*, while the peasant

[117] Novombergskii, *Vrachebnoe stroenie*, 209.

[118] *PSZ,* vol. 4, 177. "[November 22, 1701] … On the establishment in Moscow of eight new pharmacies, in which no spirits will be sold; and on the introduction of them to the Chancellery of Foreign Affairs [*Posolskii prikaz*] and on the destruction of the herb stalls [*zeleinykh lavok*]."

[119] Mamonov, *Materialy*, vol. 2, 202-206. This document, or *roskhod,* lists minor expenditures for the Apothecary Chancellery from 1656-1657.

[120] Ibid., vol. 2, 206.

Danilka Mikhailov sold two large vats to the Chancellery containing juniper berries as well as wormwood [*polyn'*] and dill for pickling [*kvashenia*].[121]

However easy or convenient Olearius claims the system of stalls was in the seventeenth century, Moscow's herb stalls are not easy to locate now. It would seem many places in Moscow sold herbs as medicine, including what used to be the "gold rows" [*zolotye riady*] in Kitai-gorod which became by 1700 well known *zeleinye riady*. Peter I initiated an investigation in 1700 into the *obrok* books for Kitai-gorod in order to determine exactly how long the herb stalls had been in that quarter, what they traded in and who traded in them. The investigation conducted by officials at what might be called the newly fashioned city hall [*ratusha*] turned up the answer that *obrok* had been collected from these herb stalls since at least 1626.[122] The investigating officials reported that whether or not the herb stalls predated this was impossible to say as the *obrok* books had all burned in a fire of that year. What was traded, regrettably, was not included in the report. It seems likely that given the ensuing legislation to ban the herb stalls entirely within specific districts (1701) herb stalls existed throughout the city, in various suburbs, independent of one another. As in the case of the "gold rows" of Kitai-gorod they were probably relatively well established.

The herb stalls did not appear in the documents of the Apothecary Chancellery as places where illegal and dangerous herbs could be purchased as medicines until relatively late in the century in 1679. Ironically enough, as the Musketeer Chancellery was responsible for policing the trade in illegal herbs, the first case concerns a musketeer, Grigorii Donskoi, whose visit to the

[121] Ibid., vol. 2, 206.

[122] RGADA, F. 143, op. 3, No. 466. The title of this document reads: "Information sent from the city hall [*Ratushi*] to the Apothecary Chancellery on the herb stalls [*zeleinykh lavkakh*] located in Kitai-gorod … 16 January 1700 g."

herb stalls led to the death of Prince Fedor Shcherbatov.[123] Feodor's brother, Iurii Shcherbatov submitted a complaint on March 16, 1679, claiming that a certain Grishka Donskoi, a mounted musketeer,[124] had given Feodor Shcherbatov, a kind of salve [*maz*] to apply to the skin and to drink with some wine that had led to Feodor's quick and painful demise. Upon interrogation, Donskoi admitted to providing Fedor with the offending salve, which he had purchased at the city's herb stalls. Significantly, the particular product which Donskoi added to the salve, *turskii kuporos*, also known as "blue vitriol" (a cupric sulfate) was an imported chemical medicine (and a toxic one at that). Donskoi describes how he applied to the salve to Feodor Shcherbatov's face and mouth for three days, and then instructed Feodor to drink a little with wine, so that the "sickness [*nechist'*] would be eaten away."[125] Disfigured and likely in great pain, Feodor died quickly thereafter. Fears that the herb stalls were dealing not just in suspect plants, but in dangerous medicines, chemical as well as herbal, were clearly well-founded. *Turskii kupros* was, in fact, a well-known medicinal agent sold in pharmacies and there is little to suggest that a doctor might have prescribed a different treatment. Part of the problem may well have been that the herb stalls were undercutting the state and state-sanctioned private pharmacies on an item they certainly would have carried.

A complaint filed with the tsar in 1699 by state secretary Mikhail Prokofiev seems to have encouraged an overview within the Apothecary Chancellery of the state of the herb stalls and the materials they were selling.[126] In his complaint, Prokofiev states that the *lekar'*, Andrei

[123] Mamonov, *Materialy,* vol. 4, 1110-1111; Clare Griffin, "The Production and Consumption of Medical Knowledge in Seventeenth-Century Russia: The Apothecary Chancellery," (Ph.D. Diss., University College London, 2012), 188.

[124] The *stremiannyi prikaz* was a division of the Musketeers Chancellery, being the cavalry equivalent to the unmounted guards (or *streltsy*).

[125] Mamonov, *Materialy,* vol. 4, 1110. The effects of poisoning by this particular cupric sulfate ($CUSO_4*5H_2O$) closely match Shcherbatov's symptoms, as outlined in Donskoi's statement.

[126] RGADA, F. 143, op. 3, No. 444.

Kharitonov, had provided medicine to his uncle, Iurii Prokofiev, to cure a specific malady [*boleznii vrenskom*]. On that same day and presumably because of the medicine dispatched, his uncle, Iurii Prokofiev had died. Mikhail Prokofiev therefore implores the sovereign to "make inquiries about the medicines that he, Andrei, had prescribed and inspect the remaining medicines."[127]

Under interrogation Kharitonov testified that he had given Iurii Prokofiev medicine for a disease affecting Prokfiev's eyes. However, according to Kharitonov, Iurii Prokofiev had also purchased, of his own accord, a *zolotnik*[128] of mercuric chloride [*lekarstvo suleima*], at the herb stalls from a man named Mikishka Tuleishchikov. While Tuleishchikov's qualifications are not mentioned, the medicine he gave to Prokofiev "to cure his cancerous eyes" was affirmed by representatives of the Apothecary Chancellery to be mercuric chloride. Tuleishchikov, not surprisingly, blamed Iurii Prokofiev for his own misfortune, claiming that though he, Tuleishchikov, had weighed out a *zolotnik* of the medicine, he had done so not realizing that Prokofiev was drunk. Further stating that he did not know Prokofiev and had known neither conflict nor friendship with the man, Tuleishchikov emphasized the absence of malice or ill-intent in his market dealings, but not the dealings themselves. At the conclusion of the investigation, in which several traders at the herb stalls were questioned, the tsar decreed that it was Mikishka Tuleishikov who was at fault, for which he was to be sent from Moscow to Kursk, to be exiled with his wife and his children. As for Andrei Kharitonov, people were dispatched to collect and list his medicines. Should any poisonous ingredients be found, the decree warned, Kharitonov was to be executed, regardless of whether he had dispatched this substance, knowingly, unknowingly, or at all.

[127] RGADA, F. 143, op. 3, No. 444, pg. 1.

[128] A *zolotnik* is an old Russian unit of weight equaling approximately 4.25 grams.

1699 was also the year that P. P. Saltykov, a notable boyar, had died after ingesting medicine that he too had obtained from the herb stalls. Saltykov's servant, Aleshka Kamenskii, was brought before the Musketeers Chancellery [*streletskii prikaz*] in June to be interrogated on his role in his master's death. Kamenskii testified that he had cured Saltykov a number of times before with medicines that Saltykov himself had sent him to the herb stalls to buy. In this particular instance he had bought a container with about an eighth of a *zolotnik* of an unidentified substance that he calls *afian* from a market trader named Andrei Ganka.[129] He divided the contents of the container into 12 doses, which he gave to Saltykov, who then ingested them from a crystal cup. Guards from the Musketeers Chancellery were dispatched to find and seize the medicines being sold by Andrei Ganka at the herb stalls, bringing them to the Apothecary Chancellery to be examined by the doctors there. Meanwhile, another six traders from the herb stalls were interrogated about the products they sold and how long they had been trading in medicines.[130] These traders testified that they never gave medicine to sick people without a doctor's list [*rospis'*], which required doctors, presumably from the Apothecary Chancellery, as well as the market apothecaries both to personally examine the sick person.[131]

Most of these poisoning cases reviewed here appear in a single Chancellery document clearly generated to address the problem of the herb stalls. These cases were included as summations, recorded after the fact and are followed in the document by a series of other recorded orders and decrees that center on the state's increased efforts to suppress the trade in herbs, roots, seeds and other medicinal goods outside of the official state and private pharmacies. A 1673 decree is reproduced, perhaps for the sake of convenience or for establishing precedent,

[129] RGADA, F. 143, op. 3, No. 444, pg. 1.

[130] Griffin, "Production and Consumption," 183.

[131] RGADA, F. 143, op. 3, No. 444, pg. 7.

detailing Aleksei Mikhailovich's attempts to establish a monopoly on the trade in internal medicines for the state-sanctioned pharmacies. The language of the decree emphasizes that

> to establish order within the dry-goods, vegetable, and herb markets, those people trading in medicines, who sell them either in the old or in the new markets …[including]… elixirs and oils made of juniper, cinnamon, anise, or other ingestible medicines, are not to have them nor are they to sell them … on the pain of great punishment.[132]

Only a few, named individuals are then allowed the right to trade in internal medicines. Artem Petrov and Kuzme Semenov "and friends" are given permission to hold and trade in various oils infused with herbs, as well as a range of animal and mineral products and spirits, along with the standard assortment of flowers, roots and leaves. Allowing them to set up operation within the herb stalls, Petrov and Semenov are in fact encouraged to serve "every rank" of person in their medical trade. The signature at the bottom indicates that the decree was also sent to the Musketeers Chancellery, which was responsible for enforcement.

In 1693 Peter I issued a decree that put medicines in league with any other kind of food, or trade good, or perhaps more accurately, subjected trade goods to the exacting scrutiny already established for official imported pharmacy medicines. According to this decree, all sables, furs, food and drink, and medicines were to be presented to the Apothecary Chancellery, where they would undergo inspection, quarantine and be levied customs duties, before they were to be released for sale in the city.[133] Once customs were paid, stamps would be issued to indicate legal trade of the listed items. Of course this ukaz did not relate to illegally traded medicines at the herb stalls, and of course the herb stalls were difficult to eradicate entirely. Because they blended in with dry goods markets and vegetable markets, and as the reiteration of the 1673 ukaz within

[132] RGADA, F. 143, op. 3, No. 444, pp. 2-3.

[133] *PSZ*, vol. 3, 167-168.

the document from 1699 suggests, decrees could be forgotten, go unnoticed, or lose their teeth after time. Peter's decrees starting in 1701 that followed the investigation of the "gold rows" in Kitai-gorod call not just for control of ingestible medicines within the herb stalls, but for their complete destruction. "Those herb stalls," Peter decrees, which can be found on the streets and at crossroads, and "in which herbs [*travy i zelie*] are sold in the place of medicines … are to be removed from the city …they are to be broken and [the streets] purged of those herb stalls."[134] The relative resilience of the herb stalls to all attempts at closing them down suggests a healthy trade in locally sourced medicinal plants, provided by traders, identified and prepared by wise-men [*znakhary*] and wise-women [*znakharki*], locals who held up traditional herbal therapy. The Chancellery, at least initially, depended on this element of unregulated collection and trade as it built up its pharmaceutical stores and planted its apothecary gardens. In the poisoning case involving Tuleishchikov listed above, the doctors of the Apothecary Chancellery, Lavrentii Blumentrost, G. Carbonari, and Andrei Folkellerman along with the pharmacist, Petr Pil, were called upon to identify the offending material. The Chancellery staff would become even more deeply embedded in popular misuse of herbal medicines as they were pulled increasingly into the witchcraft trials of the seventeenth century, trials that often had magical herbs and roots at their heart.[135]

While the apothecary garden on the Neglinnaia was clearly a depot for plants and seeds, collected and dispatched from the across the Russian landscape by the Chancellery's *travniki*, the Chancellery itself became an important nexus for assessing belief about and state interest in the practice and prosecution of black magic. The Apothecary Chancellery and its apothecary gardens

[134] RGADA F. 143, op. 2, No. 521, pg. 2.

[135] Elise Marielle Becker, *Medicine, Law, and the State in Imperial Russia* (Budapest: Central European University, 2011). Becker writes that "medicine and law in Russia were intertwined from their beginnings," and though her work focuses on the nineteenth and twentieth centuries, there is much in the Muscovite era to corroborate her claims.

had a role to play in this late seventeenth-century turn towards the identification and prosecution of the occult. Acting as expert witnesses in witchcraft trials and even inheriting the botanical property of the dispossessed, the Apothecary Chancellery and its gardens were tapped by Russian officials to help draw the line between licit and illicit plant use, between the medical and the magical in Russian nature.

One of the more prominent witchcraft trials of the late seventeenth century was the trial of A. S. Matveev, the prominent and formerly powerful nobleman who was accused of having and circulating black books in 1676. In May of 1677 the house and the gardens of the now fallen Artemon Sergeevich Matveev's estate were deeded to the Apothecary Chancellery by order of Feodor Alekseevich, along with the plants and trees on that estate and the servant or *dvornik* who knew them.[136] The garden included over 200 apples and pear trees, both "grafted and grown from seed," as well as a variety of berry bushes. Cherry trees and barberry bushes were included in a subsequent, more detailed list of the effects of Matveev's estate, along with cucumbers and raspberry patches. In some of the open beds, secretaries noted, seedlings had been planted while others were still under the plow. This work was still underway by Matveev's gardener, Senka Leontev, who continued to live on the premises and work the garden beds even though Matveev, according to Leontev, "had gone away on business."[137]

As Valerie Kivelson and others have recently explored, seventeenth-century Russian witchcraft is a rich subject that speaks, among other things, to the evolving apparatus of control of movement and the ways in which knowledge and power come together in a juridical discourse over occult threats embedded in the natural world. Though incidental to the witchcraft trials as a whole, several trials did involve the testimony of the Apothecary Chancellery, which was called

[136] Mamonov, *Materialy*, vol. 4, 940-941.

[137] Ibid., vol. 4, 941.

upon to examine and determine whether given herbs, roots or flowers were medicinal or not.[138] Generally the Chancellery would stop just short of calling a plant magical, though they would not hesitate to either admit they did not know what a specific substance was or determine that it was likely not medicinal.

Matveev, a powerful, cosmopolitan, and westward-leaning nobleman, came under suspicion of witchcraft in 1676 after the death of Aleksei Mikhailovich, whose support he had long enjoyed. The fall of the Naryshkin family under Aleksei Mikhailovich's son and new tsar, Feodor Alekseevich and the rise of the Miloslavskii clan signaled Matveev's decline from power. Matveev's previous Chancellery work included heading the Foreign Relations Chancellery [*Posol'skii prikaz*] from 1671-1676 as well as the Apothecary Chancellery from 1672-1676. These positions marked Matveev as a particularly cosmopolitan member of the court. There is evidence to suggest that Matveev took a notably active role during his time at the Apothecary Chancellery, during which a marked increase in translations of foreign works into Russian occurred, as well as the expansion of the royal pharmacy into the "upper" and "lower" branches.[139]

Matveev's crime was of keeping and copying "black books," [*chernoknizhestvo*] which Matveev later claimed were "anatomical diagrams, medical advice, Arabic numerals and algebraic exercises." Materials, as Valerie Kivelson sharply points out, were "precisely the kind of foreign, imported texts that would set off alarms."[140] In Kivelson's reading, the "horror of *chernoknizhestvo*," or the crime of having, reading and distributing black books, contained within it a "far more generalized fear of literacy run amok, of illicit copying and circulation of

[138] Griffin, "Production and Consumption," 191.

[139] Ibid., 68.

[140] Kivelson, *Desperate Magic*, 149.

texts, and the capacity of writing to serve the disruptive ends of subversive individuals."[141] The Foreign Affairs Chancellery absorbed Matveev's offending library collection unironically taking responsibility for the very objects that had facilitated his downfall.[142]

Though *chernoknizhestvo* was in fact a relatively rare charge in seventeenth-century witch trials, Kivelson's reading of it might well provide a powerful explanatory model for the particular occult power ascribed to plants. Clearly using plants as medicines was not in and of itself inherently evil, at least not according to the tsars, who readily ingested herbal and mineral based medicinal concoctions. Having and trading in an unidentified, potentially dangerous herb, root or flower attracted the interest of the state when it moved from the countryside to the city, as it did in the herb stalls, or when it passed from individual to individual, particularly from servant to master. The threat of the herb stalls may not have been far different from the threat of *chernoknizhestvo* in that the herb stalls facilitated the uncontrolled distribution of those texts already copied by nature: individual plants. While the pragmatic reason for shutting down the herb stalls was to avoid future deaths like the one suffered by Feodor Shcherbatov the fact remains that the most dangerous substances in circulation were those associated with the pharmacies. If the herb stalls were circulating *turskii kupros*, it was not because traditional herbal medicine called for it, but because Muscovites sought the latest, most effective medicine: the chemical medicine of the Apothecary Chancellery. While shutting down the herb stalls may have been immediately practical, they were also clearly guilty of another, less easy to define form of adulteration.

[141] Ibid., 150.

[142] Sergei Belokurov, *O Biblioteke Moskovskikh Gosudarei v XVI stolietii* (Moscow: G. Lissner i A. Geshel', 1898), 69-74; S. P. Luppov, *Kniga v Rossii v XVII veka* (Leningrad: Nauka, 1970), 103.

It is particularly striking that tsar Aleksei Mikhailovich, who was so clearly interested in exotic and useful plants and whose reign saw the establishment of so many new gardens, was also the tsar who in 1653 reignited the popular opprobrium of witchcraft with its focus on malevolent herbs. In a decree from 1653 he banned owning or using "heretical and fortune-telling books and letters and spells, *and roots and grasses*."[143] Of course, tsars themselves were not without a touch of folk belief, especially when it came to ideas of health and disease and so even as Aleksei Mikhailovich was banning the heretical use of roots and grasses, he was commissioning their collection according to practices that were deeply rooted in traditional folk belief. On June 15, 1658 Aleksei Mikhailovich wrote to Afanasii Matiukhin of the Horses Chancellery [*koniushii prikaz*], asking him to direct the peasants in the villages attached to that Chancellery to collect roses [*tsveta seraborinnogo*], a kind of sweet grass called *inperikovaia trava*, and mint with the flowers still on it.[144] The tsar is careful to point out in this directive that the peasants are to collect these plants on "the birthday of Ioann Predtechi, June the 24th," which aside from being a well-known Church holiday, also happened to be the night of Ivan Kupalo. Both holidays – Orthodox and pagan – were associated in folk belief with the best possible time for collecting medicinal herbs. A. B. Ippolitova notes in her volume on seventeenth- and eighteenth-century manuscript Russian herbals, that the observance of sacred holidays, Orthodox or otherwise, in rituals of plant collection was common and the "preference to collect herbs from Ivan Kupalo night and Ivan's day is apparent even in the earliest seventeenth-century herbals."[145]

Even if plants were not necessarily or inherently magical, belief in magic colored the Muscovite understanding of plants. Valerie Kivelson's discussion of the threat posed by the

[143] Kivelson, *Desperate Magic*, 147. As quoted and translated by Kivelson. Emphasis my own.

[144] *DAI,* vol. 3, 254.

[145] Ippolitova, *Russkie rukopisnye travniki*, 131.

specific form of witchcraft known as *chernoknizhestvo* or having "black books," includes the description of the seizure and detailed recording of suspect libraries during black books investigations. Not dissimilar was the seizure and listing of medicines taken from *znakhary* and *lekary* of the city's herb stalls suspected of dispensing either magic or poison. The close overlap of concerns about poison, magic and medicine are perhaps rooted in the oldest understanding of the stuff of all three: the substance that made up the *pharmakon*.[146] Just as in the case of Matveev's black books, the crime in having them was in reading them. For Russia as elsewhere, the majority of the magic, medicine and poison-producing stuff in the world was recognizably herbal and the crime in having potentially black plants was in "reading them" as well, knowing which could be used to harm and which could be used to help.

The Apothecary Chancellery, as central as it may have been, was not the only center of medical activity or botanical collection and distribution in seventeenth-century Russia. "Along with the newly created, secular medicine," writes Sokolovskii, "there was also the medicine practiced in the monasteries and by the people, medical assistance being offered by [both] monks and 'wise-men,'" all being practiced at the same time in and around Moscow.[147] The Apothecary Chancellery was ultimately a part, an important part but still just a part, of a wider network of routes collection, sites of cultivation and bodies of knowledge that made up seventeenth-century Russian herbal and medical practice.

It was a practice however in which the acts of collection and distribution were strictly controlled. For the Chancellery's *travniki*, their livelihood was defined by their ability to travel, but the scope of their travels was always limited, sometimes by the season and sometimes by

[146] Michael A. Rinella, *Pharmakon: Plato, drug culture, and identity in ancient Athens* (Lantham, MD: Lexington Books, 2010). I must thank Dr. Kristen Gentile for a most stimulating discussion this topic that helped to generate this idea.

[147] Sokolovskii, "Kharacter i znachenie," 68.

their access to state infrastructures. The *travniki* who did put down their tools, so to speak, shirking their Chancellery duties, took advantage of their temporary permission to move about the country side unhindered in order to "go walking." Whether they did so in order to find new opportunities or to relieve themselves of irregular and poorly paid work is difficult to assess. Meanwhile, peasant collectors who were perhaps the most strictly controlled also seem to have been the most prone to taking advantage of the informal network of trade that gave rise to the herb stalls in Moscow.

Clearly plants moved in seventeenth-century Russia, from the countryside into the city, establishing patterns of circulation that broke down along social and cultural lines, while staying well within the geographical and infrastructural parameters of the early Muscovite state. As plants moved, new forms of mixed social status resulted from the creation of networks of plant collection and knowledge production. Garden spaces even at this early date formed profoundly dense sites of knowledge creation, cultural encounter, and expressive exchange between foreign doctors, their Russian colleagues, and the natural world that surrounded them.

Chapter Two:

Via the Volga:

Medicinal and Botanical Plant Collection along Russia's Southern Borders in the First Half of the Eighteenth Century

On April 13, 1720 a doctor was sent from the Medical Chancellery in St. Petersburg to the far southern city of Astrakhan, an old and relatively cosmopolitan port where 2,000 miles of the Volga River empty into the Caspian Sea through a large and shifting delta. That doctor, whose name has not come down to us, was sent with the express purpose of collecting and "preparing the herbs necessary to the pharmacy [in Moscow], and to establish there a garden [*ogorod*] and to build a greenhouse to store such trees and herbs brought from Persia that cannot otherwise survive the winter." The doctor from the Chancellery was crucial for this plan, but he was not alone. "For the preparation of these herbs which are required by the Pharmacy," the decree continues, "take from St. Petersburg to Astrakhan a pharmacist and a gardener."[1] The creation in 1720 of a garden in Astrakhan, complete with a greenhouse and staffed by a doctor, a pharmacist and a gardener was part of a much larger, concerted effort made by the Russian state in the guise of the Apothecary (reorganized as the Medical) Chancellery to turn the port of Astrakhan in to a botanical and medical gateway opening on to the empires bordering the Caspian Sea.

The creation of Astrakhan as botanical and medical outpost highlights the pull of Russia's southern borders on its emerging scientific community in general and on the Medical Chancellery in specific. Why Chancellery doctors and their students travelled overwhelmingly to the south, where they collected specimens, and what they expected to find there all contributed to

[1] M. M. Speranskii, ed., *Polnoe Sobranie Zakonov Rossiiskoi Imperii,* 45 vols. (St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kansteliarii, 1830), vol. 6, 251. Hereafter *PSZ.*

the creation a distinct botanical discourse issuing from the Chancellery that was intimately tied to the military and merchant ambitions of the Russian Empire. Focused on botanizing other empires, the botanical travels of Chancellery doctors existed in distinct contrast to the travels of Academy naturalists who headed instead to Siberia in this same era. For the latter group, the botany of the new world, of places as yet unstudied by science, provided a much more powerful model for discovery and encounter with the natural world. Over the course of the next two chapters, therefore, this dissertation will examine how different routes and different destinations provoked diverging traditions of collection and distinct botanical discourses between the sibling institutions of the Medical Chancellery and the Academy of Sciences. Because the expeditions of the Medical Chancellery remain relatively unstudied, and because they form the natural outgrowth of the seventeenth-century, medico-herbal expeditions described in chapter one, the southern itineraries of the doctors of the Medical (Apothecary) Chancellery will be presented first.[2]

The southern itineraries of Chancellery doctors differed from the Siberian itineraries of Academy naturalists in several significant respects. First and foremost the doctors of the Chancellery relied fundamentally on maintaining a close relationship with the Empire's network of military outposts. In addition to this, Chancellery doctors had the benefit of being able to follow river-based and overland trade routes long-established by merchant communities. The infrastructures of travel in these places that were so densely connected and so long associated with the Russian Empire clearly influenced where Chancellery doctors could and would travel, where they would collect, what they would describe and in some cases what they would eventually cultivate.

[2] The reorganization of the Apothecary Chancellery [*Aptekarskii prikaz*] into the Medical Chancellery [*Meditsinskaia kantselariia*] in 1712 will be discussed below.

Moreover, the doctors of the Medical Chancellery travelled to these regions with a with a series of pre-established beliefs, what I call a "botanical imaginary," in mind about the character of the region to which they were headed and the kinds of botanical discoveries that they were liable to make there. The region of the southern Caucasus, especially Mt. Ararat in modern day Turkey, was believed in the eighteenth century to hold the remnants of Noah's Ark and thus the origin of the world's human, animal and plant diversity. Finding the locations of both the resting point of the Ark and the presumed vestiges of the Garden of Eden promised the ability to work forward from the physical origins of life to the modern spread of global biogeography. In an era of competing systems of classification and debates over relatedness of various forms of life, to be able to recreate a historical family tree of all living things that played out geographically across space and temporally according to the biblical schedule of creation would be a powerful scientific theory indeed. Russian imperial, religious and scientific interests therefore combined on the southern horizon the Caspian and the Caucasus and on the Volga and the Don River basins that watered them both. This specific combination drew Russia's small but growing community of doctors and botanists around the Medical Chancellery to collect in, describe and transplant the flora of Russia's southern borders to the gardens and cabinets of Moscow and St. Petersburg.

The imperial imperative to bolster Russian military presence along its southern borders grew markedly from the middle of the sixteenth through the middle of the eighteenth centuries, pulling Chancellery officials of all ranks into the rapidly expanding infrastructure of the "southern theater."[3] The nature of Russian imperial expansion in general, but to the south in

[3] John LeDonne, "The Grand Strategy of Russian Empire, 1650-1831," in *The Military and Society in Russia, 1450-1917,* eds. Eric Lohr and Marshall Poe, 175-195 (Leiden: Brill, 2002). Technically, John LeDonne refers to the Black Sea basin and the Dniepr-Dniestr corridor as the "southern theater," but he includes in this designation Peter I's Persian campaigns of the 1720s and the control of the shores of the Caspian, so I will borrow his term and use it

particular, involved confrontations with several different world powers and the assimilation of wide swaths of ecologically varied terrain and culturally varied peoples.[4] The seizure of Kazan in 1552 and the capture of Astrakhan in 1556 secured for Russia the length of the Volga River, an important trade route that added a wide array of multi-ethnic and multi-confessional communities to the Russian Empire.[5]

With a greater Russian military presence along the southern borders came increasing conflict and rising tensions with the neighboring Ottoman and Persian Empires. Taking Azov from the Ottomans in 1696 after a long and arduous siege, Peter I escalated Russian-Ottoman tensions, which brought the city of Astrakhan under increased pressure from both the Safavid and Ottoman Empires. From Russia's perspective, therefore, the lower Volga River and the steppe that surrounded it had thus long constituted a profitable if problematic corridor to other empires.[6] Since the middle of the sixteenth century Muscovy had been focused on controlling the lower Volga in order to secure a safe foothold on the Caspian Sea thereby increasing trading prospects with Persia as well as India and China. Increased physical access to the Ottoman Empire was also important, as was protecting Russian settlements from Cossack and Tatar incursions. "The Russian annexation of Astrakhan," as Rudi Matthee explains, "proved to be one of momentous importance for commercial relations between the Slavic and Muslim worlds.

---

somewhat loosely to refer to the region roughly from Azov to Astrakhan, including the Russian-controlled sections of the Black and Caspian Seas.

[4] Andreas Kappeler, *The Russian Empire: A Multiethnic History* (Harlow: Longman, 2001); Michael Khodarkovsky, *Russia's Steppe Frontier: The Making of a Colonial Empire, 1500-1800* (Bloomington: Indiana University Press, 2002).

[5] Matthew P. Romaniello, *The Elusive Empire: Kazan and the Creation of Russia, 1552-1671* (Madison: University of Wisconsin Press, 2012).

[6] Michael Khodarkovsky, *Where Two Worlds Met: The Russian State and the Kalmyk Nomads, 1600-1771* (Ithaca: Cornell University Press, 1992); John LeDonne, "Building an Infrastructure of Empire in Russia's Eastern Theater, 1650s – 1840s," *Cahiers du Monde Russe* 47 (2006), 581-608; Willard Sunderland, *Taming the Wild Field: Colonization and Empire on the Russian Steppe* (Ithaca: Cornell University Press, 2004).

Incorporated into the Muscovite realm and rebuilt, the town emerged as the principal crossroads where merchants from Russia, Iran, Central Asia and India met and exchanged their wares."[7]

The Medical Chancellery grew over the course of the seventeenth century in almost direct correlation to military and merchant expansion. For a Chancellery doctor one of the most well-supported ways to travel and collect throughout the Russia Empire was as a military physician attached to a division or military fort [*ostrog*]. Russia's military regiments and outposts were staffed by apothecaries [*aptekari*], surgeons [*lekary*], and other low level Chancellery members as early as the 1630s.[8] By the beginning of the eighteenth century, staffing Russia's military regiments had become one of the Chancellery's primary responsibilities.[9] By virtue of this close relationship between the military and medical practice, the doctors of the Medical Chancellery primarily conducted their botanical activities in contested regions, where there was a notable military presence and where the infrastructure to support them already existed. Integrated into Russia's military under the terms of medical service, the field doctors of the Medical Chancellery collected information and materials at military outposts and along the road, building in the process a network of collection for the Chancellery that was particularly strong along Russia's southern and southwestern borders.

The Volga River, meanwhile, had long been a means for moving various things, including plants from the south into Moscow. The import, on a truly remarkable scale, of mulberry trees through Astrakhan up the Volga River in the mid- to late-seventeenth century

---

[7] Rudi Matthee, "Anti-Ottoman Politics and Transit Rights: The Seventeenth-Century Trade in Silk between Safavid Iran and Muscovy," *Cahiers du Monde Russe* 35 (1994), 742.

[8] *Akty Istoricheskie sobrannye i izdannye Arkheograficheskoiu Kommisieiu*, vol. 3 (St. Petersburg: Ekspeditsiia zagotovleniia Gosudarstvennykh bumag, 1842), 318. Hereafter cited *AI*. "[1632 December 19] *Pamiat* from the *Razriadnii* Chancellery to the Apothecary Chancellery, on dispatching from Moscow two surgeons [*lekarei*] to the field to prince Semen Prozorovskii."

[9] Andreas Renner, *Russische Autokratie und europäische Medizin. Organisierter Wissentransfer im 18. Jahrhundert* (Stuttgart: Franz Steiner Verlag, 2010).

marked the watery corridor as an early botanical highway for the Russian Empire. Early documentary evidence shows tsar Aleksei Mikhailovich was interested in exploiting this capacity of the river as early as June of the 1672 when he commanded his Privy Council [*prikaz tainykh del*], in the person of *podiachi* Markel Matokhin, to travel to the city of Astrakhan in order to speak with the boyar Iakov Nikitich Odoevskii about the import of mulberry trees [*tutovoe derevo*] into Moscow.[10] Both the tsar and the Privy Council sought clarification from Odoevskii as to how these trees were maintained and whether it was feasible to remove the majority of them to Moscow in order to establish an interior, domestic silk manufacture. As governor of Astrakhan province Odoevskii presumably already knew the extent of mulberry orchards in the region or knew to whom he should delegate the task of finding out.

The first of Matokhin's duties was to find in either Astrakhan, the town of Terek, or possibly from points further abroad, a number of trees along with "the best gardener, who is capable of bringing the mulberry trees to Moscow along with the [knowledge of the] production of mulberry seeds and of silk worms."[11] As many young trees with their soil as Matokhin could obtain were to be sent back to Moscow along the Akhtuba and Volga Rivers the following fall. Along with mulberry orchards, Matokhin was also supposed to look for melon groves and vineyards, and again, gardeners experienced in cultivating these specific plants. The instructions to Matokhin clearly state that he is to interview Odoevskii personally as well as any local gardeners about how to maintain these gardens, vineyards, and orchards. Any gardeners willing to travel were to be sent to Moscow, though, the instructions add, they also ought to be the "best,

[10] "Stat'i o tutovykh derev'iakh i o prizyve iz za more sadovnikov," *Zapiski otdeleniia Russkii i Slavianskoi Arkheologii Imperatorskago Russkago Arkheologicheskago Obshchestva* 2 (1861), 376-387.

[11] "Stat'i o tutovykh derev'iakh," 377.

most peaceful and least proud people."[12] Matokhin's duties did not stop in Astrakhan, but included similar objectives in the town of Sinbirsk (Simbirsk, now Ulyanovsk) and Tsaritsyn (now Volgograd), both places known for their mulberry orchards nestled along the Volga. To all of this, appended in the tsar's own hand, are the concluding instructions:

> In Astrakhan in the gardens of the residents of Astrakhan and of every government worker, count every mulberry tree, both young and old, and write down whether they have fruit, and from these fruits collect seeds and send them to Sinbirsk. (For the berries, money will be given).[13]

This botanical entourage of plants and soil, along with the gardeners who knew how to maintain them both, indicates that seventeenth-century Russians knew the challenges as well as the potential profit that came with growing exotic plants in new climates. Included with the mulberry trees, melons and wine grapes in this series of decrees was also a species of tree for making paper [*bumazhnoe derevo*], each plant requiring the collection of much more than its roots, stem and leaves.

This kind of early economic botany was in fact a significant part of Aleksei Mikhailovich's economic ambitions, nor were these ambitions isolated to the Volga River basin. On September 4, 1661, for instance, Aleksei Mikhailovich issued a decree ordering Boris Ermolaevich Bogichev to dispatch tobacco leaves and seeds, presumably for planting, from the Kadom region (south-east of Moscow) to the Apothecary Chancellery.[14] While the purchase of date palm seeds [*semeni finikolnovo*] riddle Chancellery documents, one case in particular, dated June 1662 asks for both date palm and pineapple seeds to be sent to the Apothecary Chancellery

[12] "Stat'i o tutovykh derev'iakh," 377. "… sadovnikov samykh dobrykh, smirnykh i ne gordykh liudei."

[13] "Stat'i o tutovykh derev'iakh," 380.

[14] N. E. Mamonov ed., *Materialy dlia istorii meditsiny v Rossii*, vol. 3 (St. Petersburg: B. G. Ianpol'skago, 1884), 738.

in Moscow with the specific instructions to plant them in the Chancellery's garden.[15] The Volga River therefore was already a key botanical highway, one of the primary routes for bringing exotic plants, whole or as seeds, into the city of Moscow through its southern borders. When the Medical Chancellery began to plan for its own, more extended botanico-medical expeditions at the start of the eighteenth century, the Chancellery itself was already a key site for the collection and cultivation of these southern species.

The broad swath of territory that encompassed the shores of the Caspian Sea, the northern and southern Caucasus, and the shores of the Black Sea was clearly as interesting to plant collectors outside of the Russian Empire as it was to military and medical personnel within in. Joseph Pitton de Tournefort (1656-1708), a prominent French botanist and doctor and director of the Louis XIV's *Jardin du Roi* in Paris, travelled throughout this region and much of the eastern Ottoman Empire besides, collecting and describing a wide array of plants. These collections not only enriched the king's gardens, they went on to contribute to Tournefort's already highly influential work, his *Institutiones rei herbariae*, then one of the primary texts for botanical classification. [16] In his widely popular, much celebrated botanical travel memoir, *A Voyage to the Levant*, Tournefort emphasized the region's biblical history, articulating a widely held belief about the twin religious and scientific importance of the region.[17] Not only did Tournefort believe that Mt. Ararat was likely the resting ground for Noah's Ark, but that this necessarily made it and the historical local of the Garden of Eden the historical and geographical centers of global plant and animal distribution.

---

[15] Mamonov, *Materialy*, vol. 3, 768.

[16] Joseph Pitton de Tournefort, *Institutiones Rei Herbariae,* 3 vols. (Paris: Typographia Regia, 1700).

[17] Joseph Pitton de Tournefort, *A Voyage into the Levant,* 2 vols. (London: D. Browne, 1718). This edition of Tournefort's memoir was the first English translation. It was published almost simultaneously with the French original (1717) which was possible due to the fact that they were published posthumously, well after Tournefort's death in 1708, and so had been quite some time in preparation.

This complex set of primarily European beliefs concerning the veracity of the bible stories of Noah's Ark and the Garden of Eden had informed early modern European natural historical discourse for some time.[18] This discussion was founded on a belief that events described in the story of Noah's Ark had occurred in history and that the landing point of the historical Ark had been followed by the dispersion of the world's existing fauna across the globe. It was correlated with a belief that the Garden of Eden had also been a very real place, presumably not far from where the Ark had come to rest, and was the point of origin for the world's floral diversity.

Joseph Pitton de Tournefort was a clearly one of the more influential people in eighteenth-century botanical practice, both within Russia and outside of it. In Russia Tournefort's classificatory system was preferred to those of his contemporaries, Herman Boerhaave and John Ray. All three naturalists sought to create a comprehensive, natural system of botanical nomenclature that could encompass and give order to the increasing number of known plants in the world. Tournefort's *Institutiones rei herbariae* was one of the most successful attempts at creating such a system and as such was widely adopted in the early eighteenth century. Tournefort's system, which was based on the form of the corolla of the flower, later became strongly influential to Carl Linnaeus's sexual system of plant classification

[18] George Stanley Faber, *Horae Mosicae: Or, A Dissertation on the Credibility and Theology of the Pentateuch* (London: F. C. and J. Rivington, 1818). Faber gives a near contemporary overview on historically minded approaches to the events of the Old Testament. For the literature on the role of Natural Theology in eighteenth century natural sciences, see Charles Coulston Gillispie, *Genesis and Geology: A Study in the Relations of Scientific Thought, Natural Theology, and Social Opinion in Great Britain, 1790-1850* (Cambridge: Harvard University Press, 1951); Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967); Peter Harrison, Ronald L. Numbers and Michael H. Shank eds., *Wrestling with Nature: from omens to science* (Chicago: University of Chicago Press, 2011).

and so remained influential even after the Linnaean "revolution" in classification and nomenclature.[19]

The well-known, contemporary debates over the relative advantages and disadvantages of natural versus artificial systems of classification came out of a larger sense of urgency towards understanding and harnessing the recently discovered and clearly overwhelming diversity of the natural world.[20] Starting from the assumption that God created all living things in the Garden of Eden, one way to understand the relatedness of observable difference amongst plants and animals was geographically and spatially, that is, as a narrative of original distribution from a single locus. In the strongly Judeo-Christian world that Tournefort and his contemporaries lived in, that point of original distribution had to be the resting place of Noah's Ark and the historical site of the Garden of Eden.

Biblical scholars had long analyzed the words of Moses in trying to decipher where, on surface of the earth, Noah and his Ark could have landed. In a nineteenth-century review of the "credibility and the theology of the Pentateuch," George Stanley Faber affirms and provides a thorough bibliography for the widely held belief "that the Ark … rested on the summit of mount Ararat … situated in the high land of Armenia."[21] Both ancients and moderns, in the enlightenment sense of the term, affirmed this general but very real location of Noah's Ark. The famous trader and French imperial jeweler Jean Chardin, a generation before Tournefort, wrote

---

[19] Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge: Harvard University Press, 1999), 18. For other, more general assessments of Linnaeus's particular contributions as scientifically 'revolutionary,' see: James L. Larson, *Reason and Experience: The Representation of Natural Order in the World of Carl von Linne* (Berkeley: University of California Press, 1971); Staffan Müller-Wille, "Collection and collation: theory and practice of Linnaean botany," *Studies in the History and Philosophy of Science Part C* 28 (2007), 541-562.

[20] Paul Lawrence Farber, *Finding Order in Nature: the Naturalist Tradition from Linnaeus to E. O. Wilson* (Baltimore: Johns Hopkins Press, 2000); Wolfgang Lefevre, "Natural or Artificial System? The Eighteenth-Century Controversy on Classification of Animals and Plants and its Philosophical Contexts," in *Between Newton and Kant: Philosophy and Science in the Eighteenth-Century*, edited by Wolfgang Lefevre, 191-209 (Dordrecht: Kluwer, 2001).

[21] Faber, *Horae Mosicae*, 118.

in his incredibly popular travel memoir detailing the cities, courts, religious sites and other monuments of seventeenth-century Persia that "twelve leagues from Erivan, the celebrated mountain, [there] everyone agrees rests the ark of Noah, though no one has any solid proof of it."[22] When Tournefort was sent by Louis XIV to the Levant it was not simply to botanize in an exotic locale like his compatriots in Canada and the French West Indies, but it was also to visit in a scientific capacity the historical landscape of the events of the Bible. This mission took Tournefort across Ottoman and Persian borders, travelling through Asia Minor and into the Southern Caucasus under the French flag from 1700 to 1702.

In his resulting travel memoir, *Voyage into the Levant* (1718), it is readily apparent that Tournefort read the botanical diversity of the region around Mt. Ararat as evidence for his belief that he had found the historical location of the Garden of Paradise. Reasoning from the geography of the Old Testament, Tournefort outlines in his memoir how the four biblical rivers "where *Adam* and *Eve* first appear'd upon the Stage of the World," was likely the valley formed by the rivers Euphrates, Tigris, Pishon and Gihon. "It cannot be doubted," Tournefort continues, "that Paradise must have been in the way between *Erzeron* [Erzurum] and *Tiflis*… in the beautiful Vales of *Georgia*, which furnish *Erzeron* with all kinds of Fruits."[23] Describing Mount Ararat, which was taller than any mountain in Europe, to be the swell of land onto which Noah's Ark eventually came to rest, Tournefort and his companions spent a great deal of time convincing regional officials and local guides to take them up the mountain to look for evidence of the sacred event. Their resistance to aiding Tournefort in what may have seemed like an unseasonable and therefore dangerous request was tempered by their agreement with the basic

[22] Jean Chardin, *Voyages du Chevalier Chardin, en Perse, et autre lieux de l'Orient*, vol. 2 (Paris: Le Normant, 1711), 188.

[23] Tournefort, *Voyage to the Levant,* vol. 2, 242.

principle of Tournefort's searches. They reminded him, however, than many before him had tried to do the same and had come away, in better weather, unsuccessful.

Tournefort's *Voyage* was a remarkably successful work, not least because it was accompanied by detailed descriptions and beautiful illustrations engraved by Claude Aubriet, showing in fine detail the many plants that could be found in Tournefort's *Institutiones*. Even if Tournefort's *Institutiones* had been published almost two decades before *Voyage*, the research he conducted while in the Levant unquestionably bolstered the earlier text, which was given a second edition in 1719. The *Institutiones* is essentially a botanical reference work, listing individual plants in nested classification, each hinged on its binomial and followed by an abbreviated botanical description with a string of citations noting where that plant had been described and categorized before. If the *Institutiones* was Tournefort's effort at deriving an organizational scheme of the plant world, his *Voyage into the Levant* was an attempt at narratively invoking it in sumptuous and dramatic detail. The popularity of both of these works, different as they are, stemmed from Tournefort's ability to provide breadth and depth in his botanical work, giving a sense of the population as well as the individual in the varied and often confusing world of botany. What is more, Tournefort articulated for the community of naturalists a sense of botanizing the ancient past in the eastern Ottoman Empire and the northern Caucasus.

The military specter of the Russian Empire, such a boon to the doctors of the Chancellery, cast a shadow on Tournefort's own travels. While in the city of Kars waiting to cross the border from the Ottoman into the Persian Empire, Tournefort and his companions were held on suspicion of being spies for the "Great Duke of Muscovy." The local official, or Bassa, told them through an intermediary that he "might forfeit his Head, if it came to be known at Constantinople that he had omitted to seize three *Franks*, that perhaps might be the Great Duke of *Muscovy*'s

Spies."[24] Throughout the second half of the seventeenth century unrest and conflict with raiding Tatars and Cossacks, some of whom were Ottoman-supported and some of whom were not, had led the Russian military to increase its pressure along the southern borders and to push the Tatars and other nomadic peoples back into Ottoman territory. As the Tatars constantly re-negotiated with the Russians against the Ottomans and with the Ottomans against the Russians, it is hardly surprising that the accusation of being a Russian spy on Ottoman territory carried with it the penalty of death.

Tournefort avoided a great deal of suspicion travelling as a doctor. In a passage that may well illuminate why Peter I chose to send doctors from the Medical Chancellery to regions as contested as the western shores of the Caspian and the rivers of the Caucasus, Tournefort cannily remarks that

> A Box of Medicines well chosen and prepar'd, and properly used, is a good Passport. There's no Part of the World where one can't raise one's self Friends by the help of Physick… But the Fear of Death prevailing in all Places, [people] are every where glad of Physicians.[25]

The Russian Empire in the guise of its Medical Chancellery clearly understood this evaluation and sought to capitalize upon it. Tournefort's agenda in botanizing the Levant was part of a general attempt shared by many to map Western Europe's cultural and biological origins from the point of historical and mythic dispersal. Importantly, this geographical point was in a part of the world that the Russian Empire had unique access to.

Eighteenth-century doctors and naturalists, at least those who engaged in long-distance travel for the sake of collection, clearly thought outside of strict geopolitical borders.

---

[24] Tournefort, *Voyage to the Levant*, vol. 2, 219.

[25] Tournefort, *Voyage to the Levant*, vol. 2, 282.

Tournefort's own collection, his personal cabinet, according to one contemporary "was a second Ark, to which the creatures, animate and inanimate, were come to won themselves as it were the Tributaries of him who had brought them together."[26] This particular vision of the biological diversity of the Southern Caucasus and the mission of the naturalist married biblical and scientific mission in a way that was profoundly influential to doctors and the naturalists of the Medical Chancellery who followed Tournefort to the Levant, but under the Russian flag. If any cabinet or collection was to be a 'second Ark,' it needed to represent the world's flora and fauna at the largest possible scale. Therefore largely pragmatic or political explanations for the travels of the doctors of the Medical Chancellery to Russia's southern borders miss a crucial element of why doctors and naturalists travelled in the first place. Military and merchant networks, as we shall see, explain *how* doctors of the Medical Chancellery travelled from Moscow to the Caspian. However, the botanical imaginary that saw the Southern Caucasus as a potential point of origin for the globe's observed biodiversity, helps to explain *why* they travelled where they did and *what* their scientific agenda might have been once they got there.

While Tournefort was voyaging to the 'Levant,' the city of St. Petersburg was being founded (1703) in Russia's north. Over next several decades Peter I would connect his new city to the Volga River waterway through extensive canal-building projects, linking the Neva River and the Baltic with the Volga River and the Caspian Seas. In 1712 the Medical Chancellery was relocated to St. Petersburg, requiring the transfer of an incredible amount of documents, collections, as well as garden plants, all overseen by Robert Erskine, "Archeator" of the Medical

[26] Tournefort, *Voyage to the Levant,* vol. 1, xvi. This passage comes from the introduction of the work, featured in both the French and English editions, entitled "The Life of Mr. Tournefort: In a letter to M. Begon, Intendant of the Marine at Rochefort," and signed by "Lauthier."

Chancellery.[27] With the Medical Chancellery and the bulk of its collections and personnel in St. Petersburg, a smaller Moscow branch of the Chancellery remained in that city, meaning that throughout the reign of Peter I, "there were two branches of state medicine. In Moscow the Apothecary Chancellery continued to operate [as before] … and in the new capital – St. Petersburg – the Apothecary (Medical) Chancellery began to function."[28]

As the head of the Medical Chancellery Robert Erskine was not only responsible for moving the offices, staff, archives and (considerable) library of the Chancellery to St. Petersburg, he was responsible, a year later, for laying out an apothecary garden on the northern end of St. Petersburg. While it is unclear how much of the apothecary garden in Moscow was uprooted to create the garden in St. Petersburg, it is almost certain that Erskine removed some portion of his own personal garden which, presumably, he would have begun upon his arrival in Russia in 1704.[29] Erskine probably already had a large collection of plants to divvy up between the two cities. Of Erskine's botanical activities before the move to St. Petersburg, Cornelius de Bruyn, who visited Erskine in Moscow in December 1707, noted that Erskine was "employed in collecting from all quarters, and disposing with the utmost elegancy on paper, all the principle herbs and flowers, which are useful in medicine, and of which he had already filled a book." Nor was Erskine content to simply catalogue the plants already found in Moscow's environs, for de Bruyn continues, "He likewise … assured me that he intended to send into Siberia for a collection of simples, flowers and plants."[30]

---

[27] John H. Appleby, "Robert Erskine – Scottish pioneer of Russian Natural History," *Archives of Natural History* 10 (1982), 377-398; M. B. Mirskii, "Doktor Robert Erskin – Pervyi Rossiiskii Arkhiatr," *Otechestvennaia Istoriia* 2 (1995), 135-145.

[28] M. B. Mirskii, *Meditsina Rossii X-XX vekov: ocherki istorii* (Moscow: ROSSPEN, 2005), 127.

[29] Appleby, "Robert Erskine," 378.

[30] Cornelius de Bruyn, *Travels into Muscovy*, vol. 2 (London: A. Bettesworth, 1737), 179. In this case, "simples" refers to the basic components of compound medicine. In some cases minerals and animal products were considered 'simples,' but by and large the term referred to the individual herbs used to compose various medicines.

Part of Erskine's manner of 'sending out' into Siberia included appointing doctors from the Chancellery, who were all highly educated foreigners, to travel with Russian-speaking assistants and guards to regions that coincided with Russia's mercantile and military interests. The doctors of the Medical Chancellery who conducted the earliest of these increasingly professional expeditions ended up following Matokhin down the Volga looking for more than mulberries. Gottlob Schober (1670-1739) was the first such doctor and botanist to be dispatched to the south by the Medical Chancellery. While Schober could not have been familiar with Tournefort's own particular vision of the Levant, he quite clearly came from the same community of medical and botanical researchers who saw at the edges of the Russian, Ottoman and Persian Empires a unique avenue to understanding the botany of "Paradise," both historical and mythic.

Born in Leipzig, educated in Utrecht, Gottlob Schober arrived in the Russian Empire by way of Lubeck, Narva, Reval, Leipzig and Dresden, where he worked as (a somewhat itinerant) doctor. When he learned in 1711 of death of one of Russia's imperial physicians, he applied directly to count Gavril Ivanovich Golovkin, the head of the Foreign Chancellery in Russia who was at that time traveling through Dresden, for a position within Russia's medical establishment. In response to this request Peter I appointed Schober as the personal physician to his sister, Natalia Alekseevna.[31] When he arrived in Moscow, however, it became apparent that Natalia Alekseevna already had a personal physician she preferred so Schober was hired instead as a doctor in the Chancellery and was later given directorship of the main pharmacy in Moscow.[32]

---

[31] "Schober, Gottlob," in: *Allgemeine Deutsche Biographie* 32 (1891), 206 – 207. Accessed online: http://www.deutsche-biographie.de/pnd120057999.html; Wilhelm Michael von Richter, *Geschichte der Medicin in Russland*, vol. 3 (Moscow: N. S. Wsewolojsky, 1817), 134-140.

[32] Mirskii, *Meditsina Rossii*, 142; V. I. Lipskii, *Istoricheskii Ocherk Imperatorskago S.-Peterburgskago Botanicheskago Sada (1713 – 1913)* (St. Petersburg: Gerol'd, 1913), 62.

Because Robert Erskine, still head of the Medical Chancellery, and through him, Peter I, were both strong adherents to the theory of mineral hot springs as medical therapy (balneology), Schober was quickly drafted by Erskine and Peter to explore the southern reaches of the Terek, the Don and the Volga Rivers for a number of reported hot springs.[33] Peter's order to the Senate in June of 1717 requisitioned for doctor "Shubert" the transports [*podvody*] and other materials necessary for travel in search of "hot springs in our domain (especially in those places, where iron is found), which might be useful against diseases."[34] Officially Schober was tasked with determining the location of these hot springs but was also expected to test them chemically for their mineral content in order to gauge their therapeutic value. However, before Schober left Moscow in 1717 Erskine asked him also to look for plants along the way in which Erskine's own "*herbarium vivum* was deficient."[35] This herbarium vivum, Erskine's personal herbarium, which was eventually included in the collections of the Kunstkamera in St. Petersburg, primarily contained medicinal plants from the Moscow region. Several unidentified species in the surviving herbarium suggest that Schober may well have satisfied Erskine's particular request.[36] Between Schober's intended destination, the river Terek in the Northern Caucasus, and his intended route, via the Volga River, there was a great deal of travel and collecting involved.

Schober travelled from 1717 to 1720 conducting a wide range of research, making many botanical and mineralogical observations, satisfying his balneological responsibilities, and even engaging in ethnographic work. The bulk of Schober's botanical collections issuing from the southern Volga and Caucasus regions were transported back to the apothecary garden in Moscow,

[33] Mirskii, *Meditsina Rossii*, 131.

[34] *PSZ*, vol. 5, pp. 498-499.

[35] Appleby, "Robert Erskine," 379.

[36] P. V. Siuzev, "Botanicheskaia starina," *Bulletin de la Société Imperiale des naturalistes de Moscou* 18 (1904), 427-434. Siuzev provides a detailed description of Erskine's herbal, which is currently held in the Kunstkamera in St. Petersburg but could not consulted for this dissertation.

where he was appointed director after his return in 1720. Out of his travels Schober produced a voluminous manuscript, his *Memorabilia Russo-Asiatica* (1718), which survives in an abridged manuscript copy in the archives of the Academy of Sciences in St. Petersburg.[37] Originally comprising three volumes and containing over 40 illustrations, Schober's major work was never published in its entirety. It appears, however, to have been fairly well known within Russia's botanical community at the time.[38] Johann Jacob Lerche (1703-1780), a student of Schober's and a physician with the Russian military, had a copy of the *Memorabilia* made as he prepared for his own travels to Astrakhan where he was to join Russia's Persian campaigns in the early 1730s.[39] This copy was deposited in the library of the Medical Chancellery [*Medicinischen kantzley*] years later in 1758.

This manuscript copy produced by Lerche served as the basis for G. F. Müller's publication of excerpts of Schober's work in his *Sammlung Russische Geschichte* between 1760 to 1762.[40] Müller was unable to consult Schober's original manuscript volumes presumably because, as Lerche had noted, they were given to Johann Gottfried Heinzelmann, a younger

[37] SPF ARAN, R. IV, op. 1, No. 326. Gottlob Schober, *Memoriabilia Russo-Asiatica, i.e. Observationes Physicae, Medicae, Geographicae, Politicae, Oeonocmiae & ct &ct .. In itinere Ao. 1718*.

[38] Valentin Rose, *Die Handschriften-Verzeichnisse der Königlichen Bibliothek zu Berlin, Zwölfter Band*: *Verzeichniss der Lateinischen Handschriften* (Berlin: A. Asher, 1893), 489. This catalogue of the manuscript division of the State Library in Berlin (formerly the Imperial Library in Berlin) indicates Schober's three original, manuscript volumes may well have made their way to Europe. This entry state that the library was then in possession of a work by an author named "Theophrasti Schoberi," a "Medicinae Doctoris," entitled "*Memorabilia Russo-Asiatica.*" This work consisted of three volumes as containing 127, 89 and 56 pages respectively, with a total of 43 images, far more than the copy currently held in the Archives of the Academy of Sciences in St. Petersburg.

[39] Johann Jacob Lerche, *Rußisch-Kaiserlichen Collegienraths, und Doctors der Arzeneywissenschaft, Lebens- und Reise-Geschichte, von ihm selbst beschreiben* (Halle: Curtis Witwe, 1791).

[40] Gottlob Schober, "Beschreibung des St. Peters-Bades bey Terki," *Sammlung Russische Geschichte* 4 (1760), 157-175; Gottlob Schober, "Beschreibung des Schwefel-Brunnens der Sergiewsk an dem Flusse Sok von D. Gottlob Schober," *Sammlung Russische Geschichte* 4 (1760), 541-548; Gottlob Schober, "Auszug aus D. Gottlob Schobers bisher noch Ungedrucktem Werke: Memorabilia Russico-Asiatica," *Sammlung Russische Geschichte* 7 (1762), 1-157.

doctor to whom Schober showed great affection and who appears to have taken them out of the country when he was dismissed from Russian imperial service in 1737.[41]

The work itself, or rather the copy that remains, provides a broad overview of the geography, natural history and ethnography of the Volga River, the shores of the Caspian Sea and the Caucasus. The first of Schober's three volumes, entitled "Memorabilia Russico-Moscovitia," treats the regions around Moscow, establishing a pattern that Schober follows throughout the work of describing first the waters, the soils and then the airs of the place, before moving on to plants, animals and peoples. The second of Schober's volumes, entitled "Memorabilia Volgensia," treats the length of the Volga River as one long geographical and ecological zone, grouping plants, animals and peoples together without differentiation between the upper or the lower stretches of the river. It is in this section that Lerche's copy includes sketches of the illustrations present in Schober's original (see figure 4), many of which, unfortunately, have been cut out of the archival copy.[42] The third and final volume, entitled "Memorabilia Asiatico-Turcica," treats the northern and western shores of the Caspian Sea, the city of Astrakhan and great stretches of Georgia, Bukhara and Dagestan.

Schober's descriptions of the landscape and the plants of the Northern Caucasus reveal a botanical imaginary not far different from Tournefort's. Indeed, he cites Tournefort throughout, relying on Tournefort's *Institutiones* to identify many of the plants he describes. Unlike Tournefort, Schober does not use his travel memoir as a means to discuss the historical origins of humanity, but he does use the word "paradisus" to describe the diversity and fertility of the land around Astrakhan and the river Terek, saying: "Alias tota haec Provincia terrenus jure vocari me

[41] SPF ARAN, R. IV, op. 1, No. 326, pg. 1v. Lerche writes on the first page of his copy that "Das Original ist hernach dem H. Rats Henzelmann in die Händer gekommen."

[42] SPF ARAN, R. IV, op. 1, No. 326, pg. 87v. Unfortunately, it is apparent that the manuscript in the archives of the Academy of Sciences once contained many more such illustrations but that have been subsequently removed.

retur Paradisus."[43] Müller's later translation renders this sentence: "The entire country deserves to be known as an earthly Paradise."[44] The region around Astrakhan and the Terek River is clearly linked with paradise in the metaphorical if not the literal sense of the word.

It is significant when Schober chooses to use the term paradise because he does not use it lightly. Müller, however, was far more liberal with it, peppering it into Schober's text where it did not appear originally. In one instance Müller renders a passage thus: "the Author was in this paradise in October and November of 1717 and found only the smallest portion of herbs due to the early appearance of the rough autumn."[45] In the original Latin, however, Schober only mentions that "in the months October and November, 1717, I saw doubtful few plants, which the fierce autumn climate in that year did not favor the vegetation."[46] Müller and Schober both, to varying degrees, saw paradise in the landscape of the southern Volga and the Caucasus.

Upon his return to Moscow in 1720, Schober assumed the directorship of the apothecary garden in Moscow, which he began to organize according to the "botanical methods" of Tournefort and Rivine.[47] Quite possibly the first time the apothecary gardens in Moscow had been organized according to any botanical method, the return of Schober from the south marked many changes for this botanical space. By the early 1730s Schober had begun to correspond with Adriaan van Royen (1704-1779), a professor of botany at Leiden and Johann Amman (1707-1741), the new professor of Botany at the recently established St. Petersburg Academy of Sciences, seeking to put the Moscow garden and his "Asian collections" on the botanical map. While this correspondence is not complete, it is clear that Schober intended to use the plants he

[43] SPF ARAN, R. IV, op. 1, No. 326, pg. 124v.

[44] Schober, "Memorabilia Russico-Asiatica," 114. "Dies ganze Land verdient ein irdisches Paradies gennant zu Werden."

[45] Schober, "Memorabilia Russico-Asiatica," 34.

[46] SPF ARAN, R. IV, op. 1, No. 326, pg. 82.

[47] SPF ARAN, R. I, op. 74a, No. 28, pg. 1v. "Letter from Schober to Amman, 1733."

cultivated from Russia's southern regions as valuable exotics ready for trade, while the garden in Moscow itself would be a launching place for the creation of a much wider network of correspondence.

Both Amman and Van Royen sent Schober seeds, while thanking him for the receipt of the same. To van Royen, in a letter dated August 31, 1731, Schober writes that "next winter baron Peter Schafirov will return from Persia; he is an admirer of this science [botany] and promises to bring back with him many rare and curious seeds."[48] Schober promises to share with van Royen whatever he can from this remarkable botanical source. It is unclear what happened to this plan and the correspondence between van Royen and Schober ends here. In a correspondence that left more in the way of documentation, Schober wrote to Amman asking for news of St. Petersburg and unabashedly places his "Asian" specimens on par with those of Hans Sloane, with whom Amman had worked before coming to Russia. In a moment of bursting pride, Schober suggests that Amman's East and West Indies plants are all that are wanting from Schober's own "Herbarium Vivum" which, he boasts, is already approximately 14,000 plants strong.[49]

In many ways Schober's work, travel, texts and botanical collections set the stage for the doctors and botanists who came after him in the Medical Chancellery. His approach to the botany of the Caspian and the Caucasus was influential in establishing the apothecary garden in Moscow as an enviable botanical collection rich in 'Asian' plants.

---

[48] Waller Manuscript Collection, Ms benl-00617. Van Royen to Schober (19 February 1731), accessed online: http://waller.ub.uu.se/22874.html. The letter from Schober to Van Royen, dated 31 August 1731 is written on the back of the first page of the earlier letter from Van Royen to Schober and therefore is catalogued as such. Schober's exact phrase reads: "…futura hyeme revertit P. Baron Schaffiroff e Persii. Ille est hoc in studio Amator et promisit ex Regni Persum qualunque rarissima et curiosa sint Semina, secum portare ad velle Patriam."

[49] Dmitry D. Sokoloff et al., "The history of botany in Moscow and Russia in the 18th and early 19th centuries in the context of the Linnaean Collection at Moscow University," *Huntia* 133 (2002), 129 – 191. While the sentiment is expressed in the above cited letter from Schober to Amman, Sokoloff et al. have described the remnants of Schober's herbaria in their 2002 article.

In many ways, Schober's counterpart in pinning Russia's southern borders on the map, botanically speaking, was Johann Christian Buxbaum (1693-1730) who assumed the role of director of the Medical Garden in St. Petersburg in 1721.[50] Buxbaum came to Russia during a time of transition for the medical establishment, as Schober was settling down into the routine of cultivation, preparation and distribution of medicinal plants in Moscow's apothecary garden, Buxbaum was tasked with reviving the flagging apothecary garden on the outskirts of St. Petersburg that Erskine had established some seven years earlier and which, since 1719, had appeared to exist with no specialized, dedicated personnel to run it.

Not unlike Schober, Buxbaum had received an extensive education throughout northern Europe studying at Leipzig, Wittenberg, Jena, Leiden and Halle.[51] Though Buxbaum never managed to get a medical degree he did produce a *Flora* of the Halle region and was on good terms with faculty there.[52] Therefore when Peter sought recommendations for medically trained and horticulturally skilled person to direct the new garden in St. Petersburg, Professor G. F. Hoffmann suggested his student Buxbaum. It was Lavrentii Lavrentevich Blumentrost, Erskine's successor, who eventually offered Buxbaum a contract for 5 years service with the Medical Chancellery.[53] Once in St. Petersburg, Buxbaum focused on the garden's collections, conducting a series of small, local collecting trips to bolster its contents. Many years later Buxbaum was able to organize these early collections into a series of publications for the Academy of Science's new

[50] As I note elsewhere, the garden of the Medical Chancellery in Moscow is generally referred to as *aptekarskii ogorod* and thus translated as apothecary garden, while the garden of the Medical Chancellery in St. Petersburg is generally referred to *aptekarskii sad* and thus translated as medical garden.

[51] "Buksbaum, Iogan-Khristian," pg. 447 in A. A. Polovtsov, ed. *Russkii biograficheskii slovar': Betankur – Biakster* (St. Petersburg: Glavnoe Upravlenie Udelov, 1908).

[52] J. C. Buxbaum, *Enumeratio Plantarum Accuratior in Agro Hellensi* (Halle: Magdeb, 1721).

[53] SPF ARAN F. 3, op. 1, No. 700, pp. 7-8. Buxbaum's 1724 contract with the Academy of Sciences was also reprinted in: *Materialy dlia istorii Imperatorskoi Akademii Nauk*, vol. 1 (1883), 54-55, hereafter cited *MIIAN*

journal.[54] He also in these early years started giving lectures to students on the grounds of the garden, though the fact that they were in Latin may have hampered their effectiveness.[55]

In keeping with the Medical Chancellery's decidedly southern orientation, Buxbaum's major botanical expedition was directed to Russia's south, to Constantinople, Asia Minor, and the Caucasus all the way to Astrakhan. Buxbaum's travels were facilitated by the departure of Aleksandr Ivanovich Rumiantsev's diplomatic mission to Constantinople, which left St. Petersburg in 1724. Peter I's "Persian campaigns" had ended successfully in 1722 with the acquisition of Derbent and Baku. Taking advantage of declining Safavid (Persian) power in the region, Russia's southward advance along the shores of the Caspian Sea had inspired no small amount of resistance from the neighboring Ottomans and local Cossacks and Tatars, but by 1724 an uneasy peace had been arranged between these parties. Rumiantsev had been sent to Constantinople to secure the ratification of the peace treaty and Buxbaum was included in his retinue both as an acting doctor and as a researching naturalist whose collections were to serve as the foundation for the Academy of Sciences that Peter I and Lavrentii Lavrentevich Blumentrost were already planning.

In order to guide his exploration of Russia's southern borders, Buxbaum was given instructions by a "Blumentrost," presumably Ivan Lavrentevich, the Archeator of the Medical Chancellery.[56] These instructions extended to Buxbaum a broad writ to study "the kingdoms of

---

[54] *Commentarii Academiae Scientiarum imperalis Petropolitanae* 14 vols. (St. Petersburg: Imperatorskaia Akademiia Nauk, 1728-1751); V. F. Gnucheva, *Materialy dlia istorii ekspeditsii Akademii Nauk v XVIII – XIX vekakh* (Moscow: Akademii Nauk SSSR, 1940), 30. Gnucheva notes that Buxbaum published one article, broken down into several installments, on his botanical findings around St. Petersburg. See: "Observationes circa quasdam plantas Ingricas …" *Commentarii*, vol. 3 (1728), 264-273, 343-347, 369-371; idem, *Commentarii,* vol. 4 (1729), 281-283.

[55] "Buksbaum, Iogan-Khristian," 447; S. Iu. Lipshits, *Russkie Botaniki Biografo-bibliograficheskii slovar'*, vol. 1 (Moscow: Moskovskoe Obshchestvo Ispytatelykh Prirody, 1947), 297.

[56] As will be noted later, the Blumentrost brothers, Ivan Lavrentevich and Lavrentii Lavrentevich, were both deeply involved in Russia's early scientific community under Peter I. As the Archeator of the Medical Chancellery and the

nature" and directed him to send back to Medical Chancellery "specimens and drawings of noteworthy objects, and … to pay the closest attention to medicinal plants."[57] In a published archival document that is likely Buxbaum's actual, signed contract, the first two points stipulate that Buxbaum is to "diligently observe the realms of nature… especially those which relate to medicine."[58] While on these travels Buxbaum engaged in natural historical research broadly speaking, clearly exceeded the simple injunction to collect medicinal plants just as Schober had exceed the injunction to 'test the waters' of the Terek.

In his letters to Blumentrost and the Medical Chancellery, Buxbaum dispatched a remarkable number of plants, seeds, drawings, notes and a wide array of natural historical specimens back to St. Petersburg, the bulk of which stemmed from his long stay in and around the city of Constantinople. In March of 1725 he sent back samples of "Mexican Balsam," "Rose oil," and other "wonders" that were not all strictly botanical, nor entirely new but decidedly medicinal.[59] Later that summer Buxbaum and the French diplomat, Baron Renne, visited the cliffs known as "the Pillars of Pompeii" outside of Constantinople. He and the Baron both, apparently, used the opportunity to observe a number of inaccuracies in Tournefort's descriptions of the same place described in the *Voyage*. Buxbaum later summed up the experience by claiming in a letter to Blumentrost: "I do not consider my work there in vain …

---

president of the Academy of Sciences, respectively, their correspondence and official assignments are not always clearly delineated between the two.

[57] "Buksbaum, Iogann-Khristian" 447-448; Gnucheva, *Materialy dlia istorii*, 30.

[58] *MIIAN,* vol. 1, 55.

[59] E. I. Kolchinskii et al., *Estestvennaia istoriia v Rossii* (*ocherki razvitiia estestvoznaniia v Rossii v XVIII veke*) (St. Petersburg: Nestor-Istoriia, 2004), 80.

because we found over 70 new, fresh plants, and among them some new genus, which I have not yet named."[60]

For three years Buxbaum traveled extensively throughout Asia Minor, collecting along the southern coast of the Black Sea, throughout the Caucasus, and in the cities of Baku and Derbent.[61] When he returned to St. Petersburg in October 1726 he divided his collections, at least that portion that he carried with him, between the new Academy and the Medical Chancellery. In a report he filed in Moscow upon his return he summarized that in his time in "Persia" he had managed to observe 11 new genera and 225 new species, "and these are all fully worked up, and I value them more than 1,500 plants of Tournefort."[62] These plants could easily help to fill the pages of the Academy's new journal, Buxbaum wrote, "and if every member [of the new Academy] took as much care as I have over their responsibilities, then ours could compete with the leading Academies elsewhere."[63]

If Buxbaum saw his own work as improving upon that of Tournefort's, his attention to the region not as the site of Noah's ark, but as the home of historical empire of Byzantium may well have been conceived of as an improvement as well. Upon his return to St. Petersburg in January 1727, Buxbaum immediately began publishing his research, contributing essays on the botanical classification and identification of new plant species and genera in the journal of the Academy of Sciences.[64] Over the next two years, while serving as the first Chair of Botany in the Academy, Buxbaum labored over his major work, the crowning text of his travels in Ottoman

---

[60] P. Pekarskii, *Istoriia Imperatorskoi Akademii Nauk v Peterburge,* vol. 1 (St. Petersburg: tipografiia imperatorskoi akademii nauk, 1870), 238.

[61] Gnucheva, *Materialy dlia istorii,* 1940, 30-31.

[62] Pekarskii, *Istoriia Imperatorskoi Akademii*, 241.

[63] Pekarskii, *Istoriia Imperatorskoi Akademii*, 241.

[64] Lipshits, *Russkie Botaniki*, 297. Lipshits gives a full list of all of Buxbaum's publications, as well as a list of all of Buxbaum's manuscripts held (as of 1947) in the Academy's archives.

and Persian lands, his *Plantarum minus cognitarum*, which focused on the description of the plants of Asia minor, or, "Byzantium," as Buxbaum pointedly called it in his full title.[65] Buxbaum clearly held Tournefort's *Institutiones Rei Herbariae* as an example and as a challenge to his own botanical work. He had certainly traveled with a copy of Tournefort's *Institutiones* and while he may have been aware of Tournefort's *Voyage,* he clearly had never seen the engravings by Claude Aubriet that accompanied it. However Buxbaum, like Tournefort, had not neglected to travel with an artist, and so was able to declare, "I have eleven new genera and 225 new species; and I have presented them in such a way," that is, pictorially, "that now they are more valuable to me that Tournefort's 1500 plants which I only know by their names."[66] Buxbaum's illustrations completed by Johann Christian Mattarnovyi, the son of the Russified German architect involved with designing the Kunstkamera in St. Petersburg, were well-executed and appreciated by many at the time.[67] Buxbaum was not the only one to see the similarities between his own project and Tournefort's, though he may have been alone in his negative assessment of Tournefort's accomplishments. One French visitor to St. Petersburg in 1726 who did not hold Buxbaum's talents in high regard, nevertheless did predict that Buxbaum's forthcoming volume on the plants of the Ottoman and Persian Empires, was likely to provide "new discoveries in botany and to supplement the *Voyage to the Levant* of the illustrious M. Tournefort."[68]

---

[65] Johann Christian Buxbaum, *Plantarum minus cognitarum Centuria I – V complectens plantas circa Byzantium & in oriente observatas*, 5 vols. (St. Petersburg: Academiae, 1728-1740).

[66] As quoted in: Renee E. Kistemaker, et al. eds., *The Paper Museum of the Academy of Sciences in St Petersburg c. 1725-1760: Introduction and Interpretation,* (Amsterdam: Royal Netherlands Academy of Arts and Sciences, 2005), 156.

[67] "Mattarnovi, Filipp Egorovich," *Bolshaia biograficheskaia entsiklopediia*, accessed online http://www.ucheba.su/dictionary/word/258866/ ; A. K. Sytin, "Osobennosti russkoi botanicheskoi illiustratsii pervoi poloviny XVIII veka," *Herba* (2009), n.p. http://herba.msu.ru/russian/journals/herba/icones/sytin2.html.

[68] Pierre Deschisaux, *Description d'un voyage fait a Saint Petersbourg* (Paris: Thiboust, 1728), 4-5.

Clearly Buxbaum saw himself and Tournefort as coequals engaged in fundamentally similar research tied to the same deeply meaningful region of the world. The links that Schober's text makes between Russia and "Asia," and the relationship Buxbaum's work presents between the Russian Empire and the plants of "Byzantium" establish Russian imperial presence not just in the 'east,' or in 'Asia' but in other empires and empires of the past. Russia's first major, published contribution to transnational botanical discourse was not patterned off of discovering an entirely new world of botanical diversity, but rather in rediscovering and botanizing an older one.

The doctors and botanists of the Medical Chancellery who came after Buxbaum and Schober continued to travel to the south as members of heavily guarded diplomatic and trading envoys. With the establishment of an apothecary garden in Astrakhan and the emergence of a resident community of military doctors there, Chancellery expeditions began to focus more on regions extending out from Astrakhan, spreading into the southern Urals and the surrounding steppe. The organization of the Orenburg Expedition, and the travels of Johann Gottfried Heinzelmann and Traugott Gerber illustrate the consistent focus placed on Russia's southern expanses by the Medical Chancellery over the course of the eighteenth century. Heinzelmann and Gerber both stuck to the practice of botanizing 'other empires,' but in their case the ancient trading empires of the silk road and the khanates of the southern Volga and Don River basins occupied their attentions. Their travels, manuscript *floras* and collections represent the continuation of the broadly southern itineraries of Medical Chancellery expeditions, indicating the key investment that Chancellery's collections, cabinet and gardens, continued to make in Russia's southern periphery.

At the height of his career, after he had become director of the apothecary garden in Moscow, Gottlob Schober shared his expertise and his resources with a young, Moscow-based doctor, Johann Gottfried Heinzelmann.[69] Heinzelmann was in Russia working as a doctor in the campaign office of Field-Marshal Minikh, though it is unclear how he obtained that position or why he sought his fortune in the Russian Empire in the first place.[70] In 1733 Heinzelmann first appears in Chancellery documents having been appointed to the Orenburg Expedition organized by state senator I. K. Kirilov to establish a Russian trading presence in the steppe north of the Caspian. Heinzelmann's appointment to the Orenburg Expedition hints at the growing divide between the Moscow and St. Petersburg medical and botanical communities at this time. It has been suggested by other historians that Heinzelmann originally aimed at being attached to the Academy sponsored expedition then leaving St. Petersburg for Siberia. Already fully staffed however the organizers of the Academy's Second Kamchatka Expedition declined Heinzelmann's application. Meanwhile, I. K. Kirilov in Moscow unsuccessfully lobbied to attach Academy botanist Johann Amman to his Senate organized, southern expedition. Only when Amman had emphatically declined Kirilov's invitation did Kirilov then turn towards the medical community of Moscow for able-bodied, well-trained scientific staff.

Kirilov's Orenburg Expedition launched itself southwards towards the Urals and into the steppe stretching north and east of the Caspian Sea. It was partially conceived of as a military expedition meant to put Russia in a position to quell local populations, while taking advantage of the natural resources of the steppe. It was also distinctly mercantile in its aims, hoping to gain access to the long important overland trade networks in the region. Kirilov's original petition to

[69] Birth and death dates for Heinzelmann are not known.

[70] W. J. Bryce, *A Botanist's Paradise*: *The Establishment of Scientific Botany in Russia in the Eighteenth Century* (Swansea: Royal Horticultural Society, 2008), 87. V. Richter suggests that Heinzelmann was related to Gottlob Schober, who likely facilitated his move to Moscow, see: Richter, *Istoriia Meditsiny,* vol. 3, 134. This suggestion is corroborated by the fact that Schober refers to Heinzelmann in his correspondence with Amman as "meine cousin."

organize the Orenburg Expedition suggested that aside from increasing the Russian presence among local, nomadic peoples, the Expedition could "create an open route for goods to [travel to] Bukhara, Badoshkan, Balkh and India."[71] Michael Khodarkovsky calls Kirilov, "the main architect of Russian policy in the region" and argues that he "conceived of Orenburg as more than just another military fort. In time Orenburg was to provide access to the natural resources of the region, become the center of trade, and lay a foundation for the Russian annexation of Central Asia."[72] An imperial decree issued in 1734 called for any able-bodied academicians to join the "famous expedition," promising both boosts in rank and certain annuities for those accepted.[73] Instruments and books, architects and artists were all petitioned for and sent along with military personnel and building materials to erect along one of the more contested borders of the Russian Empire the entirely new town of Orenburg.

Heinzelmann was attached to the Orenburg Expedition not just as a doctor but as an all-around academic, or "historiographus" in Heinzelmann's words, which in addition to botany and medicine allowed him to focus on heraldry and ethnographic description. As a result of his time with the Orenburg Expedition Heinzelmann produced at least two manuscripts. His *Flora Tatarica*, which was submitted to the Medical Chancellery in 1736 consists primarily of a list of plants ordered according to class, genus and species along a combined Rivine and Tournefort system from the lower Volga, the Urals and the steppe.[74] The absence of illustrations and the presence of an exhaustive set of references indicating where the same or a similar plant could be found in other works suggests that the primary result (if not necessarily the aim) of

[71] Gnucheva, *Materialy dlia istorii*, 70.

[72] Khodarkovsky, *Russia's Steppe Frontier*, 29.

[73] *MIIAN*, vol. 2, 469-471.

[74] LS MSS Catalogus Plantarum: Heinzelmann, *Flora Tatarica Oreburgensis …* (1736), 61-130; SPF ARAN R. I, op. 19, No. 1 [Heinzelmann], *Flora Tatarica seu plantae in itinere 'Moscovia, Ufam, Ufa, Oreburgam, exine per Baskiorum, nagaiensiumque regions in Siberiam ucque juxta … Marta 1, 1736*.

Heinzelmann's botanical research was a contribution to the understanding of plant distribution in the steppe, as opposed to discovering new or little known species. Quite possibly Heinzelmann was thinking in this vein even as he collected. The manuscript is written in such a way that it first presents a list of locations, each associated with a consecutive reference number only. Only later in the text are these reference numbers tied to specific plants, suggesting that as Heinzelmann collected, he noted location first and foremost. Later, as he organized his collections, he named the plants and linked them to other botanical texts through extensive citation. The first entry, for example, starts with the number "1" and is followed by the description of a place, which begin: "Around Ufa." This terse designation is extended to include "nowhere to be found in the deserts, fields or woods of the south, except in between the Ural mountains of Siberia and the Volga River."[75] Only several pages later is this number "1" tied to the plant, *Lilium convallium*, which Heinzelmann briefly describes and then traces to earlier botanical works.

Heinzelmann caps this flora with a short description of his itinerary from Moscow to the confluence of the rivers Ural and Or (where Orenburg was to be founded). In this closing narrative Heinzelmann reveals an acute awareness of regional differences between different steppe peoples. He notes that the entire retinue travelled with a young Kirgiz prince, "the son of Abul Khair Khan," an important central Asian leader. Travelling mainly along and across rivers, Heinzelmann identifies regions according to the peoples or the hordes to which they belong. At one point, for instance, he describes how his group passed through "Bashkir Tartary," where they found a "ruined memorial and grave … with old Tatar gold there."[76] Heinzelmann's *Flora Tatarica* therefore seems aimed not at presenting a botanical catalogue of a hitherto

[75] LS MSS Catalogus Plantarum, 62. "1. Circa Ufam: nullibi reperitur ad Meridiem nei in desertis nec agris nec sylves nisi inter montes Uralenses Sibiriam versus et in confinüs Wolgae."

[76] LS MSS Catalogus Plantarum, 118. "…ins Ural geburge umb die daselbst befindtliche ruinen denckmahle und grab hugel der alten Tatarischen gelden hin und wieder zu unter besuchen."

undiscovered territory, but a botanical layer on top of a region already rich in languages, cultures and peoples.

While Heinzelmann collected botanical materials throughout the region, from Kazan to Ekaterinburg, and from Ufa to Orenburg, he made an especially detailed collection around the city of Samara on the Volga River where he spent a great deal of time due to illness.[77] However ill he may have been his *Flora Samarensis,* a separate manuscript flora catalogued with his *Flora Tatarica,* gives a detailed and thorough account of the plants to be found on the banks of the middle Volga around this important trading town. It follows Heinzelmann's *Flora* Tatarica in format and though it is well organized it is relatively unpolished and appears more or less like a set of well-kept field notes. In the spring of 1738, Traugott Gerber, the new director of the apothecary garden in Moscow, made a copy of this manuscript and wrote a brief introduction to it before filing it in the archives of the Medical Chancellery. The work itself describes just over 300 different plants, many of which, it would seem, ended up in the garden in Moscow.

Heinzelmann's floras, though never published, clearly circulated within the Moscow medical community and abroad, helping to associate the Medical Chancellery with the botany of the regions of and empires to Russia's south. Heinzelmann's floras were incorporated into at least one Linnaean dissertation and proved interesting enough to prompt Linnaeus himself to continue asking his correspondents in St. Petersburg and Moscow about the fate of Heinzelmann well after he appears to have left the Russian Empire.[78] Positioning itself vis-à-vis one of the oldest trading routes in all of Eurasia, the Orenburg Expedition's ambition was to establish a Russian presence along primarily Asian trade route Heinzelmann's botany of it reinforced the

[77] LS MSS Catalogus Plantarum: Heinzelmann, *Flora Samarensis Tatarica seu Plantae quas circa Samaram urbem & fluvium Ao. 1737 observavit & collegit* (1737), 130-150.

[78] Alan Graham, "Plantae Rariores Camschatcenses: A Translation of the Dissertation of Jonas P. Halenius, 1750," *Brittonia* 18 (1966), 136.

relationship between the Medical Chancellery, botanical expedition and the other empires of Russia's southern periphery.

Kirilov's untimely death in 1737 and the arrival of V. N. Tatishchev as head the expedition led to Heinzelmann's removal due to "lack of ability." Heinzelmann vociferously protested his dismissal and received in support attestations from Johann Amman, the Academy's botanist in St. Petersburg, Georg Siegesbeck of the Medical Garden in St. Petersburg, and Traugott Gerber, Schober's successor as director of the apothecary garden in Moscow, all of whom were convinced of Heinzelmann's manifest botanical talents.[79] It is possible that "lack of ability" may actually have been another way to describe Heinzelmann's possible lack of interest in the Expedition's (and Tatishchev's) increasingly narrow scientific agenda. With the ascent of Tatishchev, the Orenburg Expedition turned specifically towards investigating the mineral wealth and thus mining capabilities of the southern Urals and the steppe around the Caspian. While Heinzelmann's manuscripts and his scientific connections underscore his botanical activities, the Orenburg Expedition under Tatishchev expressly sought an academic who was "not so necessary of [Natural] history," which was clearly Heinzelmann's strong suit, but rather "for the sampling of metals and minerals … and who may act as a doctor."[80]

It is not clear what happened to Heinzelmann after his dismissal from the Orenburg Expedition. He continued to be active in Russian botanical circles, aiding Count Sten Karl Bielke in obtaining seeds and information from Johann Georg Siegesbeck, head of the gardens in St. Petersburg in 1745.[81] Ultimately Heinzelmann left the country, a fact which Johann Jacob Lerche

[79] "Geintsel'man, Iogann-Gotfrid," pp. 359-360 in A. A. Polovtsov ed., *Russkii Bibliograficheskii Slovar'*, vol. 4 (Moscow: G. Lissner and D. Sovko, 1914), 359.

[80] *MIIAN*, vol. 2, 470. These are Kirilov's words describing what he hopes to gain specifically from Johann Amman as a potential member of the Expedition. When Amman declined, Heinzelmann took his place.

[81] Lipskii, *Istoricheskii Ocherk*, 8; Sten Carl Bielke to Carl Linnaeus, 30 June 1745, The Linnaean correspondence, letter L0069 (linnaeus.c18.net)

attested to when he recorded that the manuscript original of Schober's *Memorabilia* had been escorted back to his homeland by his close associate, Heinzelmann.

Heinzelmann's manuscripts along with whatever living collections he may have produced were housed primarily in the Medical Chancellery's apothecary gardens in Moscow, which had been under the directorship of Traugott Gerber since 1735.[82] Gerber assumed the directorship from Schober, who had retired to work as a private physician in Moscow. When Gerber arrived in Moscow he was met with instructions to increase the apothecary garden's already swollen collections. Like Erskine and Schober, Gerber began his tenure in Russia by collecting in the environs around his garden, ultimately producing one of the first floras of the Moscow region.[83] But Gerber's extended travels and most significant collections were made in the south, along the Volga and the Don Rivers, where he travelled in 1739 and 1741. Going all the way to Astrakhan and back, his manuscript *Flora Wolgensis* covers 225 different genera.[84] His travels down the Don took him as far as Azov and the Black Sea and resulted in his *Flora Tanaiensis*.[85] As director of Moscow's apothecary gardens after Schober and heir to the tradition started by Schober of collecting medicinal plants along the lower stretches of the Volga and the Don Rivers, Gerber's tenure in Moscow helped to solidify the garden's southern botanical orientation. His time at Moscow's gardens also allowed him to prepare others, like Heinzelmann and later Johann Jacob Lerche, to carry on that tradition.

Like Heinzelmann and Schober, Gerber's manuscripts were never published, but they were used by the likes of Amman and Siegesbeck in St. Petersburg and they were mentioned by

---

[82] Lipskii, *Istoricheskii Ocherk*,, 98.

[83] Gnucheva, *Materialy dlia istorii*, 73. Though I was personally unable to locate a copy of Gerber's *Flora Mosquensis,* it appears to have been in circulation in the 1740s and may well still exist in archives other than those of the Academy and the Chancellery.

[84] LS MSS Catalogus Plantarum, Traugott Gerber, "Flora Wolgensis," pp. 154-165.

[85] LS MSS Catalogus Plantarum, Traugott Gerber, "Flora Tanaiensis," pp. 166-178.

several different European botanists in their correspondence with Linnaeus. Adrianus Van Royen, for instance, corresponded briefly with Gerber as did Albrecht von Haller.[86] Even though Haller and van Royen were both key organizers of botanical sociability in their own rights, they could not seem to access but were nevertheless interested in the works of Schober, Heinzelmann and Gerber. Letters dating from 1736 through 1740 from van Royen repeatedly ask Gerber for news of Schober and Heinzelmann.[87] But due either to the fragility of manuscripts or to the proprietary nature of the information they contained, Gerber's, Heinzelmann's and Schober's manuscript floras detailing the botanical diversity of the lower Volga, the Don, and the steppe around the Caspian Sea remained inaccessible to most outside of Russia.

Eventually, while Schober's work fell out of circulation, Gerber's and Heinzelmann's made it into the most central, most consulted botanical repository of its time, the personal collection of Carl Linnaeus. It is curious and difficult to surmise why both Heinzelmann's and Gerber's manuscript floras survive not in the archives of the Academy of Sciences in St. Petersburg, where they would have eventually been transferred had they been kept by the Medical Chancellery, but only in the manuscript collections of Linnaeus's library in Uppsala (now in the Library of the Linnaean Society in London).[88] They were, however, included in the more synthetic, later compositions, like Johann Amman's *Stirpium* (1739), which cites all three

[86] Haller, Albrecht von. *Epistolarum ab Eruditis Viris ab Alb. Hallerum Scriptarum.* vol. 2 (Bern: Sumptibus Societatis, 1773), 206, 221, 242.

[87] Adriaan van Royen to Traugott Gerber, Waller Manuscripts: Ms benl-00618 (24 April 1736); Ms benl-00619 (15 January 1737); Ms benl-00620 (3 January 1738); Ms benl-00621 (8 January 1739); Ms benl-0622 (30 January 1740); Ms benl-00623 (6 April 1740).

[88] It would appear most of these manuscripts came by way of Count Sten Karl Bielke, a Swedish diplomat in Russia who, with the help of Pehr Kalm, copied several important botanical manuscripts lent to him by Amman and Gerber in 1740 and forwarded them on to Linnaeus.

botanical collectors as elemental in building a decidedly southern strength in the Russian Empire's botanical collections.[89]

The later works, in combination with the manuscripts of Chancellery doctors helped to create a Russian imperial 'botanical imaginary' that linked Moscow with the other empires of the south through the Volga and Don Rivers. Amman's *Stirpium*, like the first edition of the Academy's journal (published in 1728) projected a sense of Russian control of the route between the Caspian and the Baltic (see figure 5). The already established itineraries, infrastructures and imaginaries led Russia's Medical Chancellery to the south to botanize a landscape that was either post-Noachian, 'Byzantine' or essentially of other empires.

The southern itineraries of the Medical Chancellery expeditions affected the gardens in Moscow in two ways: first the gardens in Moscow, through Amman and others, came to be known for their strong 'Asian' collections. Secondly and more importantly, the Medical Chancellery began to build gardens at key points in Russia's southern periphery as part of their broader network of collection. As a space of cultivation, the apothecary garden in Moscow maintained a strong collection of southern species, the influx of which had changed the nature of the garden profoundly as it built upon its seventeenth-century foundations. Under the tenure first of Gottlob Schober and then of Traugott Gerber, the apothecary garden in Moscow, still ostensibly a place for the cultivation of medicinally useful plants, maintained increasingly diverse, decidedly southern (or what they themselves would call "Asian") collections and engaged in ever wider botanical correspondence. These first two directors were themselves, as we have seen, seasoned travellers deeply familiar with the Russian Empire's Volga and Don River basins, its southern frontiers and its military-medical complex. The apothecary garden in

[89] Johann Amman, *Stirpium Rariorum in Imperio Rutheno sponte provenientium Icones et Descriptiones* (St. Petersburg: Academiae Scientiarum, 1739).

Moscow had become under Schober and Gerber an ambitious botanical garden, invested in the cultivation of a wide array of exotic plants primarily from Russia's southern regions, and capable of catching the attention of leading botanists like Albrecht von Haller, Adriaan van Royen and Carl Linnaeus. It is, however, exceedingly difficult to describe was precisely was kept in the Moscow gardens at any given time before the nineteenth century.[90]

What is clear, however, is that the apothecary garden in Moscow begat other gardens, in St. Petersburg and Astrakhan. Many other smaller gardens besides were attached to military outposts, most of which were stationed along Russia's borders with the Ottoman and Persian Empires as well as the Polish-Lithuanian Commonwealth. To explore these southern gardens, to link them to the expeditions of the Chancellery's travelling doctors and to show their active role in the creation of new botanical discourses, as well as to hear the echoes of Tournefort and others in the sense of 'paradise' about them, I now turn to the work of Johann Jacob Lerche, a military doctor who travelled and collected throughout the 1730s, 40s and 50s.

This chapter began with a decree issued by Peter I in 1720 sending an unnamed doctor from the Apothecary Chancellery to Astrakhan in order to establish there an apothecary garden, a greenhouse, and all the necessary tools for creating a garden space. This was done so there would be, at Russia's southern terminus, a place for ensuring the safe import of medicinal plants into the Russian Empire from Persia.[91] A later report from the Medical Chancellery to the Senate filed on May 26, 1725 in part accounting for the actions of the Medical Chancellery on this

[90] M. N. Karavaev, "Materialy po istorii Moskovskogo aptekarskogo ogoroda v pervoi polovine XVIII v. Soobshcheniie 1," *Biulleten Moskovskogo Obshchestva Ispytatelei Prirody, otdel' biologicheskii* 76 (1971), 147-151; Idem, "Rol' Moskovskogo meditsinskogo ogoroda v razvitii botaniki v nachale XVIII v. Soobshchenie 2," *Biulleten Moskovskogo Obshchestva Ispytatelei Prirody, otdel' biologicheskii* 77 (1972), 142-148. The exhaustive archival work of M. N. Karavaev suggests that little indeed has survived attesting to the contents or layout of Moscow's apothecary garden before the nineteenth century. See also: Georg Franz Hoffmann, *Hortus Mosquensis. Enumeratio plantarum et seminum Hortus Botanici Mosquensis* (Moscow: Caesareae Universitatis, 1807).

[91] *PSZ*, vol. 6, pp. 251-252.

matter notes that in 1720, in accordance with the royal decree, the Medical Chancellery did indeed "assign to Astrakhan a small pharmacy for sending medicines to the garrisoned regiments there, and for the sale to local traders and those from Persia and other parts, and with respect to all of this, [also] created a garden to cultivate [*dlia pri ugotovleniia*] medicinal herbs and the like."[92]

By 1725 a Senate decree was issued shortly after Peter I's death continuing his policy calling for the establishment in Astrakhan of an additional pharmacy as well as a hospital. This pharmacy was likely meant to supplement, not supplant the pharmacy established in 1720 and it too would include a garden, planted not far from the pharmacy itself, in a "convenient position."[93] These two gardens along with the hospital were meant to provision the military regiments settled in and around Astrakhan whose duty it was to strengthen the Empire's whole southern border and to make incursions into Persian lands along the northern edge of the Caspian. Materials, medicines, and people (students and staff) were to be dispatched from the Apothecary Chancellery, with military escort, to provision the newly formed medical outpost.

The extent of these gardens by the end of the 1720s is difficult to judge, but they were encountered by Johann Jacob Lerche in 1732. Lerche proved to be something of a linchpin in the far-flung southern network of Russian medico-botanical investigation, having traveled as extensively as Tournefort, having personally met and known all of the doctors mentioned so far, and having written and published voluminous memoirs and descriptions of Russia's entire southern frontier. A graduate of Halle University and a field doctor appointed to an Astrakhan regiment in Peter I's army, Lerche arrived in Russia in 1731. He was met almost immediately in

[92] RGADA, F. 346, op. 1, kn. 3, No. 355, pg. 520.

[93] *PSZ*, vol. 7, 499. "No. 4728, Ob uchrezhdeniia v Astrakhani apteki i gospitalia … July 7, 1725 … Dlia toi apteki sdelat v Astrakhani dvor s prinadlezhashchim k apteke stroeniem i ogorod v udobnom meste."

Moscow by both Schober, still director of Moscow's apothecary garden, and Heinzelmann, who had yet to go on his Orenburg Expedition. Over the next thirty years Lerche climbed the ranks of the Medical Chancellery, travelled throughout Russia's southern and western borderlands, and became deeply familiar with the city of Astrakhan and the regions around it. Describing the medical garden there in 1761, he wrote

> there are so many trees and other strange plants, that a lover of botany would take the greatest pleasure to see it and investigate it. No less, outside these Gardens are plants for the most park unknown, and which I have endeavored to describe in the Linnaean method.[94]

Indeed, Lerche was as good as his word and in 1773 he did publish a description of the plants in Astrakhan, using the Linnaean system.[95] This essay gives extensive botanical descriptions of forty five different species, complete with encyclopedic footnotes indicating when and by whom a given plant was observed, the literature that pertained to it, and the debates that surrounded it. He divided these not by class, but by region, beginning with the plants found around Astrakhan and then moving on to those found in the surrounding deserts. After a short list of the 43 plants contained in the city's apothecary garden, the essay ends with several long lists, totaling hundreds of species of plants found throughout the region and along certain "itineraries."

If Russian military service brought Lerche to Astrakhan, family ties rooted him there. Lerche married the daughter of Peter Possuet (or Possiet), the head of the Garden Bureau [*Sadovaia Kontora*], viticulturist and skilled gardener.[96] Lerche, therefore, not only knew the

---

[94] Lerche, *Lebens und Reise-Geschichte*, 269.

[95] Johann Jacob Lerche, "Descriptio Plantarum quarandum partim minus cognitarum Astrachanensium et Persiae Provinciarum Caspio Mari adiacentium iuxta methodum sexualem excellentissimi Domni Archiatri Caroli de Linne," *Nova acta physico-medica Academiae caesarae leopoldino-carolinae naturae curiosorum* 5 (1773), 159-206.

[96] "Pos'et, Konstantine Nikolaevich," in *Entsiklopedicheskii slovar', vol. XXIVa, "Pos-Poia"*, ed. I. E. Andreevskii (St. Petersburg: I. A. Efron, 1890-1907), 718-719; "Possuet de Rozier, Pierre-Vincent," in *Les Français en Russie*

state gardens and fruit orchards, but also the private gardens of the local elite who kept their gardens just outside the city, alongside the medical garden. Windmills, he noted, had been built to irrigate the territory and a system of open troughs was put in place to distribute the water freely between Russian, Armenian, Indian and Tatar quarters, all of which kept their own gardens.[97] Lerche's many mentions of the great number of kitchen-gardens, vineyards, mulberry orchards and melon patches throughout Astrakhan, the Caucasus and Central Asia are valuable assessments of the relative fertility of the land and of his interest in collecting from the field as well as the garden throughout his travel.

Though the Volga was the primary route to Astrakhan and therefore one heavily used by the Chancellery's doctors, there were other itineraries along which plants and people moved between Moscow and Russia's southern borders. Staffed by doctors, surgeons, and gardeners, the network of field apothecaries [*zapasnye* or *polevye apteki*] erected by the joint efforts of the Medical Chancellery and the military provided unique spaces of broad social interaction as well as key points of entry for western educated naturalists to mine otherwise inaccessible borderlands for botanical knowledge. Moreover, as the eighteenth century progressed, gardens attached to these field apothecaries became important botanical way stations where travelling naturalists could observe more local plants they may well have read about but perhaps had never seen. They could also cultivate the plants they had collected in the field but were not yet ready to dispatch. Despite the fact that the gardens of the field apothecaries are difficult to resurrect from the archival sources, enough information survives to show they were remarkably potent spaces of

---

au siècle des Lumières …vol. 2, eds. Anne Mézin and Vladislav Rjéoutski (Ferney-Voltaire: Centre International d'Étude du XVIIIe Siècle, 2011), 677.

[97] Lerche, *Lebens und Reise-Geschichte*, 269-270.

scientific and cultural encounter between Western European botanical practice, Russian military and medical bureaucracy, and local knowledge of plant collection and cultivation.

Though the garden in Astrakhan clearly presents one of the more successful attempts to establish a medical or botanical garden outside of Moscow or St. Petersburg, there is evidence to suggest that there were other gardens attached to field apothecaries that may well have served as models for the one eventually established in Astrakhan. One of the more prominent gardens attached to a field apothecary, which in the nineteenth century became an important botanical and medical depot in Russia, was located just outside the small town of Lubny. What little is known about this field apothecary suggests that it stood out as an important supply station for Russia's numerous other apothecaries and doctors stationed along the borders with Polish-Lithuanian Commonwealth, along the Don River and into the Caucasus. It seems that Peter I decreed the establishment of a field apothecary in 1707 in order to supply his military forces stationed there, which were engaged with the Swedish armies of Charles XII.[98] This particular field apothecary was tasked with keeping a fresh supply of medicines, and later, with the establishment of a garden, as well as with collecting and growing wild medicinal plants for military-medical personnel. Some suggest 1709 as the creation date for the gardens in Lubny, while others maintain that it was not created until 1714.[99] Vergunov and Gorokhov, well-informed historians of Russian garden culture conclude that in 1721 Peter decreed the creation of a "pharmacy garden at Lubny on the *Poltavshine* … along with two 'crown' gardens."[100] By the 1730s a second garden appears to have been established in nearby town of Terny to supplement

[98] N. N. Koroteeva, *Stanovleniie i razvitiie aptechnoi sluzhby v Rossii v XVI – nachale XX vv.* (Ph.D. Diss Abstract, Kursk State University, 2011) n.p.; W. M. Richter, *Geschichte der Medicin in Russland,* vol. 3 (Moscow: N. S. Wsewolosky, 1817), 45. "Im Jahre 1707 eine eigene *Feld-apotheke* (*polevaia apteka*) *in Lubna* errichtet, welche noch jezt bestehet."

[99] *Bol'shaia Meditsinskaia Entsiklopediia*, vol. 4 (Moscow: Gosudarstvennoe izdatel'stvo meditsinskoi literatury, 1958), pg. 230.

[100] A. P. Vergunov et al., *Russkie sady i parky* (Moscow: Nauka, 1988), 65.

the gardens in Lubny, throughout the 1730s therefore Lubny enters the records of the Medical Chancellery as an important and busy medical way station.[101]

Additional evidence, incidental though it may be, is contained in a 1733 survey, which covered the Medical Chancellery's "four main field apothecaries" of St. Petersburg, Moscow, Lubny and Astrakhan.[102] Initiated by the new military command, the review examined the costs and contents of the field apothecaries in times of peace and in times of war. This survey found that for the most part the four field apothecaries were maintained in times of peace at greater capacity than was strictly necessary. The sole exception being the pharmacy in Lubny, which because of its responsibilities towards other, even smaller, more numerous field apothecaries, was constantly using its precious supplies and appealing to Moscow for medical provisions. A decision made by the Medical Chancellery following this report recommended that to relieve the pharmacies in Lubny, one field apothecary should be established in Smolensk to serve the regiments in Poland and Lithuania, and another in Voronezh to supply the regiments in the steppe. Interestingly enough, both of these new pharmacies were to be created from the ashes of an older pharmacy, relocated from Riga, a Russian possession since 1721.[103]

While there is little archival evidence describing the gardens in Lubny or their contents, there is quite a lot to suggest the active exchange of medicaments, simplicia and students back and forth between Lubny and Moscow from an early date. In October of 1737, for example, the archives of the Medical Chancellery record that Dr. Schreiber,[104] the head military physician in Moscow, sent a great quantity of prepared medicines to Lubny through the town of Izium.

---

[101] V. L. Nekrasova, *Istoriia izucheniia dikorastushchikh syrevykh rastenii v SSSR* (Moscow: Akademii Nauk SSSR, 1958), 117.

[102] *PSZ*, vol. 43, 206-207. "No. 6474, O state chetyrekh pokhodnykh aptek … 3 September 1733."

[103] *PSZ*, vol. 9, 767-776. "No. 6912, O sostoianii polevykh aptek … 9 March 1736."

[104] John T. Alexander, "Medical Professionals and Public Health in 'Doldrums' Russia (1725-62)," *Canadian-American Slavic Studies* 12 (1978), 119.

Enough, Schreiber wrote, for 30 regiments. This dispatch was made in response to a request made by staff physician Dr. Baeni stationed in Lubny. Far exceeding Baeni's original request, Schreiber indicated that he expected these medicines would create a surplus in both Lubny and Azov to better serve the regiments there.[105] In that same year, the garden of the Apothecary Chancellery in Moscow noted that four Russian students had completed their education in "herbs" and medical preparations and were ready to be "of use" to the military. They were to be dispatched to Izium, possibly travelling with Schreiber's surpluses, where they would be appointed to those regiments that required their services.[106]

A description of the apothecary in Lubny was finally given by Johann Anton Güldenstädt in the late eighteenth century. Traveling as an Academy-sponsored naturalist, Güldenstädt passed through parts of Ukraine and Astrakhan in the early 1770s. The pharmacy in Lubny, he writes,

> had been constructed in the time of Peter. From which they derive medicines for the near-by regiments, engaged in the current war – especially for the Second Army [*vtoraia voiska*] … Here they gather many *Simplicia*, in part to satisfy their own needs and in part to send back to the main apothecary in Moscow.[107]

The importance of Lubny as a field apothecary and as a satellite garden for the main garden and pharmacy in Moscow was more appreciated in the nineteenth century than in its own time. In 1803, in an attempt to gain imperial support for establishing veterinary schools in St. Petersburg, Moscow, and Lubny, an appeal was filed with the tsar claiming that Lubny was a good choice for the location of such a new institution because "it already contains important medical

[105] RGADA, F. 346, op. 1, kn. 4, No. 408, pg. 513.

[106] RGADA, F. 346, op. 1, kn. 7, No. 556, pp. 258-259.

[107] Iogann Anton Giul'denshtedt, "Puteshestviia v Malorossiiu Akademika Giuldenshtedta i kn. Dolgorukago," *Kievskaia Starina* 50 (1893), 429.

establishments, created by Peter the Great, including medical gardens, a pharmacy and significant medicinal reserves."[108]

Apothecary gardens fanned out from river basins and military outposts to cover much of Russia's south in the first half of the eighteenth century. Evidence to suggest that gardens existed in an around Azov is the most difficult to collect and assess of all three main field apothecaries covered here, nevertheless Azov was clearly an important crossroads for the traffic of medical information and other expertise. Alan Fisher has argued that Azov's primary importance before the eighteenth century had been as "a trading center," but that as a "a side effect of its trade," it has come to serve as "a meeting place for Muscovite and Ottoman governmental representatives."[109] The city of Azov came under Russian rule in 1696, and soon thereafter enjoyed pharmacies that were fully intact.[110] As early as 1697 reports were being filed in what was then still the Apothecary Chancellery from the 'newer' and 'lower' apothecaries in Azov asking for supplies and personnel. The Chancellery was quick to respond, dispatching medical preparations, apothecaries and pharmacy supplies within the year.[111]

In 1699, a report attesting to the curious history of a one "Venedikt Andreev son of Lang" illustrates the early pull Azov asserted on foreign specialists and Russian adventurers alike. In November of that year Venedikt Lang had appeared before the Armory [*Oruzheinaia Palata*] in Moscow to apply to be taken as a surgeon [*lekar'*] into the tsar's southern navy, having obtained

[108] *PSZ,* vol. 27, 863-866. "No. 20,912. O zavedenii v S. Peterburg, Moskve i Lubniakh trekh Skotovrachebnykh uchilishch, s prilozheniem kazhdomu osobago shtata …25 August 1803."

[109] Alan W. Fisher, "Muscovite-Ottoman relations in the sixteenth and seventeenth centuries," in *A precarious balance: conflict, trade and diplomacy on the Russian-Ottoman frontier*, ed. Alan W. Fisher (Istanbul: Isis Press, 1999), 60.

[110] AVMF, F. 177, op. 1, Nos. 5, 16, and 22. These documents, dated between 1698 and 1699 outline in very brief terms the dispatch of medicines and apothecaries from Moscow to Azov to staff the pharmacies there.

[111] RGADA, F. 143, op. 2, No, 1605. "Delo ob opredelenii Andrei Andreia Alekseeva storozhem Novoi Apteki (1697 – 1698)."

a medical education in *tsesarskie* lands (presumably the Holy Roman Empire). While working as an apothecary in Vilnius, Lang entered the service of the Polish king, Sigismund II. Arriving in Moscow with Sigismund, Lang then entered the service of a businessman in Azov [*byl pod Azovom s gorododeltsom*] whom he served for half a year before returning to Moscow. At the time of his report, he was living with doctor Grigorii Carbonari, a well-known medical practitioner in Moscow, who produced a letter on Lang's behalf. Lang was eventually appointed to the Azov fleet, at which point his story, at least as far as the document is concerned, ends.

What Lang found in Azov is difficult to say. By the eighteenth century the once key location of diplomatic contact and trade between the Ottomans and the Muscovites, had been taken and retaken by Russians, Ottomans and Cossacks alike and was much worse for the wear. Despite the ruin described by observers like Evlia Efendi Çelebi,[112] Johann Jacob Lerche travelled through it in the 1730s noting: "On either side of the city, there are Gardens, two versts long, planted with grapes and a great number of other fruit trees." These gardens appeared to be divided more or less evenly among the members of the officer class and they indicated, in Lerche's professional opinion, the great (if relatively unexploited) fertility of the region.[113]

Even more tantalizing, if anecdotal, evidence as to the possibility of a medical garden attached to Azov's field apothecaries is offered, once again, by Lerche, who notes that in 1741 he crossed paths with Traugott Gerber, who was at that time conducting his own expedition down the Don River. Just outside of the town of Khlebnov, while staying at a local monastery, Lerche reports that he met Gerber who was then on his way "to Voronezh, Kharkov, and Lubna

[112] Evliya Efendi [Çelebi], *Narrative of Travels in Europe, Asia, and Africa in the Seventeenth Century* (London: Oriental Translation Fund, 1850), 60-64.

[113] Lerche, *Lebens und Reise-Geschichte*, 104.

to collect medicinal plants [*officinalkrauter*] and to escort the tsar's gardener to Azov."[114] Unfortunately the gardener is not named, nor is his purpose in Azov, however a handful of documentary mentions suggest that there were "state gardens" [*kaznye sady*] in and around Azov like there were in Astrakhan, meant for the cultivation of fruit, wine, and decorative plants for the royal gardens in St. Petersburg.[115] Voronezh and Kharkov hosted military pharmacies, while Lubna (Lubny) was flourishing with a garden and a regional medical office. Gerber himself did not include Azov in his botanical descriptions though the fact that he was travelling with a royal gardener suggests that maybe some of his collections were not destined for the apothecary garden in Moscow but rather the royal gardens in and around St. Petersburg.

While there is very little direct evidence describing the specific contents of the apothecary gardens in places like Lubny and Azov, certainly nothing like Lerche's detailed discussion of the apothecary garden in Astrakhan, nevertheless these places were clearly sites of cultivation and hosted extensions of Russia's military-medical system in the form of field and 'emergency' pharmacies. Azov in particular was seen as a fertile new addition to the Russian Empire. Even if evidence is lacking for the cultivation and circulation of plants among these various field apothecaries Lubny and Azov provide evidence for the exchange of materials and personnel between them and the main apothecary in St. Petersburg and Moscow. The creation and cultivation of imperial Russia's garden spaces in the south was intimately tied to its military movements against the Ottoman, Persian and Swedish Empires. The creation of gardens in these spaces was as much about serving the medical capabilities of the Russian military, as it was about establishing a Russian imperial presence along these particular borders. That botanical

[114] Lerche, *Lebens und Reise-Geschichte*, 188.

[115] AVMF, F. 177, op. 1, No. 5, pg. 78. This document indicates that in 1698 Peter I had ordered soldiers in Azov to establish for the tsar a vineyard and to report how many vines were growing by the coming spring.

collection and garden creation served this purpose attests to the flexibility of both imperial and scientific practices.

As the discussion of Tournefort's ideas and travels suggest, Western botanists and doctors came from a profoundly interconnected world of ideas and beliefs about classification, relatedness and the diversity of life, beliefs that were connected by a logic of biblical and geographical shared origins. These ideas permeated natural historical and scientific discourse. In putting his 'Asian' plants on par with Hans Sloane's West Indies collections, Gottlob Schober was participating in a discourse he shared with other botanists operating in the Russian Empire: that their southern botanical activities encompassed the collection, cultivation and botanizing not of the paradise of the new world, but quite distinctly the paradise of the old. Broader conversations seeking to define the 'Asian' portions of the Russian Empire from its 'European' portions underscore this relatively dichotomous approach that western educated scientists took towards the Russian Empire, seeing it as bridging the gap between the two historical and geographical entities.[116] Unlike botanical explorers in North America, South America and the 'New World' in general, the expeditions led by the doctors of the Apothecary Chancellery into Russia's south ventured into territory that was not only familiar, but ancient and explicitly linked to their own cultural and historical origins.

If the Western interest in the "Levant," famously articulated by Tournefort, helped to fuel the imaginary of the Caucasus and Russia's south at this time, very real matters of Russian imperial expansion built the infrastructure to facilitate it, helping to establish routes of collection that were both scientifically interesting and immediately practical for the Russian Empire. The emergence of peripheral gardens associated with military forts and field apothecaries, the main

[116] Mark Bassin, "Russia between Europe and Asia: The Ideological Construction of Geographical Space," *Slavic Review* 50 (1991), 1-17; Larry Wolff, *Inventing Eastern Europe: The Map of Civilization on the Mind of the Enlightenment* (Stanford: Stanford University Press, 1994).

branch of which consisted of the gardens in Astrakhan, was the result of adopting these new routes of collection, which combined military and merchant networks with botanical and medical practice. Arising out of the need to provide medicine for local Russian garrisons as well as to facilitate the trade of goods from Persia, the gardens in Astrakhan became a space in which the strictures of Linnaean classification were applied to the flora of the southern Volga River and Caspian Sea basin. The creation of botanical knowledge on Russia's southern frontier could not ignore the power or the prestige of Russia's neighboring empires and so a botanical discourse focused on the natural diversity of the ancient world, of man's own biblical origins and the differentiation between Europe and Asia took the stage.

Following closely on the heels of the creation of Moscow's late seventeenth-century apothecary gardens with its use of itinerant herbalists or *travniki* to collect and cultivate locally available medicinal plants, the emergence of these early eighteenth-century southern itineraries suggests the rapidity of change and the influence of imperial infrastructure on botanical discourse. The appearance of Astrakhan on the horizon of botanical collection and the specter of "Byzantium" within Russian botanical texts all point to the deep-seated influence that a larger, trans-imperial past had on Russia's growing scientific community. This, by extension, assumed a role within the wider European scientific community which was happy to assume the Russian Empire might provide routes and specimens from empires other and older than its own.

Chapter Three:

Translatio Botanicae:

The Construction of Siberia and the Creation of St. Petersburg for Science

On August 5, 1721 J. D. Schumacher, imperial librarian and close personal aid to tsar Peter I, was in Paris collecting books and instruments and establishing scientific contacts for the Academy of Sciences that Peter was even then preparing to build. Schumacher was in the Académie des Sciences that day to accept the offer of membership that Bernard de Fontenelle, "secrétaire perpétuel" had extended to the young tsar. Schumacher came bearing gifts, among which was an extract taken from the observations of "one of His Majesty's doctors." As Lavrentii Lavrentevich Blumentrost, Peter's personal physician, explained in an accompanying letter: "already for two years [this doctor] has been in Siberia … making the necessary observations for perfecting a Natural History of it." There were, this letter continues, two other individuals working on similar projects in Astrakhan and Kazan, on the strength of which Blumentrost concluded his letter, writing: "we hope … to be able to provide an ample and, I dare say, a complete relation … of the products of nature in the vast estate of His Tsarish Majesty."[1]

Clearly Peter I and his aids, Schumacher and Blumentrost, understood the kind intellectual prestige that the collections from expeditions such as these could garner in Western Europe where little was known of Russia's southern and eastern regions. Linking Astrakhan, Siberia and St. Petersburg before the assembled academicians of the Académie des Sciences, Peter I and his representatives staked an intellectual claim to the Empire's most recently acquired territory and in the process worked to establish St. Petersburg as the city through which such claims would be codified and distributed.

[1] L. L. Blumentrost to the Académie des Sciences in Paris, 14 February 1721 in *Histoire de l'Académie Royale des Sciences. Année 1720* (Paris: de l'Imprimerie Royale, 1722), 130.

The previous chapter, "Via the Volga," demonstrated how a small community of doctors, working at the crossroads of Russian imperial infrastructure and European botanical imaginary could help to create new forms of botanical discourse that combined notions of paradise, ancient empires, and botanical diversity. These notions were then manifested by and displayed in the apothecary gardens of Moscow and spurred the creation new spaces of cultivation like the apothecary gardens of Astrakhan. This chapter, "Translatio Botanicae," shifts focus to a different, contemporaneous idea of 'paradise' in the Russian Empire. This new, decidedly secular paradise would be found in the recently established city of St. Petersburg, which housed the Academy of Sciences and from which scientific expeditions headed east into Siberia. While the expeditions sponsored by the Apothecary Chancellery out of Moscow were clearly interested in the south and in the arid and grassy terrain of the steppe, the expeditions of the Academy set their sights on the forested expanses of Siberia that stretched east as far as the peninsula of Kamchatka and the Pacific Ocean. Treated Siberia as essentially uncharted and therefore as the special purview of the Academy of Sciences, these particular itineraries of collection helped to cast St. Petersburg as a city of science. Siberia quickly became its primary site of field collection binding the three, St. Petersburg, Siberia and Science, into a tight complex of mutually influential ideas about science, space and movement through it.

This chapter begins with an exploration of the different paths of collection that started out from the city of St. Petersburg in the first half of the eighteenth century and streamed eastward through Kazan and Tobolsk into the forests of Siberia. Beginning with the founding of the city of St. Petersburg as a political, economic and cultural phenomenon in Russian history, this chapter goes on to discuss the establishment of the Academy of Sciences and the scientific relationship that emerged between St. Petersburg and Siberia. The second half of this chapter shifts from

focusing on the paths and routes of collection through Siberia, to an analysis of the spaces of cultivation that appeared in St. Petersburg as specimens from these expeditions flooded in. The primary garden in St. Petersburg for the collection of plants, both medicinal and otherwise, had long been the Apothecary Garden [*apteskarskii ogorod*] on Aptekarskii Island. Founded around 1713 and organized in the 1720s by Johann Christian Buxbaum, this garden proved to be a contentious site of plant control over the course of the eighteenth century. The creation of a botanical garden [*botanicheskii sad*] on Vasil'evskii Island by the Academy botanist Johann Amman in the 1730s quickly became an alternate site of plant cultivation and marked the increasing divergence between the Medical Chancellery and the Academy of Sciences as overlapping but distinct institutions.

The creation of St. Petersburg and the establishment of the Academy of Sciences, followed by the choice of Siberia as the focus for Academy expeditions and the appearance of multiple, moving botanical and apothecary gardens in St. Petersburg form a dense complex of routes, places and practices. The outline of this figure cut by Academy botany involved the creation of St. Petersburg as a city of science and the casting of Siberia as a recognizable object of scientific study and the founding of gardens to justify them both.

The creation of this particular scientific-imperial complex is rooted in two places and in the routes between them: St. Petersburg and Siberia. Siberia had clearly existed long before St. Petersburg was a place on the map. However, Siberia as it was understood through the lens of St. Petersburg's scientific community is what interests us here, so we begin therefore with the founding myths of St. Petersburg and its development into an imperial capital city. Where myths of empire were invoked in the creation of St. Petersburg, they crept into the idealization of scientific practice there as well. Indeed the rhetoric of placeless and mobile, divine authority was

as characteristic of this era's scientific approach to the natural world as it was of its approach to imperial practice.

St. Petersburg itself as a locus of intellectual, political or economic activity did not appear on the map of Russian Empire until the beginning of the eighteenth century. Seizing new territory in the northern stretches of "Ingria" during the war with Sweden, Peter I hastened to establish a new city at the mouth of the Neva River on the Baltic Sea in order facilitate the growth of the Russian Navy (which had begun only a few years earlier in and around Azov) and to encourage trade with England and the Netherlands.[2] The title of this chapter, "translatio botanicae," intentionally echoes the phrase "translatio imperii," a well-used rhetorical principle in early modern Russia used to sum up a narrative of the transfer of imperial power and authority, both divine (and Orthodox) in origin, from Rome to Constantinople to Moscow and Russia more generally. This suggestive compounding between science and empire therefore suggests that because Petrine intentions in establishing St. Petersburg were more than purely practical and involved a great deal of myth-making, this very process infused perceptions the Academy of Sciences and of its garden spaces as well.

The doctrine of "translatio imperii" was initially used to justify the fifteenth-century ascent of Moscow over other warring Slavic principalities during the earliest formation of the Muscovite state.[3] The notion of Russia as the empire hosting "the Third Rome," however, was just as useful at the beginning of the eighteenth century with the establishment of St. Petersburg and the Petrine reforms. The notion of "translatio imperii" served the aims of Peter well, as it did

[2] Edward J. Phillips, *The Founding of Russia's Navy: Peter the Great and the Azov Fleet, 1688-1714* (Westport, CT: Greenwood Press, 1995); James Cracraft, *The Petrine Revolution in Russian Culture* (Cambridge: Belknap Press, 2004), 96.

[3] Marshall Poe, "Moscow, the Third Rome: The Origins and Transformations of a 'Pivotal Moment,'" *Jahrbücher für Geschichte Osteuropas* 49 (2001), 412-429; Daniel Rowland, "Moscow – The Third Rome or the New Israel?" *Russian Review* 55 (1996), 591-614.

the Romanovs in general, when they sought to bolster their emerging real world military power with a divinely inspired origins story. It was this idea, Stephen Lessing Baehr explains, "the idea that one nation will be the dominant cultural and political force in world civilization, and that this force will move from one state to another with the passage of time," clearly spoke to Peter I's peripatetic style of rulership, while also allowing for a direct connection between Russia and a much deeper imperial past.[4]

This idea of the inheritance of authority untethered from any one geographical location also spoke to the broader scholarly community though in less direct terms. The newly articulated "Republic of Letters," like the Russian Empire, was actively engaged in the creation of new capitals of secular learning. At the same time much of the rhetoric among the various scholars and philosophes who populated the so-called Republic was committed to an entirely placeless intellectual community, one located in the fervent exchange of rapidly circulating missives and not bound by the brick and mortar of University or Academy.[5] As the newest addition to the Republic of Letters in the newest city within the Russian Empire, the St. Petersburg Academy of Sciences was committed to a rhetoric of authority that was divine, placeless and inherently mobile.

This articulation of the transfer of imperial authority and the ideal of a placeless intellectual community was often symbolized, somewhat ironically, by images of plants and

[4] Stephen Lessing Baehr, "From History to National Myth: *Translatio Imperii* in Eighteenth-Century Russia," *Russian Review* 37 (1978), 1. For a broader treatment of the nature of rulership and displays of imperial power as they came to shape St. Petersburg in the eighteenth century, see Richard S. Wortman, *Scenarios of Power: Myth and Ceremony in Russian Monarchy, Volume 1: From Peter the Great to the Death of Nicholas I* (Princeton: Princeton University Press, 1995).

[5] Lorraine Daston, "The Ideal and the Reality of the Republic of Letters in the Enlightenment," *Science in Context* 4 (1991), 366-386. In Daston's cogent analysis, the ideal of the Republic of Letters, was that it was "immaterial (it lacked location, formal administration, and brick and mortar)," but also that it nevertheless was "real (it exercised dominion over thoughts and deeds)," ultimately clashed with the well-known reality of the Republic of Letters, in that it was firmly ensconced in the elite state institutions in Western Europe. See also Dena Goodman, *The Republic of Letters: A Cultural History of the French Enlightenment* (Ithaca: Cornell University Press, 1994).

gardens, quite literally rooted in the soil. "*Translatio imperii*" as a rhetorical principle in Russia often invoked the image and the presence of gardens, both mythic and real. Quoting Andrei Naryshkin's 1756 poem "In Praise of Petersburg," Stephen Lessing Baehr provides the following example of the remarkable "accumulation of images," pastoral, scientific and imperial that suffused eighteenth-century rhetoric about the Petrine capital:

> You are a blessed country, where Peter's daughter lives, where the temple of science is open and its entrance vast. The golden ages have come again, the fields are splendid, the trees are bearing fruit. What a great city you are. You have become like Rome.[6]

Baehr's translation focuses on the invocation of Rome and the combination of pastoral (splendid fields and fruitful trees) with ancient motifs (the temple and golden ages), but the presence of fruiting trees hints at the deeper associations between gardens as the emblem of fruitfulness and that fertility contributing to the justification of empire. A belief in the divinely conferred power of empire and the bounty and natural richness that is associated with such divine blessing fuels sentiments such as Trediakovsky's, when he writes "What gardens are these established here / Planted by the great father, / Where now his daughter is ruler, / Equally great, equally first, / A goddess on earth like Minerva? / Cry out: 'The Northern Eden!'"[7] The new seat of imperial power in Russia therefore had been forged by mid-century into a symbol of cultivation, richness and bounty, despite how unfit the relatively barren and water-logged region of St. Petersburg might have been for the effort. If constructing St. Petersburg as an imperial center meant envisioning it as a 'Northern Eden,' then the creation of expansive formal and diverse botanical gardens was inspired on by more than disinterested scientific motivations.

---

[6] Baehr, "History to National Myth," 8. Baehr is quoting and translating a portion of A. Naryshkin's poem, "In Praise of Petersburg," [*Pokhvala Peterburu*], which appeared in the *Ezhemesiachnye sochineniia*, December 1756, pp. 551-552.

[7] V. K. Trediakovsky, "Veshnee teplo" (1756), cited by Lindsey Hughes, *Russia in the Age of Peter the Great* (New Haven: Yale University Press, 1998), 210.

The same can be said for the creation of the St. Petersburg Academy of Sciences (1724) and the first scientific expeditions that were dispatched from it. Both were at once deeply symbolic and immediately practical and they contributed to a larger characterization of St. Petersburg as an imperial capital and city of science. Within a decade of its founding some of the first recognizably scientific expeditions of the Petrine era were launched from this new capital. Geodetic in nature, that is concerned with making accurate measurements of the landscape, river routes and sea coasts, without the benefit of precise astronomical observation, the Petrine surveys of the 1720s helped to define both the content and the extent of the Russian Empire.[8] Historical geographers like Denis J. B. Shaw see these early expeditions as emblematic of the Petrine reforms in general, which were in large part, Shaw argues, fundamentally geographical. Peter I's political and social policies, Shaw points out, necessarily entailed radical changes in the country's social and economic geography, constituting just one more natural resource to be understood and utilized for the growth of the Russian imperial state.[9]

Valerie Kivelson has amply shown in her work that early cartographical practices in Russia, dating back to the middle of the seventeenth century with a marked uptick around the time of Peter I, combined foreign influence with deeply Russian and Orthodox traditions of seeing landscape. "While foreign models clearly exerted some influence on Muscovite mapping," Kivelson argues, "at the national scale, the consensus among historians of cartography is that local mapmaking techniques developed quite independently on Russian soil … in unique and

[8] James R. Gibson, ed. *Essays on the History of Russian Cartography, 16th to 19th centuries* (Toronto: University of Toronto Press, 1976); Denis J. B. Shaw, "Geographical practice and its significance in Peter the Great's Russia," *Journal of Historical Geography* 22 (1996), 160 – 176.

[9] Denis J. B. Shaw, "'A strong and prosperous condition' – the geography of state building and social reform in Peter the Great's Russia," *Political Geography* 18 (1999), 991-1015

autonomous fashion, free from direct outside influence."[10] The early Petrine geodetic expeditions, therefore, had a Russian culture of cartographical surveying to call upon, setting the tone for might be thought of a Russian culture of expedition, forming the creation of the Empire's early scientific community and collections.

The scientific expeditions into Siberia have long been seen as the foundation of scientific practice in Russia which was an essentially pragmatic endeavor meant to supply industry and empire with rich natural resources. Recently, E. Kolchinsky, A. K. Sytin and G. I. Smagina, in their collectively written volume, *Natural History in Russia (Notes on the development of natural knowledge in Russia in the eighteenth century*) reinforce the notion that early Russian scientific practice was fundamentally based on the collection of natural specimens emerging from Siberia. The natural sciences dominated the early Academy, they argue, because it had the objective of "developing industry and obtaining natural resources, in order to meet the expanding fields of the navigation, meteorology and cartography." It was principally the Academy's Kamchatka Expeditions, they stress, that "had a profound effect on determining the geographical position of the Russian Empire and on the study of its northern and eastern peripheries."[11] While it is true the Academy relied heavily on its Siberian expeditions to fill its cabinet and its gardens with all manner of specimens, what these and other authors ignore is that in many ways Siberia had to be constructed as a space of scientific practice. Likewise, Siberia was not the only place Academy expeditions could go, but it was overwhelmingly the place they did go. To understand the peculiar relationship between St. Petersburg, Siberia and scientific practice requires a closer

[10] Valerie A. Kivelson, "'The Souls of the Righteous in a Bright Place': Landscape and Orthodoxy in Seventeenth-Century Russian Maps," *The Russian Review* 58 (1999), 5.

[11] E. I. Kolchinskii et al., *Estestvennaia istoriia v Rossii* (St. Petersburg: Nestor-Istoriia, 2004), 51.

examination of how the earliest expeditions created an intellectual framework for entering Siberia ready to research.

While Siberia may well have been uncharted, it was certainly not unknown. Siberia had been frequented by Russian traders, military detachments and government officials for much of the seventeenth century and was familiar terrain to scores of fur traders [*promyshlenniki*], not to mention local peasants and yasak-paying native populations.[12] Nevertheless, Siberia would be cast as Russia's and the Academy of Science's *terra nullus,* ripe for study and collection, offering up a wealth of natural historical specimens and allowing the Russian Empire entrance into the Academies of Europe. Not quite a New World and yet not quite an old one, Siberia was tightly bound in a complex knot at once immediately practical and largely symbolic, with St. Petersburg and scientific practice.

The first naturalist to conduct a scientific expedition into Siberia was D. G. Messerschmidt (1685-1735) who, even as Schober was exploring the lower stretches of the Volga and Buxbaum was making his way to Constantinople, based himself and his collections in Tobolsk, conducting a seven-year foray into the eastern stretches of Siberia. Messerschmidt's mission, not unlike Buxbaum's and Schober's, carried an initial emphasis on the collection and description of medicinal plants growing in Siberia. Peter's original decree [*ukaz*], issued November 15, 1718 commanded Messerschmidt to go to Siberia "in search of any rarities and for pharmaceutical resources: herbs, flowers, roots and seeds and other necessary components for medicines."[13] But whereas the immediately practical benefits of supporting a scientific

[12] Raymond H. Fisher, *The Russian Fur Trade 1550-1700* (Berkeley: University of California Press, 1974); Yuri Slezkine, *Arctic Mirrors: Russia and the Small Peoples of the North* (Ithaca: Cornell University Press, 1994).

[13] M. G. Novlianskaia, *Daniil Gottlieb Messerschmidt* (Leningrad: Nauka, 1970), 10. "Two weeks before the death of R. K. Erskine, on 15 November 1718, there appeared a decree by Peter I on sending Messerschmidt to Siberia 'in order to find various rarities and apothecary materials: herbs, flowers, roots and sees and other things with medicinal properties."

expedition into this vast territory may well have been rooted in the potential discovery of new and useful medicinal plants, the more complex nature of the expedition, hinted at by Blumentrost's letter to the Academié cited above, was deeply natural historical, ambitiously scientific and decidedly imperial.

Messerschmidt was first engaged in 1716 into Russian service to work as a doctor for the Russian Army stationed in Danzig. Erskine, then still Archeator of the Apothecary Chancellery, met with Messerschmidt twice before sending him on to St. Petersburg in 1718 to prepare for dispatch with an expedition. Not unlike Schober and the other doctors of the Medical Chancellery detailed in chapter two, Messerschmidt entered Russia through well-established military networks that were designed to funnel medical expertise into Russia's interior. Unlike Schober, however, it seems Messerschmidt was hired with the express purpose of conducting a scientific expedition though he did resort to doctoring when called to do so. Arriving in St. Petersburg just after Erskine's rather unexpected death, Messerschmidt had to wait over a year to receive orders from Ivan Lavrentevich Blumentrost (1676-1756), the new Archeator of the Medical Chancellery, concerning his potential assignment.

By March of 1719 Messerschmidt had received an official decree calling his expedition into being, along with brief instructions from Blumentrost, Messerschmidt was given six *podvody* or carts, assigned through the post road system along with animals to draw them. Messerschmidt, two servants and two soldiers, then packed all of their belongings onto these carts and left St. Petersburg, arriving in Moscow just over two weeks later. It was in Moscow that Messerschmidt experienced the first of many delays related to the fact that his small group was to share the road with L. V. Izmailov, ambassador to China, and his travelling companion, Lorenz Lang. When Lang and Izmailov were finally ready to quit Moscow on September 5, 1719,

the group had swelled to over 10 people. Unfortunately, because he was now travelling with an official embassy, Messerschmidt and his servants were compelled to travel with much greater speed than he otherwise would have liked. Nor did the group did stop in places where Messerschmidt could make the observations and collect the plants he was supposed to. Collecting was further complicated by the fact that winter was coming on quickly as the group moved east. Messerschmidt tried to excuse the paltriness of his first packages sent back to the Chancellery and what he expected would be a poor return in his future packages, writing, "soon it will be winter, all will be frozen and covered in snow, and so I was unable to note anything special, aside from a few small items."[14]

On the road to Tobolsk, however, Messerschmidt and Lang grew close and Messerschmidt began to think of the greater utility of not stopping in Siberia but rather traveling all the way to China with Lang and Izmailov. Either Messerschmidt was truly more enticed by the kinds of collections he could make in China or his growing friendship with Lang left the prospect of continuing on to Tobolsk alone rather unappealing. In any event, Messerschmidt dispatched a letter to Blumentrost outlining a possible change in itinerary that would have him remain in Izmailov's convoy and take him all the way to Beijing. Arriving in Tobolsk, Messerschmidt was greeted by a strongly-worded letter from Ivan Lavrentevich delivering the news that Peter did not see fit to send him on to China with Lange and Izmailov for the principal reason that his journey was to study the natural resources of Russia's regions, not those of foreign lands. Blumentrost's letter, leaving no room for interpretation, continues:

> You, honored doctor, are to study according to the decree already issued (from November 15, 1718), and to describe in detail and to send to Petersburg everything that you find

[14] Novlianskaia, *Daniil Gottlieb Messerschmidt*, 12.

> worthy of attention from the animal, vegetable and mineral kingdoms, en route to Kazan, and from there to Siberia and [you are] to pay special attention to everything that relates to roots or medicinal herbs in order to show His Royal Majesty that your travels and your work done at his cost have not been in vain.[15]

Frustrated, Messerschmidt spent the winter in Tobolsk, preparing for the upcoming spring travel season and acting as a military doctor inspecting new recruits while treating the diseased and wounded. In letters back to Ivan Lavrentevich Blumentrost from that first winter, Messerschmidt continually expresses his desire to expand the writ of the original decree and to more clearly define the responsibilities of others, primarily local governors, in it. The decree he travelled with from St. Petersburg was not at all specific about the obligations of local administrators, who were theoretically supposed to help him in his project. Time and again when he asked for resources such as money, servants, and even paper and ink, he was routinely, even blithely denied by local officials who claimed they did not have enough to spare. In 1720 alone, Messerschmidt sent three official complaints to Peter naming individuals who hindered his progress by requiring of him his own money for lodging and food. By June of 1720, Messerschmidt's first year in Siberia, his expeditionary force had expanded to include 14 *podvochiki* or carts, three soldiers, and Philipp-Johann Tabbert (1676-1747), a geographer and Swedish prisoner of war who was to become indispensable to Messerschmidt over the next few years.[16] Supporting them and his studies was no small affair.

Particularly galling to Messerschmidt was that in order to obtain especially rare or important specimens, the specimens that Blumentrost continually asked for and suggested Messerschmidt was not finding enough of, he had to buy the goodwill (read: the knowledge) of

[15] Ibid., 13.

[16] Ibid., 17.

locals with his own resources. The locals, in turn, were loath to share their knowledge or expertise in locating and collecting medicinal plants with Messerschmidt without tokens of appreciation and gifts, which Messerschmidt could hardly afford and seemed to dislike giving.

Despite this lack of support, whether actual or perceived, Messerschmidt pushed to expand the aims of the expedition to make it broadly natural historical and less focused on medicinal plants and therapeutic waters. Messerschmidt argued that with more support from the Chancellery he could include important historical landmarks as well as drawings of plants and animals in his dispatches back to St. Petersburg. He wanted to prepare the skeletons of animals and conduct a whole array of studies on the local geography, history, ethnography and philology of various locations in Siberia. "The most important part of this," he wrote to Ivan Blumentrost, "would be the creation of a map of the entire country, where one could simultaneously find the poles, various latitudes, and the places where there are found different natural resources, and anything else that might be considered interesting."[17] Even though Blumentrost stressed the importance of maintaining a practical, medicinal focus to Messerschmidt's research, and even as Messerschmidt continued to serve as a military doctor while on his travels, he articulated in these letters a far broader sense of his scientific mission. His ambitious plan to make a map of the empire indicating the location of all its natural resources was easily the dream of imperial science and cartography writ large.

All of Messerschmidt's letters and collections were sent to Ivan Lavrentevich Blumentrost and were kept by the Medical Chancellery in St. Petersburg, where they were housed.[18] Upon Messerschmidt's return in 1727 proceedings began to take place to transfer his

[17] Ibid., 17.

[18] SPF ARAN, F. 3, op. 1, No. 3, pg. 235. As always, references to "Blumentrost" are vague. In summing up his time spent in Siberia while wrangling with the Academy for what he perceived to be back pay, Messerschmidt writes "by Imperial decree, being in Siberia, I reported twenty-two times to the Medical Faculty, to the President and

collections to the newly established Academy of Sciences, which intended to describe, organize, and even depict some of his objects in the Academy's journal. In 1728 the Academy listed a rough total of Messerschmidt's collections that had been transferred from the Medical Chancellery to the Academy. The vast bulk of these materials would now be considered ethnographic, however the list does detail a "small cabinet, with 18 drawers" holding seeds, earthenware and polished stones.[19] There was a herbarium "with all manner of rare herbs" as well as a second large box, full of seeds, both of which were sent to Buxbaum to examine and, presumably, to plant in the Apothecary gardens on Aptekarskii Island.[20] Some illustrations of Messerschmidt's plants were provided by the engraver Johann Georg Unverzagt who, as part of Lorenz Lang's envoy to China, had met Messerschmidt in the early part of his travels.

Messerschmidt's collections were key to establishing the early Academy and their institutional importance quickly outstripped the importance of Messerschmidt himself, who was left deeply embittered by having been divested of large portions of his personal collections, which he felt the Chancellery had no right to take, and on which he intended to found his scientific reputation back in Europe. Apparently he was able to retain some of his collections, for in 1728 he petitioned the Academy for a passport and funds to return to his homeland.[21] His boat, however, sank not far from St. Petersburg. What collections he had were lost and Messerschmidt returned to St. Petersburg impoverished, resigning permanently from academic life.

Archeator, Mr. Blumentrost." Ivan Lavrentevich was Archeator of the Medical Faculty, but his brother, Lavrentii Lavrentevich was "president" of the Academy. That Messerschmidt was corresponding with Ivan only and not both men is corroborated by documents generated by Ivan Lavrentevich himself and deposited in the Academy's archives.

[19] SPF ARAN, F. 21, op. 1, No. 3, pg. 1v. "Ein klein *Cabinet* von 18 schubla den mit allerley *Seminibus* unterschiedenen gattungen von *Terra Sigillata* und mancherley geschliffenen *Marmor* und anderen steinen."

[20] SPF ARAN, F. 21, op. 1, No. 3, pg. 2v.

[21] SPF ARAN, F. 3, op. 1, No. 3, pp. 174-174v.

Messerschmidt's seven-year expedition and his voluminous, almost unruly collections helped to create a framework for scientific expeditions into Siberia that galvanized the Academy's commitment to Siberia and to amassing broadly natural historical collections. The heir to Messerschmidt's legacy linking St. Petersburg, Siberia and science was the academic contingent of the Second Kamchatka Expedition, made up of Academy professors and students who had access to Messerschmidt's collections and may well have known the German doctor himself.[22] Siberia had to be constructed as a space of scientific discovery in correlation to the creation of St. Petersburg as a center of scientific practice. Messerschmidt's expedition started the process which the Second Kamchatka Expedition more fully carried out.

Messerschmidt's mention of making a map of the Empire points to deeper associations between empire, expedition and cartography that emerged from the St. Petersburg expeditions in a way that it did not from the Medical Chancellery expeditions to the south. Designating the "border" between Europe and Asia somewhere in Russia had long been of interest to scientific travellers. Messerschmidt's travelling partner Philipp-Johann Tabbert, later ennobled to become von Strahlenberg, placed the division between "Europe" and "Asia" firmly in the heart of Russia along the Ural Mountains and thus made a specific and marked contribution to the geographical debate then current among Europeans.[23] More commonly accepted however was the Don River as the boundary between Europe and Asia. But, as Mark Bassin explains "…the problem of a boundary dividing [Europe and Asia] remained a pedantic and scholastic issue in pre-Petrine

[22] Messerschmidt remained in St. Petersburg until his death in 1735. The German-speaking professors at the Academy formed a tight knit community, so it is not inconceivable that Messerschmidt remained in contact with Academy members.

[23] Philip Johan Tabbert von Strahlenberg, "Von der Gränz-Scheidung zwischen Europa und Asia," pp. 91-112 in idem, *Das Nord- und Ostliche Theil von Europa und Asia* (Stockholm: In Verlag des Autoris, 1730). For discussion on this, see Mark Bassin, "Russia between Europe and Asia: The ideological Construction of Geographical Space," *Slavic Review* 1 (1991), 1-17; Larry Wolff, *Inventing Eastern Europe: The Map of Civilization on the Mind of the Enlightenment* (Stanford: Stanford University Press, 1994).

Russia that derived its significance solely from Classical teachings. The essential inconsequence for the Russians of this obscure geographical distinction was indicated by their apparently complete indifference to the fact that the Tanais boundary [i.e. the Don River], which they accepted, placed a goodly portion of the historical heart of the Muscovite state in Asia."[24]

The question of the exact division between Europe and Asia was less immediately important to Russian expeditions than was the distinction between Russia and Siberia and the determination of the exact relation between Russia's far east, it's shores along the Pacific Ocean, and the centers of trade at places like Tobolsk, Kazan and of course Moscow and St. Petersburg. Answering questions such as these was certainly what drove the First Kamchatka Expedition, which was directed to determine the exact physical relation between Russia's Pacific shores and those of North America known to be adjacent.[25]

The designation "Siberian" seems to have been applied to anything east of the Urals, thus the Second Kamchatka Expedition, otherwise known as the Great Northern Expedition, seems to have been the greatest single provider of Siberian specimens that the Academy had ever known. The Second Kamchatka Expedition, the composite of three 'contingents' involving hundreds of people each, totaling over 1,000 participants and more than 10 years in the process, was the Russian Empire's spectacular entrance to global scientific practice. Messerschmidt's and Buxbaum's work had been influential to the international scientific community but their expeditions served as preludes to what the Russian Empire and the St. Petersburg Academy of Sciences intended to stake their scientific reputations upon: the biggest and the most ambitious expedition of any attempted thus far.

---

[24] Bassin, "Russia between Europe and Asia," 4-5.

[25] Evgenii G. Kushnarev, *Bering's Search for the Strait: The First Kamchatka Expedition, 1725-1730* (Portland: Oregon Historical Society Press, 1990).

The academic contingent of the Second Kamchatka Expedition was led by three professors from the St. Petersburg Academy: Gerhard Friedrich Müller (1705-1783), professor of History, Johann Georg Gmelin (1709-1755), professor of Natural History, and Louis Delisle de la Croyere (1690-1741), an adjunct professor in Astronomy. Travelling slowly through the heart of Siberia, stopping for entire seasons in towns like Tobolsk, Irkutsk and Iakutsk to organize and analyze their growing collections, the academic contingent to the Second Kamchatka Expedition comprised the most ambitious attempt to date to study Siberia as a vast natural resource and scientific object for the Academy and for the Empire. While the Second Kamchatka Expedition is certainly well represented in the literature, it has yet to be analyzed as a particular tool of empire that turned St. Petersburg and the Academy in a great repository of Siberian naturalia and molding Siberia into the quintessential Russian scientific offering to other Academies.

Perhaps the most-studied individual on this much-studied expedition is Stepan Petrovich Krasheninnikov (1711-1755), one of the first Russians to advance through the ranks of the Academy of Sciences. Thoroughly immersed in the rhetoric and culture of scientific practice, Krasheninnikov saw landscape, routes through space and gardens as essential elements to the scientific endeavor. He was, at the same time, an important agent of empire in one of Russia's farthest flung locales. When he returned to St. Petersburg he played no small role in greening the imperial city and in helping to shape Siberia into a scientific object to be studied.

Krasheninnikov was one of several Russian students attached to the academic contingent of the Second Kamchatka Expedition and worked primarily under Johann Georg Gmelin in natural history. Gmelin himself had a profound impact on the practice of natural history in Russia more broadly, having had a hand in the organization of both Buxbaum's and Messerschmidt's collections as they came into the Academy. He also prepared several of

Buxbaum's *Centuria* volumes before leaving on the Second Kamchatka Expedition. Gmelin's *Flora Sibirica*, published by the Academy in four volumes between 1747 and 1769, was easily the most important and most sought after publication that resulted from the Second Kamchatka Expedition, at least within botanical and natural historical circles.[26] His travel memoirs, likewise, provided a relatively uncensored and largely critical view of life in imperial Russia.[27] In terms of the training that he offered to students like Krasheninnikov, Gmelin placed strong emphasis on making accurate, detailed and personal observations of any subject under study. Even making one's own sketches, rather than relying solely on an artist attached to the expedition, was characteristic of Gmelin's approach.[28] Krasheninnikov, therefore, was attached to an influential figure from an early date who helped to gain a thorough grounding in botanical identification, description and cultivation for the ten years they spent in Siberia together.

Krasheninnikov, who returned to St. Petersburg in 1743 and later became the third Russian to be appointed as a professor to the Academy (in natural history in 1750) distinguished himself during the Kamchatka Expedition by charting the rivers, making ethnographic observations, and regularly dispatching materials back to the Academy of Sciences. In 1737 Krasheninnikov was given the opportunity to set himself apart from the other students. In that year Müller and Gmelin, while stationed in Iakutsk, had decided not to continue on to Kamchatka but rather to stay where they were and organize their collections. They therefore sent Krasheninnikov, who had already conducted several successful independent excursions to continue on to Kamchatka in their stead. Krasheninnikov remained on Kamchatka for the next

[26] Johann Georg Gmelin, *Flora Sibirica sive Historia Plantarum Sibiriae*, 4 Vols. (St. Petersburg: Academiae Scientiarum, 1747-1769).

[27] Johann Georg Gmelin, *Reise durch Sibirien, von dem Jahr 1733 bis 1743*, 4 Vols. (Göttingen: Abram Bandenhoecks seel, 1751-1752).

[28] S. P. Krasheninnikov, *S. P. Krasheninnikov v Sibiri: neopublikovannye materialy* (Moscow: Nauka, 1966), 63.

four years and his observations in combination with those of Gerhard Wilhelm Steller (1709-1746), provided the basis for his 1755 publication *Description of the Land of Kamchatka*.[29] This work demonstrates Krasheninnikov's wide ranging interests, which were thoroughly natural historical, and included detailed descriptions of everything from plants to the people of the peninsula, while venturing hypotheses about the origins of earthquakes and engaging in experimentation on the mineral hot springs.

One aspect of his time in Kamchatka that is not well represented in Krasheninnikov's *Description* but does appear throughout his letters back to Müller and Gmelin is his sizeable garden, which he kept in Bolsheretsk from the time of his arrival. In 1737 Krasheninnikov had just arrived in Bolsheretsk, a garrison town on the western shore of Kamchatka, after a particularly rough crossing from Okhotsk that had required him to abandon all his luggage into the sea to keep the leaky boat on which he was traveling from sinking.[30] Therefore, Krasheninnikov's first letter to Müller and Gmelin in Iakutsk asked them to provide him with all manner of necessary items including paper, clothing and money. He included in this litany a notable request to "please send to me some seeds to start a garden, as the seeds which your graces had given me fell with my other things into the sea."[31] Therefore among Krasheninnikov's initial acts of establishing himself and his presence as a naturalist on this absolute outpost of Russian Empire was the creation of a garden.

It was no small garden either, measuring approximately 140 feet by 105 feet. Mentioning his garden again in a letter dated April of 1738, Krasheninnikov reports to Gmelin and Müller

[29] S. P. Krasheninnikov, *Opisanie Zemli Kamchatki*, 2 Vols. (St. Petersburg: Imperatorskaia Akademiia Nauk, 1755). Within the first ten years of its publication Krasheninnikov's *Opisanie* was translated into French, German and English.

[30] Stepan Petrovich Krasheninnikov, *Explorations of Kamchatka North Pacific Scimitar*, trans. E. A. P. Crownhart-Vaughn (Portland: Oregon Historical Society, 1972), 352.

[31] S. P. Krasheninnikov, *Opisanie Zemli Kamchatki s prilozheniem raportov, donesenii i drugikh neopublikovannykh materialov* (Moscow: Glavsevmorputi, 1949), 560.

that he had petitioned the main offices in Bolsheretsk [*prikaznaia izba*] for stakes and rods in the hopes of completing it by May, though he had only petitioned for them and had not yet been granted anything.[32] In that same report but in an entry clearly composed much later Krasheninnikov says that he was able to grow turnips, radishes, barley, as well as "what ever herbs I could find, and which I have dried and sent to you." He was unable to plant any trees because, as he explains, with the garden dug and fenced, their leaves fell off, however "in the fall or in the spring all the trees, however many there are here, cannot fail."[33] Almost all the herbs, he reports, had flourished in the garden and would be collected, dried and dispatched later in the season.

Krasheninnikov's Bolsheretsk garden was clearly a botanical way station, a place for the local plants he had collected to grow and flower, before being dried and pressed and sent on to the professors in Iakutsk. However it is also clear that Krasheninnikov was experimenting to see how traditional Russian crops, including barley, radishes and peas, would fare in this region. In 1739, with his garden now two years old, Krasheninnikov notes that he was still collecting herbs, transplanting them into the garden, "into four beds, the majority of which have flowered, whereas the other plants have not yet appeared." At this date Krasheninnikov had finally succeeded in cultivating several small trees and bushes as well, including rowan berry, alder, hawthorn, dwarf pine, currants, raspberries, bird cherries, and roses, among other shrubs whose names cannot be identified, each planted at three or more a piece.[34] Krasheninnikov continued to describe the progress and the contents of his garden in Kamchatka until almost the day he left. This garden was a mixed space of cultivation of new-found local species and experimentation

[32] Krasheninnikov, *Opisanie Zemli Kamchatki*, 570.

[33] Ibid., 578.

[34] Ibid., 594-595.

with traditional Russian crops. It was a botanical crossroads that reflected the larger flows of specimens and information, not to mention people and arms, of Russian imperial expansion to the Pacific.

As professor of Natural History and as informal director of the Academy's botanical garden, Krasheninnikov brought this particular approach to the cultivation and display of plants that he had developed in Bolsheretsk to St. Petersburg, and to the multiple and mobile garden spaces there. Krasheninnikov's return to St. Petersburg in 1743 and his rapid ascent through the Academy ranks coincided with a gap in directorship of the Apothecary garden on Aptekarskii Island and the Academy's garden on Vasil'evskii Island. The former director of both gardens, Johann Georg Siegesbeck (1686-1755), who Krasheninnikov worked with immediately upon his return, was dismissed in 1747. First Gmelin and then Johann Christian Hebenstreit officially replaced Siegesbeck as directors of the gardens, however Krasheninnikov remained the defacto director from the time of Siegesbeck's dismissal. Gmelin had been allowed to leave Russia to visit family in 1749 and he simply never returned, while Hebenstreit was almost immediately attached to the Academy's president, Kirill Razumovskii, on his expedition to Ukraine. By 1750 Krasheninnikov was a full professor of Natural History at the Academy and his own botanical agenda with the Academy's garden on Vasil'evskii Island was well underway. He sought, it would seem, to organize the Academy's garden in such a way as to represent and highlight the flora of the Russian Empire, as opposed to abiding by a strictly classificatory organization. He petitioned the Academy to organize the collection of seeds from each of the Empire's provinces [*guberniia*] for this reason though it is unclear if he was successful in this endeavor.[35] Krasheninnikov's interests in botanizing Russian provinces closer to home, including the

[35] A. N. Kuprianov, *Arabeskii botaniki* (Kemerovo: Masterskaia AZ, 2005), 62-63.

province of Ingria in which St. Petersburg was located, characterized much of his work until his death in 1755.[36] Krasheninnikov's tenure as director of the Academy's gardens provide a tantalizing though difficult to substantiate perspective on how St. Petersburg's garden spaces must have changed and what uses they were likely put to in the wake of the momentous Siberian expeditions.

St. Petersburg's scientific expeditions into Siberia were certainly tied to and rooted in garden creation however difficult those gardens are to resurrect from the sources. It seems evident that the influx of botanical specimens provided by Messerschmidt and the Second Kamchatka Expedition spurred the creation of multiple garden sites back in St. Petersburg, including the Academy's garden on Vasil'evskii Island (started in 1735) and Gmelin's own personal gardens attached to his living quarters. As my earlier discussion of St. Petersburg suggested, gardens were not just the inevitable outcome of imperial expansion but were an undeniable tool of it. Even more so with botanical gardens, which do not simply house the specimens collected by expeditions, they in turn help to drive those expeditions themselves. St. Petersburg's multiple and overlapping garden spaces, the Apothecary Garden on Aptekarskii Island and the botanical garden on Vasil'evskii Island reflect the mobile expeditions that helped to fill them.

St. Petersburg, as a port and as the new base for the Russian navy was clearly a city well connected to many different regimes of movement. The expeditions of the Academy of Sciences connected it directly with the space of Siberia and linked the two in a intellectual package that implied the new Academy's greatest strength lay in its access to this little studied region. St. Petersburg, however, was also distinctly a garden city. The complex of architectural and

[36] Stephani Krascheninnikow and David De Gorter, *Flora Ingrica ex schedis Stephani Krasheninnikow Botanices et Historiae Naturalis Professoris quondam Petropolitani confecta et prioriis observationibus aucta a David de Gorter* (St. Petersburg: Academiae Scientiarum, 1761).

aesthetic styles adopted by Peter's personal gardens were highly symbolic additions to a city otherwise focused on military and mercantile expansion through the Baltic. From the large, formal gardens of the suburban estates like Peterhof, Gatchina and Ekaterinhof, to the smaller gardens within the city center, gardens spoke volumes about the ways in which imperial power expressed itself over nature through the creation and control of landscape and display.

The language surrounding the construction of St. Petersburg in Peter's correspondence constantly invoked the world "paradise," which Lindsey Hughes has pointed out was used to the point of sarcasm when the realities of daily life filtered into and disrupted Peter's original vision. Certainly, as Hughes maintains, "the abandonment of Moscow in favor of St Petersburg was a potent symbol of Peter's rejection of Russia's past," while the embrace of St. Petersburg was an equally potent symbol of its future.[37] Filled with new-style architecture and plans for canals, wide avenues, and triumphal arches, St. Petersburg was intended, it would seem, for the imperial procession and the feted display. Gardens too and other public diversions adorned this new urban space in such a way as to visibly mark it as distinct from, even a rejection of, older style Russian urban living. The importance of the inclusion of parks and gardens in the creation of St. Petersburg is emphasized by James Cracraft when he argues that "before the reign of Peter I the very concept of a large, artificially arranged space in the open air intended solely to provide pleasurable surroundings in which to relax and congregate, if not to dally, was virtually unknown in Russia."[38]

Within this new and powerfully symbolic ecology of imperial garden spaces, the Apothecary Garden on Aptekarskii Island, which despite being one of the earliest gardens to be

[37] Hughes, *Age of Peter the Great*, 204. Hughes does point out in this section of her work that while these were potent *symbols*, the reality was that significant building projects continued in both St. Petersburg and Moscow.

[38] Cracraft, *Petrine Revolution*, 182.

established in St. Petersburg, is one of the least studied. The lack of compelling visual sources (not absent from other St. Petersburg gardens) may explain some of this neglect. However this large, diverse, well-tended and busy garden deserves attention as a key site of cultivation. Moreover it acted as a lens, focusing the numerous plants flows issuing from the Siberian expeditions as well as more local forays through the city of St. Petersburg on to the global botanical community. Apothecary gardens in general are likened in the Russian-language literature to old style farmsteads or *usadby*, which were essentially pragmatic spaces for the protection and cultivation of important crops like wheat, rye and livestock. As apothecary and monastery gardens have been reassessed more recently for their aesthetic, symbolic and intellectual offerings, strains of Byzantine influence and indications of Russian cultural understanding of nature have started to emerge.[39] It is in this light that the apothecary garden in St. Petersburg and later the botanical garden of the Academy should be read as meaningful places where new imperial forms were being forged along with older Russian cultural practices and methods of knowledge production.

Gardens even in the narrow sense of the role they played within Russia's scientific community were important places of knowledge creation and self-presentation. When Catherine I appointed Lavrentii Lavrentevich Blumentrost as the first president of the Academy of Science in 1725, the first meeting of the newly arrived academicians was held by him at the entrance to the Summer Garden in the city's center. After the Academicians were formally presented to Catherine I, Blumentrost paraded them through the grounds, showing them the marble statues

[39] Per-Arne Bodin, "The Terrestrial Paradise: the garden as topos in Russian medieval culture," in *Byzantine Gardens and Beyond,* eds. Helena Bodin and Ragnar Hedlung, 175-183 (Uppsala: Uppsala Universitet, 2013); V. D. Chernyi, *Russkie Srednevekovye Sady: opyt klassifikatsii* (Moscow: Rukopisnye pamiatniki drevnei rusi, 2010).

and fountains and lingering on the grotto, which was adorned by a statue of Venus that was supposedly "in no way yielding to that of the Medici."[40]

The Blumentrost brothers, Ivan Lavrentevich and Lavrentii Lavrentevich, Archeator of the Medical Chancellery and President of the Academy of Sciences respectively, both appear to have been keenly aware of the use of gardens in an intellectual setting. Following Peter I closely as he toured, campaigned, and visited various therapeutic waters, the Blumentrost brothers were hardly likely to have had much time to garden themselves, and yet, upon closer inspection, it appears they left a number of gardens in their wake. They shared households first in Moscow and later in St. Petersburg and in both locations they were supposed to have kept personal apothecary gardens while officially maintaining those of the Medical Chancellery and later of the Academy of Sciences. Their personal garden in St. Petersburg, for instance, was built in 1722 close their residence in the German quarter and stretched from Milloniaia street to the Moika canal, and from Bestuzhevkii street to Apothecary alley.[41] How dirty they got their hands by actually gardening is unknown. In any event having close personal access to a garden space was as medicinally important and it would appear political astute as well.

As with many other aspects of the early history of St. Petersburg very little is known about the process of moving the Apothecary Chancellery from Moscow, nor is the choice of location for the Apothecary Garden on Aptekarskii Island or the contents of the garden's first collections easily reconstructed. A fire in 1737 in St. Petersburg destroyed most of the Medical

---

[40] Petr Pekarskii, *Istoriia Imperatorskoi Akademii Nauk v Peterburg*, vol. 1, (St. Petersburg: Imperatorskaia Akademiia Nauk, 1870), XXXV.

[41] Smagina, G. I. ed. *Nemtsy v Rossii* (St. Petersburg: Liki Rossii, 2004), n.p. http://www.genrogge.ru/grbook/01.htm "The brothers Iogann-Gotlieb-Teodor (Ivan) and Robert-Laurens (Lavrentii) Bliumentrost kept a house in the German quarter [of St. Petersburg]; their residence in the neighborhood was the result of the appearance in 1722 of the building for the Main Apothecary (Millionaia st., 4/1). In 1712, along with the other "ministries" of the Petrine court, the Apothecary Chancellery moved to St. Petersburg, was renamed the Main Apothecary, [and] I. L. Blumentrost was appointed its head. The grounds of the Apothecary … stretched from Millionaia street to the Moika river, … [and was] bordered by Bestuzhevskii to the east, [and] by Apothecary alley to the west."

Chancellery's documents including the entire archive of the Apothecary Garden. Even the original decree issued by Peter I to establish the Apothecary Garden in St. Petersburg has not survived. This lack of direct primarily evidence attesting to the first days of the St. Petersburg Apothecary Garden has given rise to creative uses of other sources and much debate about the basic facts of the garden's history.

Most early nineteenth century historians of Russian botany who appear to have thoroughly used the state and regional archives in Russia generally tend to assert a conservative estimate of 11 February 1714 being the date on which Peter I established the garden on Aptekarskii Island.[42] V. I. Lipskii, however, using old sketch maps argues for a founding date no later than 1713.[43] In either case an apothecary garden was laid out on the rather appropriately named Aptekarskii Island fairly early in the city's history. Flanked to the east by the Bolshaia Nevka River, across which lay the foreigners' burial ground, and to the west by a forest cut by a single alley leading to the residence of Feofan Prokhopovitch, the Apothecary garden on Aptekarskii Island would have been relatively isolated from the rest of St. Petersburg well into the eighteenth century (see figure 6). This may well have been intentional as the area was meant to be kept unspoiled for the purposes of raising medicinal plants and preparing, through distillation and other chemical processes, medicines for the Main Apothecary in town. The garden likely had some outbuildings, for it did house a gardener and several pharmacists and was supposed to have contained a pharmaceutical 'factory' [*zavod*].

---

[42] F. E. L. Fischer, "Notiz über den Kaiserlichen botanischen Garten zu St. Petersburg," *Verhandlungen des Vereins zur Beförderung des Gartenbaues in den Königlich Preußlichen Staaten* 17 (1844), 275; E. R. Trautvetter, *Grundriss einer geschichte der botanik in bezug auf Rusland* (St. Petersburg: Aus der Druckerei der Kaiserl. Akademie der Wissenschaften, 1837), 51.

[43] V. I. Lipskii, *Istoricheskii Ocherk Imperatorskago S.-Peterburgskago Botanicheskii Sad (1713 – 1913)* (St. Petersburg: Gerol'd, 1913), 6.

Before the early 1720s maps provide the most data about the garden's existence. It is reasonable to assume that Robert Erskine as Archeator of the Apothecary Chancellery was responsible for its layout, for as Cornelius de Bruyn attests Erskine was concerned with the collection and cultivation of medicinal plants from surrounding areas.[44] Erskine likely would have diverted at least some of his considerable energy to laying out and building up the garden before his death in 1719. It is interesting to note here that even though Erskine directed the contents of his personal garden from Moscow to the Apothecary Garden in St. Petersburg he did not go long without making for himself another personal garden. This garden was supposed to have been on the outskirts of St. Petersburg at what is now Gatchina where Erskine was given a small residence as the primary physician to Natalia Alekseevna, Peter I's sister. Henri Lavie, a French ambassador to the Russian court between 1719 and 1722, he observed Erskine's funeral and noted that his "books and his cabinet, the same as his house, were to be sold and the proceeds given to the hospital in Edinburg, … his house in the country and his garden of simples for the tsar, were to be given as a present to doctor Blomptrose [I. L. Blumentrost], personal physician to the tsaritsa."[45]

While it was clear that there was a great deal of gardening going on in St. Petersburg in the first third of the eighteenth century, it is not entirely clear who was responsible for the Apothecary Garden on Aptekarskii Island. Technically, after the death of Buxbaum, Ivan Lavrentevich Blumentrost, Archeator of the Medical Chancellery, would have assumed the role of director of the Apothecary Garden. Having hired Buxbaum in the first place, Blumentrost was probably not intimately involved in the maintenance of the Apothecary Garden, required the full-

[44] Cornelius de Bruyn, *Travels into Muscovy*, vol. 2 (London: A. Bettesworth, 1737), 179.

[45] Henri Lavie, "Donoseniia franstuzskago konsula v Peterburga Lavi … c 1719 po 1722 g." *Sbornik Imperatorskago Russkago Istoricheskago Obshchestva*, 40 (1884), 3-4.

time attentions of a trained professional. Despite the fact that Johann Georg Gmelin had been in St. Petersburg in the employ of the Academy of Sciences since 1728 neither he, or Johann Amman (1707-1741) who had been hired in 1733 to replace Buxbaum in the Academy appears to have much to do with Apothecary Garden. Gmelin was certainly busy preparing Buxbaum's *Centuria* for publication. Meanwhile Amman's petitions to the Academy starting in 1735 to build a new garden on Vasil'evskii Island suggest that the Apothecary Garden was not part of his regular research.

Despite the existence of the Apothecary Garden on Aptekarskii Island, which no doubt housed a large collection of medicinal plants, there was a felt need for creation of a specifically 'botanical' garden for the Academy of Sciences. Lavrentii Lavrentevich Blumentrost, president of the Academy of Sciences, was one of the first to voice the need for establishing a botanical garden closer to the Academy itself.[46] On May 1, 1726 an unsigned petition was submitted to St. Petersburg's head architect, Domenico Trezzini, requesting a portion of land on Vasil'evskii Island for the creation of a botanical garden along with buildings in which to house the newly arrived academicians.[47] The desire to house the Academy's professors on the grounds of the proposed garden foreshadows the future role the garden space would play in the daily life of St. Petersburg's intellectual elite. The Academy's botanical garden on Vasil'evskii Island was in fact created as an addition to the housing provided the professoriate, who liked to keep their own gardens close to their quarters.

Blumentrost may have been writing in response to the recent visit of Pierre Deschisaux to St. Petersburg. Though little is known about this French doctor from Cannes, that he appeared

[46] N. I. Nevskaia, *Letopis' Rossiiskoi Akademii Nauk (1724-1802),* vol. 1 (St. Petersburg: Nauka, 2000), 49.

[47] *Materialy dlia Istorii Imperatorskoi Akademii Nauk,* vol. 1 (St. Petersburg: Imperatorskaia Akademiia Nauk, 1885), 188.

without invitation in the city of St. Petersburg to either join an expedition or help found a botanical garden suggests how central both were to the image of St. Petersburg as a new imperial capital on the broader international stage. Even without an official invitation to Russia and therefore enjoying few connections within St. Petersburg itself, Pierre Deschisaux apparently did enjoy the support of the French Minister of Foreign Affairs, Count de Morville,[48] who sent him to St. Petersburg in 1724 seeking a scientific appointment to the diplomatic mission slated to leave for Constantinople under the direction of Aleksandr Ivanovich Rumiantsev. According to a letter that Deschisaux wrote to an unknown recipient dated in 1726, he had apparently initially travelled to Russia assuming he already had a position with Rumiantsev. However arriving late in the fall of 1724, just after Rumiantsev had left, Deschisaux learned that the expedition had chosen Johann Christian Buxbaum to serve as the convoy's doctor, which forced Deschisaux to "change destinations" and see what could be done in the city of St. Petersburg.[49] Lavrentii Lavrentevich Blumentrost offered Deschisaux some assistance, but could not secure him a position within Academy. G. F. Müller, a professor at the Academy at the time of Deschisaux's visit wrote that even though Deschisaux "waited in St. Petersburg" for some time, it was "not without benefit," for Blumentrost "bestowed upon him a yearly pension of 300 rubles from the Academy, which started September 1, 1724." That pension was given along with instructions by Blumentrost to draft a plan for the establishment of a Botanical Garden in St. Petersburg. Over the next several months Deschisaux did some botanical collecting around St. Petersburg, but

[48] Charles Jean-Baptiste Fleuriau, comte de Morville (1686-1732), was Minster of Foreign Affairs in France from 1723-1727. See: "Fleuriau, Charles Jean-Baptiste …," *Biographie Universelle* … Vol. 30 (Paris: Chez L. G. Michaud, 1821), 228.

[49] *Materialy dlia istorii Imperatorskoi Akademii Nauk*, vol. 6 (St. Petersburg: Imperatorskaia Akademii Nauk , 1890), 81. This volume of the *Materialy* is entirely taken up by G. F. Müller's "Nachrichten zur geshchicte der academie der wissenschaften … (1725-1743)." Hereafter, *MIIAN*.

otherwise, Müller claims never to have seen him at Academy sessions or among anyone other than the French Academician, Nicholas Delisle.

Having spent the better part of a year in St. Petersburg Deschisaux travelled back to France where he published his plan for Blumentrost's botanical garden in a slim volume entitled: *Mémoire pour servir à l'instruction de l'histoire naturelle des plantes de Russie et à l'établissement d'un jardin botanique à St. Pétersbourg* (1725). The *Memoire*, which ran into a second edition in 1728, contains a dedication to the Count of Morville, Deschisaux's patron, who was "something of a second party in the project [to establish] a garden for the cultivation of exotic plants in St. Petersburg."[50] Why Morville may have been interested in helping to establish a botanical garden in St. Petersburg is difficult to know, however it is clear that he intended to support Deschisaux's further travels into Turkey and Persia should he gather Russian Imperial support as well.

Deschisaux's memoir begins with "a history of plants in Russia," in which he names and describes plants that he collected around St. Petersburg albeit in vague terms. He also makes note of the work already done in this area, describing Buxbaum's collections of mosses and funguses as well as Buxbaum's alphabetical list and description of plants from Livonia and Finland. Deschisaux also notes Erskine's herbarium of plants from Moscow, which, he stressed, all had their proper names affixed. Deschisaux was apparently a thorough investigator but more importantly, he was one who enjoyed access to the primary botanical collections of the time, those compiled by Buxbaum and Erskine. These collections existed as herbaria and were likely kept in the library of the Academy of Sciences. Even if Deschisaux was familiar with the dried

[50] R. Minzloff, *Catalogue raisonné des Russica de la Bibliothéque impéiale publique de Saint-Petersbourg. Tom. 1: Pierre le Grand dans la Littérature Étrangère* (St. Petersburg: I. I. Glasounow, 1872), 401.

and pressed work of Erskine and Buxbaum, it seems very likely that he had not been introduced to their garden on the northern end of town.

The real contribution of Deschisaux's work and one of the primary reasons it is useful here is for the series of very specific, almost technical instructions it offers for building a botanical garden from the ground up. Deschisaux begins this section of his *Memoire* by remarking that even the famous Jardin du Roi in Paris was originally thought to have been located in an inhospitable location being so much more northerly than Montpellier, site of one of the earliest and most successful botanical gardens in Europe. "All the more reason," Deschisaux writes, "to allege that it is impossible to establish such an institution in St. Petersburg, which is even more northerly than Paris."[51] However, the northerly climes had not kept the Jardin in Paris from flowering nor would they in St. Petersburg.

The foundation of any garden, Deschisaux writes, begins with the fundamental division of the garden into two overall sections, one for plants from the region and one for exotics and imports. He then advocates for cultivating as many different kinds of plants as possible, while making sure to cultivate those that are more useful in at least two different places: one where they can be grouped with other plants that prefer the same conditions, and one where they can be grouped according to a system of classification. Deschisaux's definition of 'use' here is vague, though it seems necessarily broad, possibly encompassing both economically and medicinally useful plants. In these recommendations for division and duplication we see an indication of one of the blunt realities of running a botanical garden in the early modern period: that plants grouped by classificatory scheme may well have been instructive, but they undoubtedly grew less well than those that had been grouped according to preferred growing conditions. Separating

[51] Pierre Deschisaux, *Description d'un voyage fait a Saint Petersbourg* (Paris: Thiboust, 1728), 17.

out the local plants from exotics, and maintaining plant grouping according to growing conditions probably used to feed the display of plants grouped according to classification. The artificiality of plant classification was perhaps no where more obvious than in the bifurcated botanical garden.

Of the various 'systematic' approaches that could and should nevertheless be adopted Deschisaux outlines three basic types to choose from: the first was a system based on the 'virtues' of the plants while the second was based on the pharmaceutical use of the plants. The third system, which Deschisaux clearly favored, was based on the physical characteristics of the plants. Deschisaux recommends without reservation the system of Joseph Pitton de Tournefort "both because of its ease and its simplicity, and because of the reputation for genius of that great botanist, who has been adopted by all great men of sense."[52] Following Tournefort's system meant grouping plants in individual beds according to a class that was determined primarily by the shape of the corolla or the brightly flowering part of the plant. The portion of the garden where the plants were to be arranged according to a classificatory system was to be called "the school" and the plants therein were to be arranged in sequence so as to display the continuum of forms that make up a complete botanical array. In this prescription for a botanical garden, therefore, we can see the familiar tension between displaying the local and the exotic as simultaneously in sequence and yet fundamentally different. Like other early modern collections, including cabinets of curiosity, the purpose of the collection was to display a certain kind of natural relatedness: one that emphasized the unity of natural phenomena from a given area.[53] Just

[52] Deschisaux, *Description d'un voyage*, 19.

[53] Richard Drayton, *Nature's Government: science, imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000), 24. "The botanic gardens of the Enlightenment, under the influence of the new taxonomy, sought to *represent* rather than encompass the plants of the world. Thus Linnaeus suggested to the King and Queen of Sweden that their gardens assembled '*deputies* of the whole wide world.' When Jussieu reordered the Jardin du Roi he intended to comprehend all 'the families of plants', not every species: the ideal of the microcosm

because that area, for instance the Russian Empire, was historically and politically determined, did not in fact undermine the attempt to create and display a coherent flora or collection of it.

Each large bed in the garden, whether it contained a class or a group of plants preferring the same conditions, was in any case to be surrounded by a short hedge and the garden itself was to be fairly well enclosed by the same "so that the curious can enjoy the view of the plants, and yet, cannot enter without permission."[54] And, in true formal fashion, the middle of the garden was to be occupied with a fountain inside a great basin for the dual purpose of visual delight as well as holding and directing water to various parts of the garden. In general then, Deschisaux's conception of the botanical garden is defined by a combined systematic and pragmatic grouping of plants, by the display of a continuous array of plants for students, as well as by the control of access to it. That these working garden spaces were focused around the form of the fountain hints at their function as formal site of display as well. What separates a botanical garden like this from an apothecary garden or a garden meant to display the 'virtues' of plants was that the botanical garden, the work of many years and the hands of many men, was not only meant to repopulate itself with well-established, seed-bearing plants, an indication of the attention paid to their specific conditions, but that it combined both utility and beauty.

The work of the botanical garden itself, Deschisaux concludes, is impossible without a resident botanist committed to its year-round care. In addition, he adds, there must be kept a herbarium, recording the garden's riches and storing the riches of other gardens for future comparison in order to determine the identity and assign names to strange or new plants. There must also be a library attached to such a garden, Deschisaux suggests, which must include in the principle works of botany including Bauhin's *Pinax* and his *l'Histoire des Plants,* Tournefort's

---

had yielded to that of a map."

[54] Deschisaux, *Description d'un voyage*, 21.

Institutiones and Jean Commelin's work on grasses without which "it is absolutely impossible for a botanist, no matter how laborious or industrious, to ever render reasonable service in the employ of the [science] in question."[55]

G. F. Müller, the Academy's historian who had met Deschisaux during his visit to St. Petersburg did not assess the first half of Deschisaux's work positively. Müller implied that Deschisaux lacked advanced knowledge of plants beyond their common name, scoffing that "one might almost think, that Mr. Deschisaux's science consisted for the most part of gardening."[56] But, in 1724 St. Petersburg had more than enough gardeners and Deschisaux was, in Müller's estimation, "superfluous in St. Petersburg," which needed neither his knowledge nor his talents.

A garden for the Academy, however, would not come to be until the tenure of Johann Amman, who held the chair of Botany and Natural History at the Academy from 1733 until his death in 1741. The earliest documents in the Archives of the Academy relating to Amman's activities show him hard at work describing and organizing Messerschmidt's and Buxbaum's collections. On this score, Amman had his work cut out for him. Messerschmidt's botanical collections alone were vast and to this day are still only partially catalogued. Buxbaum too left a wealth of material behind. Only the first two volumes describing the plants he observed and described during his extended trip through Russia's southern regions had been published before his death, leaving the remaining three to be assembled first by Gmelin, and then after 1733 by Amman alone. These were, in the end, essentially textual projects, requiring comparison and classification using dried specimens and descriptions and based on comparison with other texts held in the Academy's botanical library.

[55] Deschisaux, *Description d'un voyage*, 24.

[56] *MIIAN*, vol. 6, 82.

Amman's productivity was so great that by 1739 he had organized most of Buxbaum's materials according to Tournefort's system of classification and he had published a series of botanical descriptions in the Academy's journal.[57] Clearly Amman was no stranger to the garden however. His major volume, *Stirpium Rariorum in Imperio Rutheno sponte provenientium Icones et Descriptiones*, or *Rare Plants Spontaneously Occurring within the Russian Empire*, is remarkable for how many plants it claims to have observed in the garden.[58] The geographic spread of the plants featured is also impressive, attempting to trace the outlines of the Russian Empire, but focusing heavily on the span of Russia's southern borders, from the Black Sea, to the Caspian, to the long stretches of southern Siberian often called 'Greater Tatary.' Describing some 285 new plants, mostly Siberian in origin, this volume was well received across botanical circles.

Perhaps because of the numerous projects Amman found himself responsible for or perhaps because Aptekarskii Island in 1733 was still relatively distant from the Academy and difficult to travel to in bad weather, very early on Amman began to advocate for creating a botanical garden [*botanicheskii sad*] for the Academy's use close to the Kunstkamera where the Academicians met. This garden, which in the assessment of one historian would eventually become one of Amman's "greatest achievements" was difficult to get started. Writing to his friend and former employer Hans Sloane in 1736 Amman complained: "I have given so many

[57] The Academy's journal, *Commentarii Academiae Scientiarum Imperialis Petropolitanae*, published volumes some years after the original scientific papers had been presented to the Academy assembly. Therefore, Amman's papers which appeared in volumes 8, 9, 10 and 11 were published between 1741 and 1750, but were read before the assembled members of the St. Petersburg Academy between 1736 and 1741.

[58] Johann Amman, *Stirpium Rariorum in Imperio Rutheno sponte provenientium Icones et Descriptiones* (St. Petersburg: Academiae Scientiarum, 1739).

proposals to the Academy of creating a Physic garden, nothing hath been done as yet. A little spot of ground behind my lodgings is my garden, and a little room is my greenhouse."[59]

The Academy eventually was able to rent a wooden building to house its professors in between the second and third lines on Vasil'evskii Island starting in 1732.[60] Once there professors like Amman created small personal gardens that in 1737 they moved over to the adjacent grounds, which the Academy was able to rent from the same owner as the house.[61] It was in this unassuming and piecemeal fashion that a botanical garden came to be on Vasil'evskii Island before it was officially sanctioned with the issue of a royal decree.

In 1739 funds to purchase the property were made available. Some of the funds generated for the purchase of the property were dispersed directly to Amman, who immediately began spending them on glaziers, brick-layers and door-makers to renovate the green houses, depositing the receipts in the Academy's archives.[62] As the Academy described these transactions much later, the property was purchased "for the support of the Academy's Botanical Garden, for the preservation and the cultivation of seeds and herbs, and for the maintenance of the botanical books for study."[63] A certain Trezzini (probably Carlo Guiseppe, Domenico's son-in-law) inspected, described, and drafted the property for the Academy's records, in which the green houses are particularly well-depicted (see figures 7 and 8).

---

[59] W. J. Bryce "Russian Collections in the Sloane Herbarium," *Archives of Natural History* 32 (2005), 28. Bryce dates the letter from Amman to Sloane to 1736.

[60] Nevskaia, *Letopis Rossiiskoi Akademii*, 111. "[29 January 1732] As G. F. Miller, G. F. V. Iunker, G. Ia. Ker and another five members of the Academy have been put out of their quarters, it has been decided to rent for them the house of general-anshef Bon on the third line on Vasil'evskii Island." See also: *Materialy* vol. 2, 99-100.

[61] *MIIAN,* vol. 5, 2-3. This house and garden complex is only designated on one historical map from the period (see figure 9) and is otherwise described quite generally, which made for some difficulty actually locating the garden. A useful website for St. Petersburg's historical architecture, however, gives the current location of where "Bonov house" would have been had it not been destroyed during the Second World War, as being on Kadetskaia ulitsa north of Srednii prospekt. http://www.citywalls.ru/house16191.html.

[62] SPF ARAN, F. 3, op. 1, No. 44, pp. 526-526v. This brief document accounts for Amman's expenditures in the year 1739, which included expenses for building materials, labor and plants.

[63] *Materialy dlia Istorii,* vol. 5, 3.

A report in the Academy's archives contains the Academy's request for the Senate's approval of the purchase, stressing the reasonable price (1,500 rubles), the solid state of the buildings, and the importance for the Academy of having a botanical garden. Somewhat conspicuously not mentioning the apothecary garden on Aptekarskii Island, this report states the need for a piece of land both high enough to withstand potential flood waters and close enough to be of use to the Academy. An "Academic garden" [*Akademicheskii sad*] is essential, this report stresses, for "sowing and cultivating seeds sent to the Academy from many European countries, and moreover from Kazan and Astrakhan, from Siberia and from China; many of which have already been … sowed and have flowered … [and] also for the teaching of botany to students."[64] The added benefit of purchasing this property as opposed to continuing to rent would be, they point out "the acquirement for such a small price of a permanent place for the Academy to replace its Garden."[65]

Interestingly enough by 1742 the Academy claimed that it could not take any more lodgers in the house for the greenhouses were in such a bad state that they were unusable and the plants, which needed to be kept warm, filled the rooms indoors.[66] Regardless of the state of the greenhouses, the Academy's garden on Vasil'evskii maintained an impressive collection that, by the middle of the eighteenth century, contained upwards of 600 species.[67] A map project commissioned by Catherine II in the 1770s to produce an axonometric or "birds-eye-view" of St. Petersburg that covered most of Vasil'evskii Island and included a view of this botanical garden which appeared to be flourishing. (See figure 9)

[64] SPB ARAN, F. 3, op. 1, No. 48, pg. 68v.

[65] SPB ARAN, F. 3, op. 1, No. 48, pg. 70.

[66] *MIIAN*, vol. 5, 2-3.

[67] S. G. Shetler, *The Komarov Botanical Institute. 250 Years of Russian Research* (Washington D.C.: Smithsonian Institution Press, 1967), 63.

Even before the founding of the Academy's botanical garden on Vasil'evskii Island, the Apothecary garden on Aptekarskii Island was trying to separate itself from the Academy of Sciences and from the broader botanical agenda of its garden directors and expedition leaders. This process had already begun with the return of Messerschmidt and the formal handing over of his collection from the Medical Chancellery to the Academy, which physically housed most of his collections in the Kunstkamera, but had to send the living specimens up to Aptekarskii Island. This tension grew even stronger during Amman's early years when the first collections and packets of seeds sent back to St. Petersburg by Gmelin travelling with the Second Kamchatka Expedition were addressed to the Academy of Sciences but were planted on Aptekarskii Island. The creation of the Academy's Garden was no doubt designed in part to relieve this tension and to allow the Apothecary Garden to focus on pharmaceutical plants while the Academy could build up a more botanically diverse collection. However once the Academy got its own garden these tensions did not resolve themselves quite so neatly. Once Ivan Blumentrost ceased being the Archeator of the Medical Chancellery in 1731 the Chancellery's Apothecary garden began to move once again towards expanding its botanical agenda. The new the garden director, once again a doctor from a German university, was explicitly tasked with engaging in wide-spread international correspondence as well as with the identification and description of rare, exotic and unknown plants.

In 1735 Amman continued to build up the garden on Vasil'evskii Island, Johann Georg Siegesbeck (1686-1755) was invited from the University of Wittenberg to direct the Apothecary Garden on Aptekarskii Island. The first thing Siegesbeck did upon arrival was to immediately set about drafting a catalogue of the garden's collections. Published in 1736 under the title *Primitae Florae Petropolitanae*, this work was the first published catalogue of any botanical or apothecary

garden in the Russian Empire and therefore sought to set the record straight on Russia's botanical resources. Published travel narratives and manuscript lists had existed for some time, but as yet there had been no systematic catalogue of the gardens in Moscow, St. Petersburg or Astrakhan. In the preface to this work Siegesbeck acknowledges the fact that this is, indeed, an apothecary or physic garden and therefore did have the same intellectual ambitions as a botanical garden. He even refers somewhat casually to his catalogue as a useful aide-de-memoire for "practicing herbalists, who must on occasion consult lists."[68] However, throughout the preface Siegesbeck's narrative takes pains to point out not just the "usefulness" of the collection, but also the diversity of it, remarking on the number of rarities and exotics.

Playing to his audience's assumptions Siegesbeck goes on to emphasize the distance of St. Petersburg from the rest of Europe and assumes that his audience's prejudices might lead them to think of St. Petersburg's gardens as somehow provincial or uninteresting. Echoing Deschisaux he writes that one assumes plants at such a high latitude and in such a severe climate would be "few and common," but, he exclaims "the reality is far from it!" He confesses to his own surprise when, having crossed the Baltic, he was greeted with "an elegant and delightful view of trees planted along the banks of the Neva," a sight which was enhanced by many meadows, forests, and fields. Rare and exotic plants abound, he assures his reader, not just in the Apothecary Garden itself, but also in many of the "splendid and graceful gardens within the city, [and] attached to the Summer Palace and Peterhoff."[69] Siegesbeck praises the Apothecary Garden on Aptekarskii Island for being even more fruitful and diverse than similar sized gardens elsewhere in Europe. Of the garden's supposed weaknesses, which stereotypically included the harsh

[68] Johann Georg Siegesbeck, *Primitae Florae Petropolitanae sive Catalogus Plantarum tam indigenarum quam exoticarum, quibus instructus fuit Hortus Medicus Petriburgensis* (Riga: Samuel Laur. Frölich, 1736), ii.

[69] Siegesbeck*, Primiate Florae Petropolitanae*, iii.

winters, Siegesbeck suggests that the climate was in fact a spur to even greater collection strength for the gardens had developed powerful methods for overwintering plants, using the snow for its insulating effects and using the sunlight to its greatest advantage in the thick-walled "winter houses."

Siegesbeck, like most botanists in his day, was interested in botanical method and in the debates over nomenclature and classification that were going on between Carl Linnaeus and others. The Dutch traveller Peder van Haven visited the Apothecary Garden in 1736 and described it as being "wide, and designed in the newest manner … [with] so many complete collections of plants and trees from Europe and Asia, especially in the greenhouses, that the doctor and professor Siegesbeck, the director of the garden, said to me more than once, that among all the gardens he had ever visited, not one was equal to it." During van Haven's short stay there appeared "hundreds of completely unknown plants from China and greater Tartary," possibly coming from the Second Kamchatka Expedition which was at that time was in full swing, forcing Siegesbeck to ignore his guest and continue his work at giving them all "appropriate names." [70] However, just as Siegesbeck invokes the herbalists who may well wish to use his published volume in their every-day practice, van Haven notes that in St. Petersburg "all the Apothecaries get their plants from this garden, which is why it is called the Apothecary Garden. It is for this reason that a pharmacists lives there whose sole responsibility is to collect and then prepare medicinal herbs."[71]

During the peaceful beginning of what would become a rather acrimonious correspondence, Siegesbeck wrote to Linnaeus in June of 1736 describing in some detail the situation of botany in Russia. He initiated this correspondence with Linnaeus by introducing

[70] Iu. N. Bespiatykh, *Peterburg Anny Ioannovny v inostrannykh opisaniiakh* (St. Petersburg: Blits, 1997), 312.
[71] Bespiatykh*, Peterburg Anny Ioannovny*, 312.

himself as the appointed director of the Apothecary Garden in St. Petersburg and naming Traugott Gerber as the appointed director of the apothecary gardens in Moscow. They were both responsible, he writes, for increasing their gardens' collections of local as well as of exotic flora. They were also expected to discover and publish descriptions of any previously unknown plant species, while keeping up broad botanical correspondence. He himself was expected to correspond more with European Academies and gardens, while Traugott Gerber, he wrote, would be responsible for keeping up with doctors and surgeons dispatched to Siberia, Greater Tartary, China, Persia and Ukraine.[72] Siegesbeck's point, whether accurate or not, does suggest that the botanical and the apothecary gardens of the Russian Empire were being characterized in terms of their respective itineraries across space and not in terms of the disciplinary break down between 'botanical' and 'apothecary' traditions.

Some friction did occur along these disciplinary lines, however. Siegesbeck did not mention Amman or the botanical garden on Vasil'evskii Island in this first letter, perhaps because it was still a new institution in 1736, but also, possibly, because the relationship between the Apothecary garden and the Academy of Sciences was already starting to deteriorate. Several months after Siegesbeck's first letter to Linnaeus, Amman began corresponding with Linnaeus as well and what he had to say reveals the already distant relationship between the two gardens. In response to Linnaeus's request in his first letter for information about Siegesbeck, Amman responds that he "can provide no news" of Siegesbeck for he "lives at some distance from the Academy." That garden which Siegesbeck directs, Amman continues, "has nothing to do with the Academy, but rather belongs to the Medical Chancellery and is a Pharmaceutical garden."[73]

[72] Johann Georg Siegesbeck to Carl Linnaeus, 4 June 1736, *The Linnaean correspondence*, letter L0085 (linnaeus.c18.net)

[73] Johann Amman to Carl Linnaeus, September 1736, *The Linnaean correspondence*, letter L0094 (linnaeus.c18.net)

These two garden spaces on Aptekarskii and Vasil'evskii Island would soon come together under the consolidated directorship of Siegesbeck, who controlled both gardens from 1741 to 1747. To be sure, there was much complaint, as Siegesbeck took seriously the proprietary nature of the flora discovered by the Academy expeditions and cultivated by the Academy's gardens. What Siberian specimens Linnaeus could obtain from Russia were essentially smuggled out by Count Sten Carl Bielke, a Swedish diplomat then in St. Petersburg, with the help of Gmelin who feuded with the overbearing Siegesbeck. The two garden spaces continued to exist as one dynamic but disconnected unit through the tenure of Krasheninnikov and that of his student, Ivan Ivanovich Lepekhin (1740-1802). The botanical garden on Vasil'evskii was not abandoned to urban development until the early nineteenth century, suggesting that even if there was real cost to maintaining largely redundant garden spaces, there was also real value in having a network of several botanical and medical garden spaces in the city of St. Petersburg.

In looking at the Academy sponsored scientific expeditions out of St. Petersburg and into Siberia in the first half of the eighteenth century, this chapter explores the relationship between the particular itineraries chosen by naturalists Daniel Gottlieb Messerschmidt and Stepan Petrovich Krasheninnikov and the garden spaces their collections ultimately contributed to. Messerschmidt's expedition is seen here as forging a model of scientific expedition in general for the Academy, one that was founded on broadly natural historical investigation, that was deeply committed to Siberia as a the proper space of scientific research, and articulated broader imperial designs in collecting, organizing and displaying the naturalia of the Russian Empire.

Krasheninnikov's travel and later tenure as defacto director of the botanical and medical gardens in St. Petersburg bridges the gap between routes and gardens in large part because he

was so adept at forging both. Krasheninnikov's Bolsheretsk garden focused and reified the movement of plants, people and practices east across Siberia, growing barley next to local, wild herbs, and borrowing from both the collections of the Academy's professors back in Iakutsk and from the expertise of local peoples.

Meanwhile, the Academy of Sciences was asserting itself on the wider stage of other universities and academies by emphasizing its special purview in Siberia. That Linnaeus could not get Siberian specimens out of the country without smuggling them suggests how valued they were by Siegesbeck who blocked their flow and by Linnaeus who ensured it. The fractured and mobile network of garden spaces within St. Petersburg demonstrates how shifting winds of support contributed to the creation of multiple alternative spaces of plant cultivation that ultimately served the purposes of the Academy's botanical community better than a single unitary garden might have done. The complex relationship between construction of St. Petersburg as a city of Science, seeing Siberia as a site of scientific research, and producing scientific knowledge in both occupies the center of this chapter. The connections that bind these concepts are not easily uncoupled, however, ultimately speaking to their combined strength and longevity.

Chapter Four:

Collecting Europe

In 1786 the wealthy and well-connected nobleman Prokofii Akinfievich Demidov published a Russian language catalogue of his private botanical garden in Moscow.[1] This catalogue alphabetically listed just over 4,000 plant species according to their Linnaean binomials, which had been transliterated into Russian. Each name, from *Amomum zerumbet* to *Iasminum azoricum* was given an overall reference number and listed vertically, with information relating to the Linnaean class, the original Latin binomial, and various aspects of the plant's growth conditions separated into columns. What Demidov produced, in the end, was a handy reference for the literate Russian speaker, bridging the gap between informal knowledge of plant names and the more systematic, botanical organization mapped out by Linnaeus earlier in the century. For the Russian (like Demidov) who knew his verbenas from his violets and who relied more heavily on short form Latin names rather than Russian common names, this work provided a crucial synthesis between Russian language and botanical classification.

Demidov's catalogue was not the first such work, indeed the late eighteenth century saw the publication of a number of texts printed in French, Latin and Russian, catering to an increasingly literate Russian elite with ambitions to botanical and other scientific knowledge.[2]

---

[1] [Demidov, Prokofii Akinfievich], *Katalog Rasteniiam po alfavitu Sobrannym iz chetyrekh chastei sveta; s pokazaniem Botanicheskikh Kharakterov; nakhodiashchimsiia v Moskve sadu Deistvitelnago Statskogo Sovetnika Prokofiia Demidova* (Moscow: F. Gippius, 1786).

[2] Bernard de Fontenelle, *Razgovory o mnozhestve mirov gospodina Fontenella*, Kn. Antiokh Kantemir, trans. (St. Petersburg: Imperatorskoi Akademiia Nauk, 1761). One of the earliest translations of a scientific text into Russian was Antioch Kantemir's 1730 translation of Bernard de Fontenelle's *On the Plurality of Worlds,* in which Kantemir spilled no small amount of ink directly transliterating scientific terms and defining them in Russian. Somewhat later, Nestor Maksimovich Ambodik's botanical dictionaries worked to translate Latin botanical terms and concepts into Russian. See, Nestor Maksimovich Ambodik, *Vrachebnoe veshchestvoslovie ili opisanie tselitel'nykh rastenii v pishu i lekarstva upotrebliaemykh, so iz"iasneniiem ikh pol'zy i upotrebleniia, izobrazheniiem risunkov, prirodnomy*

The appearance of this literature, both translated and transliterated scientific texts, speaks to a larger trend followed throughout this chapter of Russians (students, amateurs, noblemen alike) travelling to Europe to collect books and specimens in order to fill libraries, collections and gardens back in Russia.

This chapter opens with a brief treatment of Demidov's remarkable catalogue (more of which later) in order to highlight the role of botanical collection and the creation of botanical gardens in the increasingly frequent travels of Russians to various European states throughout the eighteenth century. Because the Russians followed here treated the gardens of Leiden, Uppsala, London and Paris as fields to be botanized and as a market to be utilized, rather than as sites of scientific pilgrimage, this chapter works to reposition the intellectual relationship between the Russian Empire and European Academies and gardens as one weighted by values associated with relative distance and proximity. Russian students and collectors were clearly outsiders when they visited European Academies and gardens, but the value associated with going to these places was in establishing a proximate relationship with such rich collections. Furthermore, the value that these Russian imperial subjects brought with them was their own proximity to Russian collections and to Russian imperial flora. Rather than reinforcing the imbalance of the classic "center-periphery" relationship, this chapter chooses to focus on the subtle ways in which proximity and distance, from different perspectives, helped Russian students and collectors to meet, engage with and benefit from the European botanical community.

Each of the preceding three chapters in this dissertation have tried to show how the routes along which plants were collected in turn created distinct spaces of plant cultivation. These routes and spaces helped to dictate the production of botanical knowledge within the Russian

---

kazhdago rasteniia vidu sootvetstvuiushchikh, 4 vols. (St. Petersburg: Tip. Morskogo shliakhetnogo kadetskogo korpusa, 1783-1789).

Empire from the late seventeenth through the early eighteenth centuries. Previously in all three chapters the focus has been on these activities as they occurred strictly within the borders of the Russian Empire from the seventeenth-century travels of itinerant herbalists to the eighteenth0century travels of doctors and naturalists. This fourth and final chapter therefore turns its attention to the Russian imperial subjects who conducted their botanical collection outside of Russia in Europe and on the gardens they constructed with their hard-won seeds and starts.

Traveling to and collecting in Europe ushered in new kinds of botanical texts for the Russian Empire, including the university dissertation and informal botanical correspondence. More importantly, this particular regime of collection supported a new form of service to the state, engaged in primarily by elite Russians who had achieved their status either through wealth or education, allowing them to travel between Russia and Europe more or less freely.

Certainly, the most immediate reason for travelling to the gardens and academies of Europe was, of course, to learn. Plant identification, description, and classification were just the ends of botanical practice, the means included fluency in Latin, direct access to an ever expanding collection of botanical books, and the kind day-to-day knowledge of climate and soil that sustained cultivation required. There was clearly a lot to be learned. But collecting in Europe did not just indicate a need for better educational opportunities. It spoke to the use of a service model for the integration of scientific practice into elite sensibilities. Following the 'service model' of scientific practice in imperial Russia ultimately helps to decipher the deeply imbricated relationship between Russian elite culture and scientific practice that had emerged by the end of the eighteenth century. The careers, correspondence and publications of the Russian students and amateurs explored in this chapter including Constantine Ivanovich Shchepin, a translator and botanical liaison for the St. Petersburg Academy of Sciences placed in Leiden and

Aleksandr Matveevich Karamyshev a student of Linnaeus, all display a confidence in the suitability of botanical study for a man of intelligence. The travels of various members of the wealthy Demidov family suggest it was suitable for the man of means as well.

The act of collecting within Europe, still a relatively new endeavor for Russia, became a way of harnessing older techniques for organizing Empire, namely, the notion of service. Sending Russian imperial subjects to Europe to render service in science encouraged the growth of an educated and mobile elite while capitalizing upon their successes back home.[3] While Russian intellectual activity in Europe has often been slotted into preexisting European hierarchies of power and knowledge, understanding these early eighteenth-century Russian itineraries through Europe as a form of service, regardless of whether it was directly supported by the state or independently funded, helps to link the scientific work of the Russian traveler with the imperial processes occurring in Russia.[4]

While traditionally Russian students in Europe were seen as ill-fit to their responsibilities, this chapter looks at Russian collectors in Europe who saw themselves and their work as existing on a continuum with other regimes of botanical collection, including scientific expedition. Casting European gardens not as hegemonic botanical centers, but rather as another kind of botanical borderland with its own rules regulating access, this chapter understands the real value of collection in terms of proximity and distance. One aspect of going to Europe to collect was that it provided a new locale where Russian collectors could gain local knowledge while trading on their own local knowledge of Russian flora. This refiguring of the relationship between Russian students and collectors with their European counterparts offers to open up our

[3] Brenda Meehan-Waters, *Autocracy & Aristocracy: The Russian Service Elite of 1730* (New Brunswick: Rutgers University Press, 1982).

[4] Elizabeth A. Hachten, "In Service to Science and Society: Scientists and the Public in Late-Nineteenth-Century Russia," *Osiris* 17 (2002), 171-209

understanding of how the Russian Empire sought to use scientific practice. As a tool facilitating service to the Empire and as a measure of the relative proximity to Russian natural phenomena registered with foreign Academies, the activities of Russians collecting in Europe serves as indicator of the extent to which elite Russian culture had been influenced by botanical practice, and similarly, how botanical practice came to be infused with certain elements of Russian culture.

Those Russians travelling to Europe in the eighteenth century to collect European botanical resources and observe local traditions form a distinct corollary to the tradition of European travellers visiting the Russian Empire.[5] European descriptions of the Russian Empire were primarily concerned with Russia's political and religious cultures as recognizably similar yet distinctly alien to western forms. Orthodoxy and autocracy were endlessly fascinating to European observers as they filled the familiar categories of Christianity and monarchy and yet seemed to be aberrations of both, the figure of the Patriarch likened to a Russian Pope and the tsar, more a despot than a king. Similarly Russia's noble elite were remarkable in the eyes of many European observers for their lack of literacy and their steadfast adherence to old ways. Very early descriptions of Russia painted 'Muscovy' as rude and barbarous, tyrannous and untutored. John Perry, the English engineer hired by Peter I to construct a canal between the Don and the Volga Rivers suggested in his description of Russia that the primary cause of the "ignorance" of the vast majority of Russians was "not so much to be wonder'd at, when it is consider'd that they neither suffer'd their Sons to travel, nor was there ever any University in the Countrey, or considerable School of any Learning, till this *Czar*'s Time."[6] Travel and education

[5] Marshall T. Poe, *"A People born to Slavery": Russia in Early Modern European Ethnography, 1476-1748* (Ithaca: Cornell University Press, 2000).

[6] John Perry, *The State of Russia Under the Present Czar* (London: Benjamin Tooke, 1716), 210-211.

were both, therefore, perceived as crucially missing from Russian elite culture and whether or not he took Perry's words to heart, Peter I set about rectifying the situation.

Russians travelling through Europe produced their own corpus of texts containing observation and evaluations of the similarities and differences between themselves and the people they encountered, though clearly not on the scale of Western literature about Russia.[7] Some of the earliest travel memoirs written by Russians describing Europe date to the late 1690s when Peter I dispatched several of his closest confidents to Europe to make observations on various aspects of civil and military infrastructure. Boris Petrovich Sheremetev (1652-1719) and Peter Tolstoi (1645-1729) were separately send to Italy with specific instructions to observe military and naval organization of the different city-states there. They both enjoyed high profile circuits through the Italian peninsula that each described in great detail.[8] Upon his return to Moscow in 1699 Sheremetev became one of Peter's first boyars to adopt a German-style dress in place of the older Russian *opashen* (a short, circular cape worn about the shoulders) and advocated for implementing new systems of Italian-style military organization into the Russian army. Sheremetev's observations of Italian intellectual culture were reserved to a brief visit to a zoo [*zverintsy*], where he encountered several lions, panthers, bears, wolves, foxes, as well as a

[7] Sara Dickinson, *Breaking Ground: Travel and National Culture in Russia from Peter I to the Era of Pushkin* (Amsterdam: Rodopi, 2006). Russian travel accounts describing Europe in the late seventeenth and early eighteenth centuries are few and far between. Dickinson treats one travel memoir from this period, that of Boris Kurakin written from 1707-1708, before moving on to the travels of Aleksandr Kurakin in the 1770s.

[8] SPB II, Bk. 115, No. 396 [Quarto], "Puteshestviie Grafa Sheremeteva," (1697 – 1699); Boris Petrovich Sheremetev, *Zapiski Puteshestviia ... grafa Borisa Petrovicha Sheremeteva* (Moscow: Imperatorskii Universitet, 1773); Peter Tolstoi, *The Travel Diary of Peter Tolstoi: A Muscovite in Early Modern Europe*, ed. and trans. Max Okenfuss (DeKalb: Northern Illinois University Press, 1987); P. A. Tolstoi, *Puteshestvie stolnika P. A. Tolstogo po Evrope (1697-1699)* (Moscow: Nauka, 1992).

seal [*morskoi kot*] and a "great eagle."[9] Later he visited the Jesuit Academy in Naples, where he briefly noted "they teach writing, every science and most of the arts."[10]

Tolstoi, who travelled more widely, paid much more attention to gardens and hospitals, describing the gardens outside of Warsaw as "of remarkable proportions … with many fountains." Tolstoi was struck by the fact that these gardens had "a great bucket for watering flowers made of hammered copper, a remarkable craft."[11] While gardens were on the itineraries for both noblemen, only Tolstoi describes the apothecary gardens he saw beside a hospital in Vienna. On one side of the hospital, Tolstoi writes, "they have put a small garden, and have planted it with grapes, in which the ill become well by walking through that garden for the air."[12]

Sheremetev's and Tolstoi's journeys were clearly influenced by Peter's "Grand Embassy" (1697-1698), the first instance of a Russian tsar officially visiting various European states. Peter's Grand Embassy sparked a number of subsequent journeys in which students and diplomats alike were dispatched by the tsar to establish relationships and take advantage of the great variety of resources, material and intellectual, available abroad. While these quasi diplomatic envoys were primarily interested in enacting the rituals of imperial reception, official Russian travel to Europe was becoming increasingly involved in observing and borrowing from Academies, gardens, and libraries.

In all cases these travels were closely directed affairs and students, like diplomats, were by and large not allowed to choose their own destinations nor would it seem were they allowed to choose their own course of study. When Petr Vasilevich Postnikov (1666-1703), for instance,

---

[9] SPB II, Bk. 115, No. 396, pg. 65; Sheremetev, *Zapiski Puteshestviia*, 85.

[10] SPB II, Bk. 115, No. 396, pg. 61v; Sheremetev, *Zapiski Puteshestviia*, 80-81.

[11] Tolstoi, *Puteshestvie stolnika Tolstogo*, 27. "…i dlia polivaniia tsvetov stoit vod v velikikh mednykh chekannykh chashakh, kotorye chashi izriadnoi raboty."

[12] Tolstoi, *Puteshesvie stolnika Tolstogo*, 41.

was sent by Peter I to Padua to pursue a medical education he was selected for his language ability and not for any innate desire to study medicine.[13] The son of a secretary in the Chancellery of Foreign Affairs [*Posol'skii prikaz*], Postnikov likely had experience with foreign languages and more importantly would have been literate well before being chosen to go abroad for study. After he finished his medical degree in 1696 Postnikov was called up for diplomatic duties that were both political and scientific in nature. While there is little information on Postnikov's impressions of Europe, it is clear that in travelling to Padua and studying for a medical degree, Postnikov was simultaneously undergoing training to become a European liaison for the tsar and diplomatic interlocutor.[14] His course of study and his status as a student in a foreign university therefore was essentially a form of obligatory state service. Rather than a form of "elective travel abroad … no less leisured than 'pure' tourism," as Sara Dickinson suggests that it might have been, the travel of early modern Russian students was deeply tied to systems of patronage and the expectation of service to the state that directed the lives of the elite.[15]

Petrine era students appear to have been at times unreliable 'servitors,' failing at their studies and returning to Russia, occasionally to be examined by Peter I himself, no more skilled in navigation, fortification or medicine than they had been when they left.[16] Often depicted as "one of the more humorous episodes of the early eighteenth century," Peter's failed students

[13] R. A. Simonov, V. K. Kuzakov, and M. K. Kuzmin, "Estestvenno-Nauchnye znaniia," in *Ocherki russkoi kul'tury XVII v. Vol. 2*, ed. Artemii Vladimirovich Artsikhovskii (Moscow: Moskovskii Universitet, 1979), 70.

[14] P. V. Postnikov and N. Iu. Bolotina, "'Poluchil Ia chest' v Versalii koroloia frantsuskago': Rossiiskii diplomat P. V. Postnikov vo Frantsii (1702-1710 gg.)," *Istoricheskii Arkhiv* 6 (2010), 177.

[15] Dickinson, *Breaking Ground*, 35.

[16] Meehan-Waters, *Autocracy & Aristocracy*, 42. Brenda Meehan-Waters recounts that when Fedor Alekseevich Golovin, who had studied shipbuilding alongside Peter I in Holland returned from his studies in Italy in 1701, "he was questioned on his studies by the Tsar. In the worlds of his cousin, 'When the Tsar asked him what he had mastered, he candidly replied: nothing. Well then, what did you do? I drank wine, smoked tobacco, and played the bass (*bas*). The Tsar didn't get angry but took him on as his adjutant and called his 'Bas.'"

drank, runaway or refused to leave Russia in the first place.[17] While some historians highlight the failure of these projects, clearly there were some success. Education and scholarly pursuit became a more reliably successful service model over the course of the eighteenth century as Russians travelling to Europe departed with firmer educational backgrounds and experience with foreign languages.

Peter I sent students everywhere, but students in the natural sciences travelled overwhelming to Leiden to study at the University there. Nicholas Hans and Aleksandra Bekasova have both shown the University of Leiden to have been a special destination for young Russian scholars seeking education in botany, medicine and natural history. Registering over 100 Russian students over the course of the eighteenth century "the role of Leyden University in the diffusion of knowledge in Russia," writes Nicholas Hans, "was outstanding, for it trained six members of the Academy of Sciences, seven professors of medicine and the sciences, and about thirty doctors of medicine."[18] Aleksandra Bekasova, investigating Russo-Dutch relations in the later half of the eighteenth century shows the University of Leiden to have been the indisputable center of Russian medical and scientific education, producing some of Russia's chief physicians, as well as bureaucrats and diplomats.[19] By the middle of the eighteenth century 41 Russian students had passed through Leiden. Peter I himself had been through twice. Travelling back from Paris in 1717, Peter stopped at this small town for the second time to buy books on

[17] Max J. Okenfuss, "Russian Students in Europe in the Age of Peter the Great," in *The Eighteenth Century in Russia,* ed. J. G. Garrard (Oxford: Clarendon Press, 1973), 131.

[18] Hans, "Russian Students," 554.

[19] A. B. Bekasova, "Academia Lugundo Batava Libertatis i Rossiia (Iz istorii russko-gollandskikh nauchnykh sviazei v XVIII veke) *Naukovedenie* 1 (2001), 157-188.

medicine, botany, and gardening, while also taking time to collect and press a few plant specimens from the University's garden for his own personal herbarium.[20]

The University of Leiden and its gardens, therefore, comprised a mandatory stop for the travelling student and the Russian collector in the natural sciences. To further understand the role that this city and its gardens had on the early Russian botanical community I now shift my attention to one Russian student in particular who worked in Leiden in the middle of the century as a botanical liaison for the Academy and its gardens. Constantine Ivanovich Shchepin's (1728-1770) remarkable career poses significant questions about the kinds of mobility students and others, not yet elite and not quite peasantry, enjoyed in eighteenth-century Russia. Fortunately Shchepin left a significant archive with the Academy of Sciences detailing his years spent training under S. P. Krasheninnikov and working in the Netherlands. Shchepin's travels illustrate how by the middle of the eighteenth century a new form of mobility was beginning to emerge, one clearly engaged with the collection of specimens and the construction of knowledge and designed to contribute to the new spaces of collection, including libraries, cabinets and gardens, developing back in Russia.

Shchepin was born in a village outside of the town Viatka (now Kirov) some 600 miles north east of Moscow. Not unlike Postnikov, Shchepin's professional and academic successes hinged on his facility with languages. Serving first as a translator in the Academy of Sciences, Shchepin was later dispatched to the Netherlands to act as a collector and liaison, engaging in a form of state service that required mastering the local practices of scientifically elite Europeans. Calling upon the precedence set by Postnikov, Shchepin essentially became the local liaison that the St. Petersburg Academy lacked in that part of the world. Similarly, Shchepin was well

[20] E. A. Kniazhetskaia, "U istokov russkoi botaniki (300-letiu s dnia rozhdeniia Petra I), *Botanicheskii Zhurnal* 57 (1972), 140.

received in Leiden because of his status as a Russian local and person who enjoyed intimate proximity with Russian flora. Shchepin was valued by academics on both sides of the Baltic because of the proximate relationship he alone enjoyed with European and Russian scientific communities.

The son of a priest, Shchepin received his early education at a local seminary and later at the Khlynovskii Slavo-Latin School in Viatka. His studies were encouraged by the local bishop who suggested he complete his education at the Academy in Kiev, where he traveled and began studies in 1742. The Academy at Kiev was originally a theological seminary but since the early seventeenth century had come to stress the secular humanities of the Scholastic tradition teaching the natural philosophy of Aristotle along with ancient and modern languages. When Shchepin was a student there the Kievan Academy had over 1,000 enrolled students while the city itself was a relatively cosmopolitan crossroads between western and eastern Europe.[21] It was the Academy in Kiev, according to Alexander Vucinich, that "contributed to the establishment of a recognized professional status for individuals engaged in pure scholarship" in Russia, a form of scholarship that, "by its identification with Scholasticism … stimulated the rise of secular thought."[22] In 1742, Shchepin matriculated into that Academy hoping, no doubt, to take advantage of new avenues to professional success and elite status opening up within the Russian Empire.

Shchepin excelled at the Kievan Academy and was rumored to have been offered a teaching position there, however he opted instead to travel. This seemingly unprecedented move, his biographer Kuprianov suggests may have been influenced by the popularity of V. G. Barskii

[21] V. V. Kuprianov, *K. I. Shchepin – Doktor meditsiny XVIII veka* (Moscow: Medgiz, 1953), 17. Kuprianov gives the (probably debatable) number of 1,000 students. For a more general treatment of the Academy in Kiev, see: Alexander Sydorenko, *The Kievan Academy in the seventeenth century* (Ottawa: University of Ottawa Press, 1977).

[22] Alexander Vucinich, *Science in Russian History* (Stanford: Stanford University Press, 1963), 18.

in Kiev at this time. Barskii had been a student at the Kievan Academy in 1723 and had later travelled throughout Turkey, Greece and the Middle East as a wandering scholar and Orthodox pilgrim. Returning to Kiev in 1747, Barskii died quickly thereafter and was buried in a local monastery. Barskii's manuscript journal detailed all 24 years of his travels. He died before he could publish his journal, as he intended, but the manuscripts, which were kept by his mother, were available to anyone who wished to see them. In this way, news of Barskii's travels spread within Kiev quickly after his return.[23]

In 1748 these different threads of education and opportunity, both facilitated by the Academy in Kiev, led Shchepin to decide to leave Kiev and travel to Poland. The Academy supported him in this endeavor tasking him with purchasing Latin books while there.[24] Shchepin followed in the footsteps of Postnikov and others continuing on to Italy where, presumably on his own personal resources, he studied medicine in Florence, Padua and Bologna for the next two years. In 1751 he relocated to Greece to study Greek and later that year ended up in Constantinople. Travelling in search of education, primarily in languages and medicine, Shchepin's itinerary through Europe followed those of a handful of Russian scholars and diplomats before him. Curiously, however, he traveled without the benefit of direct state support but also unbound by imperial decree, official instructions or the expectations of a patron. As his later career demonstrates this did not hinder Shchepin from understanding the methods necessary for obtaining such institutional support and patronage.

In 1751, while in Constantinople, Shchepin began the process of seeking support to travel back to Russia. Shchepin was able to attract the attention of M. Vorontsov and A. Bestuzhev-

[23] Alexander Grishin, "Vasyl Hryhorvyc Barsk'kyj: An Eighteenth-Century Ukrainian Pilgrim in Italy," *Harvard Ukrainian Studies* 17 (1993), 7-26; V. G. Barskii and A. M. Lazarevskii, "Odinadtsat Pisem peshekhoda Vasilia Grigorevicha Barskogo (1723-1746)," *Russkii Arkhiv* 9 (1874), 513-532.

[24] Kuprianov, *Shchepin – Doktor meditsiny*, 18.

Riumen, Russian noblemen and diplomats in Constantinople at the time, who drafted a *promemoria* on behalf of the College of Foreign Affairs [*kollegia inostrannykh del*] that they then signed and sent to the Academy of Sciences on October 24, 1751. Their document in support of Shchepin recommends him as a young man, "Russian born," who, knowing both Latin and Greek and having studied medicine and mathematics "at his own cost," was seeking a position within the Academy either as an adjunct, as a translator, or as a student.[25]

Shchepin wrote his own letter recommending himself to the College of Foreign Affairs in order to secure this crucial support. As part of this letter he included attestations from his professors in Bologna and Padua. As to his studies Shchepin clearly suggests that even while in Italy he intended to bring his expertise back to Russia. Moreover, it suggests that a career ladder of professional advancement, as such, already existed within the Academy. "I humbly ask," he writes towards the end of his letter, that "the office of foreign affairs kindly recommends me to the current Imperial Academy of Sciences, so that I might receive an appointment at their discretion upon the examination of my abilities." Shchepin details his reasons for seeking this support by saying that "my sincere desire has always been in obtaining that science, for which I have paid no small amount, to serve and be useful [*k sluzhbe i polze*] to my homeland."[26] Shchepin, it would seem, had already grasped the language by which positions were obtained in the Russian imperial bureaucracy and was adept at securing highly placed patrons to support his professional advancement by couching it in terms of service both to his science and to his state.

In November of that year a meeting of the Academy was held where it was decided to give Shchepin an examination to see if he was fit to serve and where he might be placed in the

[25] SPF ARAN, F. 3, op. 1, No. 158, 280; Kuprianov, *Shchepin – Doktor meditsiny*, 18-19.

[26] SPF ARAN, F. 3, op. 1, No. 158, pg. 281; Kuprianov, *Shchepin – Doktor meditsiny*, 20.

Academy's structure.[27] The academicians Richman, Fisher, Popov and Kratsenshtein all examined and attested to Shchepin's manifold abilities. Though Krasheninnikov was present at the examination, he himself did not ask any questions.[28] It was generally agreed that Shchepin's fluency in both Latin and Greek made him valuable to the Academy, but that he was not prepared enough to enter as an adjunct or as a translator. The delicate matter then of assigning Shchepin the status of a student without offending his supporters in Bestuzhev-Riumen and Vorontsov was left to J. D. Schumacher to resolve. Shchepin helped Schumacher out tremendously on this front when he expressed in a short letter dated November 11, 1751, his "personal desire to continue to study natural history," which he signed "Student Constantin Shchepin."[29] This placed him with Krasheninnikov who at that time was the Professor of Natural History at the Academy as well as director of the Academy's gymnasium and university.

After only four months under Krasheninnikov's tutelage Shchepin was promoted to the rank of a translator by the president of the Academy K. G. Razumovskii. The following July the Chancellery of the Academy decided to dispatch Krasheninnikov to the territories north west of St. Petersburg, collectively known as Ingria or Ingermanland, in order to "describe plants … in a fashion similar to [his] Kamchatka description."[30] Even though he now ranked as a translator Shchepin travelled with Krasheninnikov as his botanical assistant. The summer excursion started with the pair traveling on horseback to Krasnoe Selo, Porkohv, Narva and then on to Novogorod. They returned from Novgorod along the Volkhov River, visiting Shlisselburg and following the Neva River back to St. Petersburg conducting the entire expedition in a single season.[31]

---

[27] N. I. Nevskaia, ed., *Letopis Rossiiskoi Akademii Nauk, Vol. 1 (1724-1802)* (St. Petersburg: Nauka, 2000), 393.

[28] Kuprianov, *Shchepin – Doktor meditsiny*, 22.

[29] SPF ARAN, F. 3, op. 1, No. 158, pg. 302; Kuprianov, *Shchepin – Doktor meditsiny*, 24.

[30] Nevskaia, *Letopis Rossiiskoi Akademii*, 400.

[31] Kuprianov, *Shchepin – Doktor meditsiny*, 27.

After this trip, Shchepin decided to make a trip home, to Viatka, for the first time since he originally left 10 years previous. Again, Shchepin was to use this opportunity to further his science and act in a botanical capacity. Krasheninnikov sent along with Shchepin a letter, the addressee of which has since been lost, but with the apparent aim of forming a relationship with "curious people" of the region who might know "where and what kinds of herbs grow." Krasheninnikov was also interested in finding out about local fish, birds, and other animals, including where they tended to live or nest and how they were traded.[32] Shchepin was tasked not just with carrying the letter, but with working with the local governor and other officials to establish what amounted to a society for the study of local naturalia. This minor project to enlist the 'curious' of Viatka in creating a local network of botanical collectors has echoes of the imperial and Chancellery decrees from earlier in the century, tasking governors of remote regions with finding and appointing locals to identify and collect medicinally useful plants. While first hand observation by a trained individual was always highly valued, the shortcomings of dedicated expeditions were clear: they were expensive, took a great deal of time, and even if they resulted in large collections, these collections were themselves fairly volatile, often succumbing to decay, fire or other losses. To have established a reliable network of resident collectors would create a much more reliable stream of plants, animals and minerals, not to mention observations for the Academy's collections.

While this particular society of locally knowledgeable collectors did not spring up in Viatka in Shchepin's wake Shchepin himself was called upon to perform something of a similar task, however when the following spring he was dispatched to Leiden to act as a scientific and botanical liaison for the Academy in Europe. On April 22, 1753 Shchepin submitted to the

[32] Kuprianov, *Shchepin – Doktor meditsiny*, 28.

Academy an official report, detailing his progress as a translator and the success of his study of natural history and botany under Professor Krasheninnikov. His duties, he claims, included accompanying the professor "on a botanical excursion to various places in our country, as well as making observations during the winter of many plants and trees from different climates, which currently grow in our green houses."[33] Having succeeded in these endeavors, he writes "I humbly ask the Chancellery of the Academy of Sciences … to see fit to send me in the upcoming summer to Holland, for securing the skills necessary to my obligation [*sniskaniia potrebnago iskustva v dolzhnosti moei*] of becoming a better assistant to the professor [Krasheninnikov] in the realm of that science … which I have been called upon to serve [*okazat' uslugu*]."[34] Collecting on behalf of Krasheninnikov, Shchepin would become the knowledgeable local that Krasheninnikov sought in Viatka. And like the Academy's expeditions, Shchepin's 'service' would have him travel to a distant locale full of botanical unknowns, and then observe, collect, pack, and dispatch botanical specimens back to the Academy in St. Petersburg. The infrastructure of travel and the methods of collection may have been different for Krasheninnikov collecting on Kamchatka, but these two Russian botanical collectors shared the common goal of access to new plants and new sources of botanical information.

Krasheninnikov wrote in support of Shchepin's petition suggesting that he be sent to Leiden "in order to make scientific observations [*iskusnoe nabliudenie*] in botany among those plants contained in greenhouses." Shchepin's performance the previous summer, Krasheninnikov writes, had been promising for his future in botany "especially as he is only 25 years old," and therefore "he may reach perfection in these studies." Though Krasheninnikov wisely admits that "any success depends on [Shchepin's] diligence … given his current performance, it is doubtful

[33] SPF ARAN, F. 3, op. 1, No. 158, 314; Kuprianov, *Shchepin – Doktor meditsiny*, 29.

[34] SPF ARAN, F. 3, op. 1, No. 158, 314-314v; Kuprianov, *Shchepin – Doktor meditsiny*, 29.

that he will return from there without having made himself useful."[35] Krasheninnikov ends the letter suggesting that in order to achieve this, Shchepin will likely need from two to three years in this study. Apparently the Academy agreed for by the end of May, Shchepin had left Kronstadt for Leiden.

Instructions were issued to Shchepin by the Academy on May 21, 1753 just days before he departed. While Shchepin sketched for himself a broad program of study and collection, the instructions focus on keeping Shchepin on task while abroad. The first point in them admonishes Shchepin above all to "have fear of god and of the Orthodox Greco-Russian Faith [*pravoslavnuiu grekorossiikuiu veru*], [and] whenever possible keep to it completely."[36] This and other contracts or oaths [*kliatva*] that Russians who left the country were often obliged to sign indicated that a major concern of sending Russian students out of the country was the threat that it posed to their Orthodox faith. Maintaining Orthodoxy in a protestant, foreign land was clearly a form of discipline meant to keep individuals like Shchepin firmly within the Russian cultural fold. In many ways Shchepin himself was interested in asserting his Russian identity even as he conversed in Latin and traveled throughout the Netherlands. While the tenets of service were informed by Orthodoxy, Orthodoxy along with other ways of asserting his Russian identity helped Shchepin to present himself as an individual with unique and much desired access to Russian sources of new and exciting flora.

The next several points in his instructions call upon to Shchepin "try to observe plants growing from their origins, follow those who have named them, and note the methods they use to cultivate them, without omitting anything." Furthermore, Shchepin is encouraged to "observe every part yourself, especially the fruit and the flower, in order to attain complete understanding

[35] SPF ARAN, F. 3, op. 1, No. 158, 315v; Kuprianov, *Shchepin – Doktor meditsiny*, 29-30.

[36] SPF ARAN, F. 3, op. 1, No. 158, 328.

and so that it will not soon leave your memory."[37] Of these observations, "keep a list," the instructions intone (and not for the last time), "of when and what kinds of plants you observed yourself, [whether] garden varieties or local, wild types," and "the plants which you examine, dry them in the regular fashion and send them to St. Petersburg along with notes to aid discussion of your successes." All these injunctions to put pen to paper were made in part to assure the Academy that Shchepin was not malingering in Leiden. As the instructions make clear, Shchepin was expected to record practically everything "so that we can see how you occupied yourself."[38]

One of the last points in the instructions relates to gardens specifically and is longer and more detailed than the others. The instructions order Shchepin "to pay special attention to how gardens are properly kept," [*kakim obrazov sad soderzhat' poriadochno*], and to observe "how growing plants are maintained and how new plants are successfully sprouted." In pursuit of this, Shchepin is told to "look at the gardens there and at see how they are arranged … note how they treat seeds that have been brought from distant lands, how they resuscitate seeds that are stale or old, what methods they use to speed growth, and of those seeds that have hard shells [note] where are they planted."[39] Water plants, too, deserve Shchepin's attention and obviously, Shchepin is to obtain whatever seeds he can for the garden in St. Petersburg, but above all "make sure," the instructions state "that they are fresh, and that they are unknown to us."[40] And for those seeds imported from other countries Shchepin is to note which countries they come from so that they have a chance of being successful in Russia. Clearly it was contact with the garden in Leiden that was to be Shchepin's utmost priority, accompanied by a responsibility towards

[37] SPF ARAN, F. 3, op. 1, No. 158, 328v.

[38] SPF ARAN, F. 3, op. 1, No. 158, 328v.

[39] SPF ARAN, F. 3, op. 1, No. 158, 329.

[40] SPF ARAN, F. 3, op. 1, No. 158, 329.

obtaining and knowledgably conveying seeds and specimens on to Russia. His studies, such as they were, facilitated these activities and not the other way around.

On July 30, 1753 Shchepin sent his first report [*donoshenie*] to the Academy from Leiden, documenting his travel from St. Petersburg, his matriculation into the University, and asking for an advance on his stipend to be paid to him through a bill of credit [*veksel*] sent via merchant. Shchepin's next report was filed almost a year later, providing a detailed accounting of how he spent his time and his money in satisfying his contract. He had been engaged, he writes, in work since his arrival, despite the fact that his stipend had not come for several months and study, he noted, required funds for books and other things. Much of the autumn was spent collecting and drying plants, of which he prepared about 600 specimens that were complete and in good condition. "Many of them," he adds "are quite rare, which gives me great hope that I might create a well organized and soundly collected Herbarium."[41]

Purchasing seeds, it turned out, was more difficult than either Shchepin or the Academy had expected it to be. It seems impossible, Shchepin reports, to obtain seeds in that city for payment. Even with means seeds could not be obtained without great effort and or art, a fact which "everyone who deals in herbs knows."[42] Leiden was a international center of plant and seed exchange and demand was high. Of course, "exchanging Siberian herbs for seeds is never difficult," Shchepin continues. In fact he suggests that he was bound only by the number of Siberian plants he had on hand to trade. Nevertheless, Shchepin claims that "from various

[41] SPF ARAN, F. 3, op. 1, No. 158, 343.

[42] SPF ARAN, F. 3, op. 1, No. 158, 343v. "o semianakh … chto bezmezdnymi sredstvami poluchit ikh nikak nel'zia, da izamzdu ne bez belikago truda i iskustva, vedaet o tom vsiake v soderzhanii trav uprazhniushcheisia." I must thank Gregory Afinogenov for essential help in deciphering this passage.

sources" he has been able to obtain 513 different kinds of seeds, 31 of which come from "Indian plants" which he reports he is sending on to the Academy.[43]

Moving on to the local gardens as well, Shchepin reports that in general they appear more or less the same and tend to have structures along their northern and north-western sides to protect them from harsh winds and cold. Every garden, he continues, is enclosed by high walls and it is in their shade that water plants are grown for the numerous pools that have been artificially created. Shchepin then describes the greenhouses he has observed, which he goes into in great detail.[44] He reports that these greenhouses have different rooms that are kept at different temperatures, which "for little cost greatly improves the yield" of delicate plants from Africa, India and other places. These various temperatures are maintained through a system of tubes, made of metal sheets, which conduct steam from a furnace through the different rooms and then back again. The rooms themselves have brick floors, constructed with the greatest care for reasons of safety, Shchepin adds, for under some of them are open canals of steaming water, which helps to keep the very hottest rooms at their maximum temperature.

The manner of Shchepin's description and the level of detail suggest that perhaps Shchepin had not encountered a greenhouse like this before and indeed, greenhouses at the Academy in St. Petersburg did have ovens but they heated the air directly without the use of steam or under floor channels. An Academy document from 1739 describes the repairs that were necessary for the Botanical Garden on Vasil'evskii Island and includes a sketch of the grounds showing a section of the greenhouses. This illustration indicates that in the late 1730s the Academy's Botanical Garden used individual stoves to do most of the heating (see figures 7 and 8) Because little else is known about the greenhouses on Aptekarskii Island or the subsequent

[43] SPF ARAN, F. 3, op. 1, No. 158, 343v.

[44] SPF ARAN, F. 3, op. 1, No. 158, 343v - 344.

development of the greenhouses on Vasil'evskii Island, Shchepin's observations and his attention to the details of the construction of Leiden's greenhouses are key, if incidental, pieces of evidence attesting to the state of greenhouse technology in Russia by mid-century.

Shchepin ends this report with a request for printed volumes of Gmelin's *Flora Sibirica* (the first two volumes of which had been published by that date) along with catalogues of the holdings of the Academy's Library and Kunstkamera because, apparently, "many learned people are constantly wanting them." He also requests a map of St. Petersburg as well as an atlas of Russia "in order to display here the success of the Academy in the arts and the sciences."[45] All three of these texts comprise important documents attesting to Russia's collecting activities and they would have been crucial to a liaison like Shchepin in proving to his fellow students and scholars the scientific wealth of the Russian Empire. Later that month, Schumacher granted Shchepin 30 rubles to continue buying "herbaria and seeds" and included a copy of the second volume Gmelin's *Flora Sibirica,* which he noted "interests the scholars of Leiden." However Schumacher denied Shchepin a map of St. Petersburg or an atlas of the Russian Empire suggesting that he did so in accordance with "Zboromirskii's order."[46] S. V. Zboromirskii was the head of the printing department of the Academy of Sciences [*knizhnaia lavka Akademii nauk*] from 1722 to 1782 so his approval would have been necessary before copies of a work could be distributed. Moreover, distributing maps made a different political statement than distributing floras and it is possible that there were other considerations that went into dispatching to

[45] SPF ARAN, F. 3, op. 1, No. 158, 344.

[46] SPF ARAN, F. 3, op. 1, No. 158, 345-345v; Nevskaia, *Letopis Rossiiskoi Akademii*, 416.

Shchepin a copy of Gmelin's work while withholding the Academy's Atlas, which had been in publication since 1745.[47]

Shchepin suggests that he needs a copy of Gmelin's *Flora* quite specifically in order to "prove my position" [*v razsuzhdenii moego zvaniia*].[48] In this moment Shchepin reveals the extent to which he is trading on his proximity to Russian flora, which can otherwise be thought of as his 'localness' in dealing with European students and scholars. His proximity to Russian flora was maintained by his correspondence with the Academy and was proved by his ability to obtain Russian books and seeds. This identity was preformed socially when Shchepin signed the autograph books of his fellow students. One such autograph book Shchepin signed as "Constantinus Scepin Russus ex provincia Wiatka," while another he signed as "Contantinus Scepin é Wiatka Russus." In the first instance Shchepin included a brief Latin motto that reads "yield gently to the greater man, be gracious to the lesser, choose thy fellows wisely, and thou shalt be safe," calling to mind Shchepin's acute diplomatic sensibilities. In the second instance, Shchepin includes a detailed image of a floral wreath and a Greek motto from Hippocrates' *Aphorisms* which reads "life is short, art is long."[49] (See figure 10) Shchepin, therefore, was not only adept at playing up his Russian localness, he did so with all the grace and politesse of the skilled courtly scholar.[50]

A report filed April of 1754 documents that Shchepin sent a box aboard a Dutch trading ship containing seeds, books and other things for professor Krasheninnikov. The register of seeds

---

[47] *Atlas Russicus. Russischer Atlas: Welcher in einer General-Charte und neunzehen Special-Charten das gesamte Russische Reich und dessen angraentzende Laender, nach den Regein der Erd-Beschreibung* (St. Petersburg: Academie der Wissenschaften, 1745).

[48] SPF ARAN, F. 3, op. 1, No. 158, 344.

[49] I am indebted to Saskia Dirkse and Roderick Saxey for help deciphering and translating these inscriptions.

[50] Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1994).

he notes was included in his previous letter dated February1754 but has not survived in the archives. He asks that the Academy dispatch the debt for transport owed to the captain and assures the Academy that he has begun his study of "those plants that can be dried," while still obtaining seeds "by whatever means possible."

Just over two and half years into his three year tenure at Leiden, in the winter of 1755, Shchepin was informed of Krasheninnikov's unexpected death. Losing his Academy patron, Shchepin was faced with the immediate cancelation of his project, which in his own assessment, was coming to completion.[51] Therefore, early in 1756 Shchepin made a significant career decision and petitioned to be appointed as a doctor to the Medical Chancellery. Negotiations began almost immediately between the Chancellery and the Academy of Sciences over Shchepin's future.[52] Shchepin's case went straight to the head of the Medical Chancellery, P. Z. Condoidi, who like Ivan Lavrentevich Blumentrost before him, was the Russian-born son of a foreign émigré in the service of the tsar. One of Condoidi's 'projects' had been to improve the make-up of Russia's medical infrastructure by enlisting more talented Russians as part of a broader trend to "russify" Russia's Medical Chancellery.[53] The Academy voiced no objections to releasing Shchepin, past mentioning the sum of 1,060 rubles investment in Shchepin's tenure in Holland, which the Medical College indicated in a subsequent missive it was certainly ready to pay.

By September both the Academy and the Chancellery had agreed to the new arrangement. Remarkably, Shchepin was not recalled back to Russia at this time, but rather was made to re-

[51] Kuprianov, *Shchepin – Doktor meditsiny*, 30.

[52] SPF ARAN, F. 3, op. 1, No. 211, pp. 20 – 32; Kuprianov, *Shchepin – Doktor meditsiny*, 31; Nevskaia, *Letopis Rossiiskoi Akademii*, 438.

[53] Ludmilla Schulze, "The Russification of the St. Petersburg Academy of Sciences and Arts in the eighteenth century," *British Journal for the History of Science* 18 (1985), 305-335. Schulze does not cover the Medical Chancellery in her treatment of the russification of the Academy of Sciences, but she does provide the broader context in which efforts at russification within state bureaucracies took place in eighteenth-century Russia.

matriculate at the University Leiden, this time to study medicine. The transition from one program of study to the other was, apparently, relatively simple, though it did require a new infusion of financial support from the Chancellery. Shchepin added pharmacy and chemistry to his areas of study, while natural history as well as the study of botanical gardens, the collection of plants and the preparation of his herbarium continued unabated. In August of 1757 he reported to the Medical Chancellery, "this past winter and spring … I was occupied with studying the application of chemistry to medicine, and at the start of the break," he along with everyone else was "studying herbs in the botanical gardens and in the field." He was at that time preparing as well to travel to Amsterdam to be instructed in natural history and pharmacy as it directly related to medicine.[54]

By the spring of 1758 Shchepin had finished his course of study and defended his thesis, *Schediasma Chemico-Medicum Inaugurale de Acido Vegetabili*, conferring upon him a medical degree from the University of Leiden. He took pains to point out to the Chancellery when he reported this achievement that "I have the honor of having publically received with great satisfaction the degree of doctor, not just from the medical faculty, but from the whole university."[55] Shchepin's dissertation combined his personal experience with his professional ambition focusing on the benefits of "vegetable acids" in the common Russian (and indeed, the peasant) diet. "Vegetable acids" were theorized as those acids derived from the grains of wheat and rye. Shchepin's work linked these acids with diet and exercise as the key by which the Russian soldier maintained the peak of health. "For," he claims "it is the Russian soldier who above all is healthy and brave, working unceasingly he lives many years. For this, the only thing he eats is wheat bread. Rarely does he have even a small amount of meat. And for his thirst,

[54] Kuprianov, *Shchepin – Doktor meditsiny*, 34.

[55] Kuprianov, *Shchepin – Doktor meditsiny*, 36.

kvass suffices."[56] This ideal body, that of the working Russian soldier, who in the Russian system of conscription was usually of peasant or serf origin, "never knows illness due to the acidity of bread and kvass."[57]

Asserting the health effects of kvass publically, in Latin, within the context of a university debate was certainly a remarkable statement of confidence in the importance of Russian particulars to the wider scientific community. However, it was not the most outstanding attempt of Shchepin's to turn European scientific discourse to decidedly Russian ends. In a concluding paragraph of his dissertation, Shchepin takes the opportunity to challenge some of Linnaeus's classifications, writing "I have taken it upon myself to reform some of the genera defined by Linnaeus, renaming one of them in memory of a very good man and of his country, someone who has made great contributions to the republic of botany."[58] Shchepin's new genus, *Crassina*, was, of course, named after Krasheninnikov and along with the kvass drinking Russian soldier marks another attempt on Shchepin's part to insert himself and his mentor into the broader botanical corpus.

Years later Linnaeus himself called Shchepin the young botanist "who disputed against me … the most impudent and audacious fellow that ever was."[59] Linnaeus wrote these words in his late work, *Nemesis Divina*, which in the words of his modern day translator and editor forms Linnaeus's "mature conception of … the actual meting out of Divine justice in accordance with talion."[60] The work is a compilation of observations and causal connections amounting to a list

---

[56] C. Scepin, *Schediasma chemico-medicum inaugurale de acido vegetabilicum annotationibus botanicis* (Lugduni Batavorum: s.p., 1758), 14.

[57] Scepin, *Schediasma chemico-medicum*, 15.

[58] Scepin, *Schediasma chemico-medicum*, 21 – 22. Translation of sections of Shchepin's dissertation provided here by J. M. Petry in: Linne, Carl von. *Nemesis Divina.* M. J. Petry trans. (Dordrecht: Kluwer, 2001), 383.

[59] Carl von Linné, *Nemesis Divina*. M. J. Petry, trans. (Dordrecht, The Netherlands: Kluwer, 2001), 193.

[60] M. J. Petry, "Introduction" to Linné, *Nemesis Divina*, 4.

of moments where Linnaeus believed he saw the interconnection between fate and Providence. Linnaeus follows this comment about Shchepin by writing that Shchepin "is said to have been the one who did away with the empress, so enabling so many to avoid biting the dust."[61] Whether this accused Shchepin of murder or heroism is difficult to tell. However, Linnaeus did receive Shchepin in 1759 well after he had seen Shchepin's *Schediasma*.[62] In September of that year Shchepin wrote a warm letter to Linnaeus full of questions and information. It would appear that Linnaeus never responded. The slight at having one of his genera challenged, something Linnaeus did not usually take lightly, may in the end have been deeply felt.[63]

After the defense of his dissertation but before his return to Russia, Shchepin continued to travel as far as London and Paris where he was not able to achieve much in the way of botanical collection or other observations given his lack of funds. One of his final letters to the Medical Chancellery dated in Paris suggests that though he was able to do more in that city than in London his progress was hindered nevertheless by the lack of financial support from the Chancellery. "All my joy," he writes "now derives from herbs, however even that would be more, if I could but find them along the road. I miss a great deal being without means and unknown [*buduchi v nedostatke i neizvestnosti*]."[64] Without a reply from the Chancellery Shchepin left Paris at the end of the spring and returned to St. Petersburg from Amsterdam in the early summer of 1759.

---

[61] Linné, *Nemesis Divina*, 193

[62] Johannes Burman to Carl Linnaeus, 20 June 1758, *The Linnaean Correspondence*, letter L2363 (http://linnaeus.c18.net). Burman included a copy of Shchepin's *Schediasma*, along with several other works he wishes Linnaeus to see, without much comment.

[63] Constantin Scepin to Carl Linnaeus, 17 September 1759, *The Linnaean Correspondence*, letter L2584. (http://linnaeus.c18.net/)

[64] Kuprianov, *Shchepin – Doktor meditsiny*, 41.

Linnaeus's correspondence with Shchepin may have failed to take hold in part because Linnaeus already enjoyed several reliable Russian correspondents and even hosted a number of Russian students at Uppsala. His correspondents included Krasheninnikov, as well as Grigorii Akinfievich Demidov. Their letters comprise a remarkable archive of eighteenth-century Russian botanical discourse containing the thoughts, questions and contributions of those Russians, the botanist and the nobleman amateur, who were taking larger part in Russia's growing scientific community. These letters themselves comprise a new form of botanical discourse for the Russians in Linnaeus's network. A text that was once informal, mobile and informative, the corpus of personal letters often bearing seeds of the very plants they discuss indicates how widely Russians were beginning to participate in botanical practice well beyond the borders of the Russian Empire. This transformation was aided in no small part by increased travel between Russia and Europe by the likes of Shchepin and the Demidovs. The European botanical itinerary helped to generate not just a more broadly Russian interaction with the generation of botanical knowledge, but a decidedly textual one.

Linnaeus's relationship with the botanical and apothecary gardens of the Russian Empire had started well enough when Johann Georg Gmelin initiated correspondence through Count Sten Carl Bielke in 1744.[65] But Linnaeus's relationship with Russian collections became increasingly strained during the tenure of Georg Wilhelm Siegesbeck, who effectively controlled both the apothecary and the botanical gardens from 1741 to 1747. Siegesbeck's tight control was seconded by the Russian state and the Academy of Sciences, which treated all discoveries made in Siberia, botanical or otherwise, as strictly proprietary scientific information. It was to be jealously guarded, worked up and published by the St. Petersburg Academy before it was to be

[65] Johann Georg Gmelin to Carl Linnaeus, 28 February 1744, *The Linnaean correspondence*, Letter L0537. (http://linnaeus.c18.net/)

released abroad.[66] The correspondence between Linnaeus and the Swedish diplomat then in St. Petersburg, that is Bielke, is particularly telling on this score. Bielke introduced Gmelin to Linnaeus in 1744, making clear to Linnaeus that the Siberian seeds Gmelin had generously included were to be kept secret, he writes, "as it is a crime to reveal this kind of information outside the Imperial Academy."[67] Were Linnaeus to advertise that he had received any plants from Siberia, it would only be too obvious who had supplied them.

Linnaeus was only able to find a way around this restriction after Grigorii Akinfievich Demidov (1717-1761), who inherited a fortune derived from weapons and iron manufacture, initiated correspondence with him in 1748. Grigorii Akinfievich, whose primary home and main garden were located in Solikamsk, a small town in the Ural Mountains, sent his first letter to Linnaeus unprompted but bearing welcome news. Demidov reported to Linnaeus that the botanical collections of G. W. Steller, a botanist appointed to the Second Kamchatka Expedition, were in his possession and that he wished to forward them on to Uppsala.[68] The herbaria leaves that Demidov sent were almost certainly Steller's own, but the seeds were likely the result of Demidov's efforts at propagation. Steller had planted many of his specimens in Solikamsk to over winter there as he traveled from Siberia to St. Petersburg in 1746.[69] Steller, however, died on the road and the valuable collection was left in the care of Demidov outside the restrictions of the Academy's Botanical Garden.[70]

---

[66] Margery Rowell, "Linnaeus and Botanists in Eighteenth-Century Russia," *Taxon* 29 (1980), 17.

[67] Sten Carl Bielke to Carl Linnaeus, 28 February 1744, *The Linnaean correspondence,* letter L0536. (http://linnaeus.c18.net/)

[68] Georgij [sic] Akinfievich Demidov to Carl Linnaeus, 26 February 1748, *The Linnaean correspondence*, letter L0877. (http://linnaeus.c18.net/)

[69] Leonhard Stejneger, *Georg Wilhelm Steller: The Pioneer of Alaskan Natural History* (Cambridge: Harvard University Press, 1936), 464. "The very first thing Steller had done in Solikamsk was to secure his host's permission to plant the living collections, consisting of about eighty species of shrubs and herbs in his garden as a temporary measure before their final shipment to St. Petersburg."

[70] Rowell, "Linnaeus and Botanists," 20.

Throughout the late 1740s and early 1750s Grigorii Akinfievich and Linnaeus continued to carry on a healthy botanical correspondence and exchange of seeds that revealed Grigorii Akinfievich's remarkable knowledge of the subject and hinted at his impressive gardens and library in Solikamsk. Linnaeus clearly engaged Grigorii Akinfievich as a preferred correspondent, dispatching seeds to him while neglecting the requests of numerous others. In his second letter to Linnaeus Grigorii Akinfievich thanked the eminent botanist for the seeds he had already sent from the Americas (over 30 species), and promised to send half of them to his gardener in Solikamsk directly and to save the other half to sow himself when he returned home. Demidov also indicated that he had sent a whole potted plant to Linnaeus, as well as box of some 320 others that he had collected through various channels, primarily mercantile. While Demidov was not confident about their attached Linnaean binomials and therefore asked Linnaeus to correct them, he did append individual Russian names to the plants he had sent, in so far as he knew them.[71]

Demidov's network within Europe apparently was extensive. Demidov mentions traders in Stockholm, Hamburg and London with whom he worked and to whom Linnaeus should feel free to send letters, books and boxes. Though the correspondence between Grigorii Akinfievich and Linnaeus survives as a one-sided collection (only Demidov's letters remain), it seems clear that the two corresponded on an equal level, sharing books, seeds, and gardening advice. In a letter dated December 1748 Grigorii Akinfievich actually instructs Linnaeus exactly how to open a box containing over 400 plants that he had recently sent. They should not, he instructs, be

[71] Georgij [sic] Akinfievich Demidov to Carl Linnaeus, 24 June 1748, *The Linnaean correspondence*, letter L0915. (http://linnaeus.c18.net/)

opened in any kind of direct warmth, but rather, should be allowed to warm, unopened, in an unheated room for sometime before they were exposed to the air.[72]

Well before his correspondence began with Linnaeus, Grigorii Akinfievich also attempted to correspond with Traugott Gerber, the director of the apothecary garden in Moscow. In a letter dated 1740 Demidov offers to trade with Gerber Russian common or folk plant names for European botanical ones, which he succeeded in doing later with Linnaeus. He writes "I am now sending you 241 dried plants, which I collected last year (1739), a few of which I have already given Russian names to … I ask you to order the rest of them, as you did with my herbarium previously, and if it is possible, share with me any duplicates you might have and I will try and give them Russian names too." Demidov's efforts at describing the plants he has collected and grown in his garden, he explains, have been frustrated in part because "our Botanists," by which, he means Siegesbeck and Amman in St. Petersburg, do not "speak the same … One calls an herb by one name, the other, by a different name." Demidov concludes this letter by asking Gerber to inform Linnaeus of his growing collection, promising Gerber in a familiar tone "… when I receive from you the herbs you promised, I will reply with a story about how our Botanists (in the capital!) use those herbs, and you will laugh."[73]

Grigorii Akinfievich was not the only Russian seeking botanical correspondence with European academics. Linnaeus enjoyed a brief correspondence with Stepan Petrovich Krasheninnikov who as a representative of the Academy of Sciences was able to answer Linnaeus's inquires politely, but without the free exchange of seeds and information that Demidov could engage in. Linnaeus initiated correspondence with Krasheninnikov in the fall of

[72] Grigorii Akinfievich Demidov to Carl Linnaeus, 2 December 1748, *The Linnaean correspondence*, letter L0997. (http://linnaeus.c18.net/)

[73] M. N. Karavaev, "Rol Moskovskogo meditsinskogo ogoroda v razvitii botaniki v nachale XVIII v. Soobshchenie 2," *Biulletin Moskovskogo Obshchestva Ispytatelei Prirody, Otdel biologicheskii* 77 (1972), 145.

1750 for he had been impressed, he writes, with Krasheninnikov's recent articles in the Academy's journal, *Novi Commentarii*. "Having already been aware that you strive towards discovering rare plants with extreme diligence," Linnaeus writes, "I could no longer neglect to ask if you would like to engage in mutual correspondence with me on matters touching botany." Linnaeus takes this opportunity to extoll the virtues of botany in Russia, suggesting that "in the Russian Empire more unknown plants have been discovered in the last ten years, than in the rest of the world in the previous half century."[74] Though this was probably an overstatement, it represents both an important aspect of Linnaeus's point of view that his Russian students and correspondents may well have shared: that the Russian Empire contained real and recognizable wealth for the wider botanical community.

Many of Linnaeus's questions contained in the two letters he sent to Krasheninnikov focus on the Academy of Sciences and the botanical community in Russia. Linnaeus was eager to know who was working on botany, where they were collecting, and when they might publish their findings. He was also eager to find out about specific plants that he had seen in Buxbaum's *Centuria* volumes and in the first volume of Gmelin's *Flora Sibirica* (1747). He asks specifically in the second letter for information about Schober's new species of *Nitraria* which he, Linnaeus, had already classified as *Nitraria schoberi*. He claims in this letter that he has never seen the flower of the plant, though he has a specimen "alive, however without flower or fruit." If Krasheninnikov could "either provide a dried specimen or a description," Linnaeus writes, "it would be possible to designate its proper species."[75]

[74] K. V. Riazanskaia, "Perepiska Karla Linneia s S. P. Krasheninnikovym," in *Karl Linnei. Sbornik Statei. 250 let so dnia rozhdeniia 1707-1757*, [Carl Linneus], et al., 230-251 (Moscow: Akademiia Nauk SSSR, 1958), 237.

[75] Riazanskaia, "Perepiska Karla Linneia," 245.

Krasheninnikov did his best to answer Linnaeus's questions. He suggests in his first letter back to Linnaeus that he cannot at this time send any seeds as it is winter and there are none to be had. Judging from Linnaeus's response, Krasheninnikov did provide him with some information that was ultimately used in the *Species Plantarum*. Krasheninnikov definitely sent Linnaeus the second volume of Gmelin's *Flora Sibirica* (1749) as well as the second volume of the Academy's *Novi Commentarii*.[76] "I must report," Krasheninnikov writes, "that we have very few botanists here and I know of none who study botany exclusively, except the honorable Hebenstreit, who directs our Academy's garden."[77] Everyone else, including Lerche, were attached to the Medical Chancellery and thus were required to spend their time on their medical duties. Krasheninnikov does write that Hebenstreit, "with whom I enjoy a great friendship, has promised me that just as soon as the weather allows next summer he will collect seeds from all the plants [you desire] and will send them to you."[78] Krasheninnikov's sole request is for any plants stemming from the Verbena or Veronica genera.

Krasheninnikov's second letter to Linnaeus explains one aspect of scientific correspondence that would greatly influence the nature of botanical discourse between the Russian and Swedish professors. "My slowness in answering your letter, which caused you some surprise, has a surprising reason," Krasheninnikov beings. "After your courteous letter and my reply were both read and approved by the Conference,[79] I had to obtain the approval of our

[76] Riazanskaia, "Perepiska Karla Linneia," 236.

[77] Riazanskaia, "Perepiska Karla Linneia," 241. While Krasheninnikov had been made professor of Botany and was given directorship of the Academy's gymnasium in 1750, Johann Christian Hebenstreit (1702-1795) was also hired as a professor of Botany and was given the directorship of the Academy's Botanical Garden on Vasil'evskii Island from 1749, a position he held until 1759.

[78] Riazanskaia, "Perepiska Karla Linneia," 242.

[79] The assembled professors of the Academy headed by the president made up the "Academic Conference" [*Akademicheskaia Konferentsiia*], which functioned as the critical organ appraising individual research of Academy members. Academy records indicate that the Conference met approximately once a week with different professors reading the results of their work.

honorable president." As the president was busy with other matters it took some time to actually dispatch Krasheninnikov's response to Linnaeus's initial overture to botanical correspondence. Shchepin may well have been under similar constraints when he wrote his only letter to Linnaeus in 1759 promising to send de Gorter's revision of Krasheninnikov's *Flora Ingrica*, the fruit of Krasheninnikov's and Shchepin's travels together back in 1752. Notably, Shchepin did not offer to send anything else to Linnaeus in the way of information or actual plants and seeds.[80] The meeting of the Academy Conference to discuss matters of correspondence and the approval of the Academy's president were not unusual for the running of a scientific Academy in general. The inability however of the Academy professors like Krasheninnikov to correspond informally and without Academy approval was not common within the larger Republic of Letters. This control and formality, which Demidov's correspondence provides an alternative to hints at the institutional differences that would come to define the St. Petersburg Academy from its scholarly institutional siblings.

It is important to note that while this correspondence carried seeds, it also very often carried books. With increased mobility and with increased contact with European scholarly societies, these texts circulated more and more broadly, reinforcing new patterns of scientific mobility. As these texts circulated, shifts were beginning to occur within the "service" model of professional advancement as well. The letters, for instance, between Linnaeus and his Russian correspondents, Grigorii Akinfievich Demidov, Krasheninnikov and Shchepin were part of a new form of botanical expression and a new corpus of botanical literature in the Russian Empire: the informal scientific correspondence based on familiar European practices of gift exchange and politesse. The mobility of these individuals, directly or by proxy, within western Europe helped

[80] Stephani Krascheninnikow and David de Gorter, *Flora Ingrica ex schedis Stephani Krasheninnikow ...* (Petropoli: Typis Academiae Scientiarum, 1761).

to spark this new form of botanical discourse and linked the new space of the private botanical garden with the larger network of gardens in Europe and beyond.

Linnaean dissertations form an interesting subset of early modern university dissertations in general. The authorship of these works is by definition corporate, though often attributed to Linnaeus solely. W. T. Stearn has suggested that the Linnaean dissertations, a corpus of approximately 186 works published originally under the title *Amoenitates Academicae,* were produced "under an academic procedure of medieval character … whereby the student defended in public debate a thesis for which the professor was primarily or entirely responsible." This was a system that demonstrated understanding of the topic and fluency in Latin as well as "acquaintance with the rules of formal disputation … the content of the thesis and its authorship and originality not greatly mattering."[81]

The dissertation defended publically by Jonas Hallenius, entitled *Plantae Rariores Camschatcenses* in 1750 was clearly one of the earliest university dissertations to focus on the Russian Empire and is almost certainly the work of Linnaeus himself, based largely on the herbarium and other specimens sent to him by Demidov. The introduction to the work states, "Last Summer Gregory Demidoff, a distinguished Ukrainian and excellent judge of plants, submitted to the examination of our President an enormous collection of very rare plants which Lerche, a botanist of great insight, has collected toward the end of last year in Kamchatka, the remotest part of Asia and that closest to the American continent."[82] If nothing else this passage suggests the inaccuracy of some of Linnaeus's information when it came to the context from which his 'Siberian' specimens issued. The plants furthered to Linnaeus by Demidov were

[81] W. T. Stearn, "An introduction," in: Carl von Linné*, Species Plantarum: A Facsimile Edition,* Vol. 1 (London: John Ray Society, 1957), 51. See also Alan Graham, "Plantae Rariores Camschatcenses: A Translation of the Dissertation of Jonas P. Halenius, 1750," *Brittonia* 18 (1966), 131.

[82] Alan Graham, "Plantae Rariores Camschatcenses: A Translation of the Dissertation of Jonas P. Hallenius, 1750," *Brittonia* 18 (1966), 136.

mostly the work of G. W. Steller, while nowhere in his surviving letters to Linnaeus does Grigorii Akinfievich identify himself as Ukrainian.

A second Russian dissertation was produced under Linnaeus in 1766 by Aleksander Matveevich Karamyshev (1744-1791) who studied botany with Linnaeus and publically defended a dissertation on the necessity of natural history for the Russian Empire in 1764. Born in the Urals and thus like Shchepin not from capital cities of Moscow or St. Petersburg, Karamyshev received his early education at the recently established Mining Institute [*Gorno Uchilishe*] in Ekaterinburg before moving on Moscow University (established in 1755). Karamyshev's career in natural history, though focused on mining and mineralogy later in life, represents the entrance of an ever broader array of Russian imperial subjects into Russia's scientific community. Linnaeus's great bibliographer, Pulteney, has described this particular dissertation as having constituted an exercise to "excite [Karamyshev's] countrymen to a diligent cultivation of the study of natural history, as a science eminently beneficial to a rising people … exhibiting also the vast field which the Empire of Russia affords for its cultivation."[83] If the standard interpretation of the Linnaean dissertation offered by Stearn is correct, then it is Linnaeus who "endeavors to persuade [Karamyshev's] countrymen to cultivate a number of useful vegetables, by presenting them with a long catalogue of exotics, which have been, in some sort, naturalized at Abo [now Turku], in Finland, under the care of Professor Kalm."[84] Indeed, this is in keeping with Linnaeus's own projects in transplantation and economic botany in Sweden.

[83] Carl von Linné, Richard Pulteney, Carl Troilius and William George Maton, *A General View of the Writings of Linnaeus* (London: J. Mawman, 1805), 471.

[84] von Linné, *A General View*, 472.

Karamyshev studied in Uppsala with another Russian, Matvei Ivanovich Afonin (1739-1810) who also publically defended a dissertation under Linnaeus in 1766 on the use of natural history in everyday life.[85] Much less focused than either Karamyshev or Shchepin's dissertations, the appearance of Afonin's scattered cogitations on the types of wheat, southern ornamental plants grown in the north of Russia, on the characteristics of medicinal herbs and poisonous berries suggests not only that perhaps some of the Linnaean dissertations were not written by Linnaeus, but also that the relatively open nature of botanical inquiry allowed for a wide array of individual interests and writing styles. When Afonin returned to Russia in 1770, he was appointed as professor of Natural History at Moscow University, where he specialized in agriculture and took part in the activities of the newly established Free Economic Society.[86]

In general, the corpus of Linnaean correspondence with Russian imperial subjects and the production of dissertations by those who studied under him illustrates some of the new textual forms that resulted from increased ability to travel in western Europe, to communicate with academicians there, and to collect specimens among them. Moreover, the particular policies of the Academy of Sciences towards the control of Siberian specimens heightened the value of first hand Russian observations and allowed for the entrance of an increasingly broad array of a variety of Russian speakers, not necessarily tied to the Academy or the Chancellery, into botanical discourse.

The exchange of letters, the creation of gardens and the circulation of plant specimens was quickly outstripping official Academy and Chancellery channels. And even as Grigorii Akinfievich corresponded with Linnaeus, his older brother, Prokofii Akinfievich (1710-1788)

---

[85] Matheus Aphonin, *Dissertatio academica demonstrans Usum Historiae Naturalis in Vita Communi* (1766).

[86] E. G. Bobrov, "Rossiiskie Ucheniki i Korrespondenty Karla Linneia," in *Karl Linnei. Sbornik Statei. 250 let so dnia rozhdeniia 1707-1757*, [Carl Linneus], et al., 113-154 (Moscow: Akademiia Nauk SSSR, 1958), 120.

initiated his own botanical correspondence with André Thouin in Paris, more or less entirely bypassing the trained scientific community in Russia and establishing his own, direct connection, with well-known botanists abroad. Unlike his brother Grigorii, Prokofii Akinfievich generated far more personal botanical correspondence, some of which is touchingly intimate. From Thouin to his son in law to his children, Demidov's botanical correspondents are all continuously called upon not just to help him obtain desired plant species or botanical books, but to appreciate what has, in turn, been sent to them, in a display of mutual respect and affection.

Two letters from Prokofii Akinfievich to his sons, Lev and Akaki exist attesting to Prokofii Akinfievich's particular blending of the intimate affairs of industry, family and gardening. In the closing paragraph to a letter dated March 6, 1764 that is otherwise full of advice on how to handle problems with workers at their Neviansk iron factory, he writes:

> With this I am sending some seeds, three sorts of geraniums, an Africana, and a curious iris; if you like, plant them and keep them in the greenhouses: their flowers are as nice and curious [*khoroshie i kurioznie*] as you could want; for I have a passion for such things, and have collected many plants, which might primarily serve for your enlightenment. Do pay [the postage] for these items, which I have intentionally included in this letter, and above all enjoy them.[87]

The fact that Lev and Akaki had greenhouses at the factories in Neviansk is itself a surprising admission. Unfortunately there is no more correspondence between Prokofii Akinfievich and his two sons to know if this botanical line of communication continued. Prokofii did take pains in his letters to his son-in-law, M. I. Khozikov to share plants and gardening advice in an effort to encourage intimacy, communicate affection, and show off his growing collections. In Demidov's

[87] *Русский Архив* 1873, 2234.

earliest letter to Khozikov dated February 14, 1773 he humbles himself before Khozikov, writing: "My birds sing more poorly than do yours; and without me, my gardeners would kill a full third of my plants; I have no blossoms and have only glanced at yours."[88] In another next, dated February 19, 1779, Demidov begins rather abruptly. Without introduction or invocation, it begins: "With this letter I have sent the soldier Ivanov and with him two boxes. The first with an herbarium to give back to Solodovnikov and the other with bottles to be uncorked."[89]

Somewhat earlier, in 1740, Prokofii Akinfievich did try corresponding with Johann Amman at the Academy of Sciences in St. Petersburg, while at approximately the same time Grigorii Akinfievich was corresponding with Traugott Gerber in Moscow. A letter from Johann Amman dated March 18, 1740 indicates that Prokofii was known in St. Petersburg as a source for hard to find flora, probably due to the fact that Prokofii still lived in Tula at that time and so had direct access to a wider range of 'Siberian' specimens than did the academicians in St. Petersburg.[90] In his response to Amman's letter, Prokofii writes that as he does not speak German he has delayed in responding to Amman until he could have the letter translated. Unfortunately, he continues, the time of the year is not right to collect and dispatch seeds. "I heartily regret," he writes, "that I cannot be of service to you currently, as I do not have a greenhouse; however, god willing, it would be my pleasure to send to you the few [plants] I have in the garden in the coming fall."[91] He does include, however, "two herbarium pages of the *Eleberum nigro* and a third page describing how it grows in nature." In addition to this Demidov includes seeds of this plant, though, he admits, "I do not know how good they are, as this fall has

[88] *Русский Архив* 1873, 2247.

[89] *Русский Архив* 1873, 2248.

[90] Prokofii Akinfievich Demidov, *Prokofii Akinfievich Demidov. Pisma i Dokumenty* (Ekaterinburg: Demidovskii Institut, 2010), 11-13.

[91] Demidov, *Pisma i Dokumenty*, 13.

been particularly rainy. I collected them with great difficulty and they may not yet have completely dried out." If they do prove viable, however, he suggests that they "love the earth of open fields, good and dark, however in black earth [*chernozem*] they do not, in my experience, grow."[92]

By mid-century, Prokofii Akinfievich had moved to Moscow and had established a sizable garden at his estate there. As his merchant network grew, so too did his ability to collect more widely while travelling less frequently. Fedor Vasilevich Karzhavin, a French-speaking Russian student who travelled throughout the Netherlands and France in the early 1770s, for instance, mentions in his journals that his travel was supported by Prokofii Akinfievich, who connected him with a certain Mr. Solodovnikov in St. Petersburg. This Solodovnikov, who appears frequently in Demidov's correspondence, travelled between St. Petersburg and Amsterdam regularly. Interestingly, Karzhavin notes that this support did not come without expectations, for he travelled with "Russian and Siberian natural rarities" destined for the cabinet of the Prince of Orange, presumably gifts from his patron, Demidov.[93]

From the early 1780s Prokofii Akinfievich worked on bolstering his relationship with the French botanist and chair of Horticulture at the Museum of Natural History in Paris, André Thouin. The earliest letter between Demidov and Thouin is dated May 1781.[94] Prokofii opens this letter stating he was "honored to receive two letters from [Thouin] dated 14 and 16 March, and with them, sent through Mr. Solodovnikov – 180 different types of plant seeds." Whether or not this marks the initiation of correspondence between the two, the fact that Demidov then goes on to reiterate exactly what Thouin was hoping to get out of the relationship suggests that they

[92] Demidov, *Pisma i Dokumenty*, 13.

[93] "Feodor Vasilevich Karzhavin," *Russkaia Starina* 12 (1875), 274.

[94] Demidov, *Pisma i Dokumenty*, 156-157.

were not yet close. "You wish, sir," he writes, "that I would send you every year seeds of Russian plants, which I will not fail to do. I will order that they be collected and in the fall I will send them to you."[95] Demidov includes in this letter to Thouin "Siberian seeds for your own garden," no doubt so that his exchange of seeds on behalf of an institution (the Museum of Natural History) could double as an act of friendship between two individuals.

Demidov's second letter to Thouin is dated July 1783. As with the first letter, Demidov's response indicates that Thouin has already written to Moscow twice the previous spring and that Demidov has waited to respond. In both cases, as before, the letters and their contents were conveyed by Mr. Solodovnikov and in total they included 330 different types of seeds, which, Demidov states "are already growing here."[96] Later that same month Prokofii received 166 living fruit trees from Thouin, packaged and sent from Paris the previous March. In thanking Thouin for his efforts, Prokofii does mention that Solodovnikov neglected to forward on some jasmine, plumb and apricot varieties as they had been damaged en route and had not survived. Certainly no more experienced than Thouin in the removal and packaging of young trees, Demidov apparently knows the rigors of the road from Paris to Moscow better than the French botanist. He writes, "I understand that sending trees from France is difficult due to the distance and the time…nevertheless, I beg of you, sir, send various sorts of jasmine, 12 for each kind, and put them in boxes filled with earth and moss to the depth of at least two inches. As for those with seed, just send the seed. The others cover only with moss, as you do with lemon trees, so that they are visible … and affix to all of them identification numbers using brass wire."[97]

[95] Demidov, *Pisma i Dokumenty*, 157.

[96] Demidov, *Pisma i Dokumenty*, 161.

[97] Demidov, *Pisma i Dokumenty*, 162.

Instructing Thouin to use at least two inches of soil around the roots, to group the different trees together in a series of boxes, to use brass wire instead of thread: these are all tricks learned to avoid the hazards of the road and to minimize loss in transport. The fact that Thouin, more than once, uses thread to attach the identifying information to individual trees instead of wire may suggest that he does not quite appreciate the extreme weather the trees will encounter in their five- to six-month journey from Paris to Moscow. Demidov certainly asks for a lot, but he encourages to Thouin to spare no cost in preparing and sending these trees. Reassuring Thouin of his solid financial connections he says that Mr. Solodovnikov has been informed to pay Thouin whatever he asks with funds secured in London by his bankers. "I also ask," he writes in closing, "that you send peach trees, apricots, cherries, six trees of every kind, including in every box one of each kind, even if it costs a little more; and include whatever else you think worthy. It will all be expensive … but I will be happy to pay."[98]

The creation of new botanical spaces was occurring at a rapid rate from the middle of the eighteenth century on. This particular nexus of mobility within western Europe, combined with the emergence of new textual forms of botanical discourse was buoyed by the growth of Russia's system of secondary education, including the foundation of Moscow University in 1755.[99] The mid-eighteenth century was a time of rapid expansion for the Medical Chancellery as well, and saw the growth of a network of hospitals and pharmacies as well as pharmaceutical production facilities and pharmacy gardens.[100] However, the most telling new botanical spaces at this juncture, and the spaces of cultivation to which I turn now, issue from the Demidov family, and

[98] Demidov, *Pisma i Dokumenty*, 163.

[99] I. P. Kulakova, *Universitetskoe prostranstvo i ego obitateli* (Moscow: Novyi Khronograf, 2006); Idem, "'Minervni Khram': Moskva i Moskovskii Universitet v XVIII veke," *Voprosy Istorii, Estestvoznanniia, i Tekhniki* 3 (1997).

[100] Mary Schaffer Conroy, *In Health and Sickness: Pharmacy, Pharmacists, and the Pharmaceutical Industry in Late Imperial, Early Soviet Russia* (Boulder, CO: East European Monographs, 1994).

involve both Grigorii Akinfievich and his older brother, Prokofii Demidov. Heretofore I have only briefly mentioned the private botanical gardens of the Demidov brothers Grigorii and Prokofii Akinfievich. The remainder of this chapter now turns its attention to their new botanical spaces, the private gardens of elite noblemen in general, as the outgrowth of increased mobility within the European botanical network. Ultimately as botanical travel increased, and as Russian botanists and amateurs understood their role as purveyors of proximity to Russian flora, new spaces were created to mediate that performance and underscore the utility of their collection not just to themselves but to their state as well. While Grigorii Akinfievich maintained an impressive garden in Solikamsk, Prokofii Akinfievich started one of his own in Moscow on the banks of the River Moskva. Both Grigorii and Prokofii's extensive travels, botanical exchanges and generation of texts helped to form a new space of cultivation in the Russian Empire, the private nobleman's botanical garden, which proved a useful and powerful site for the performance and display of elite sensibilities.

The traces of Grigorii Akinfievich's botanical garden in Solikamsk remain primarily in the descriptions penned by the naturalists who visited it through out the eighteenth century. As a large town in between Moscow and Tobolsk, Solikamsk was a common stop for groups traveling from Russia into Siberia. Grigorii Akinfievich Demidov, as a wealthy local and as a well-travelled businessman with aspirations to European languages and cultures appears to have hosted many of these travelling naturalists. Though documents are few, at least one historian maintains that Grigorii Akinfievich started his garden in Solikamsk in the mid 1730s, shortly after marrying and setting up his household.[101] It is likely therefore that Grigorii Akinfievich's

[101] L. Bankovskii, "Botanicheskii sad Grigoriia Demidova," *Nauka i Zhizn'* 2 (2007), n.p. (http://www.nkj.ru/archive/articles/9021/); I. N. Iurkin, *Demidovy – uchenye, inzhenery, organizatory nauki i proizvodstva* (Moscow: Nauka, 2001), 115.

private botanical garden in Solikamsk predated the creation of the Academy's botanical garden on Vasil'evskii Island and is therefore one of the earlier botanical gardens in the Russian Empire.

Johann Georg Gmelin, the botanist attached to the Second Kamchatka Expedition, was one of the first travelling naturalists to visit Demidov's Solikamsk gardens and to record his experience in his travel memoirs. On his return to St. Petersburg in 1742, at the end of his time with the Second Kamchatka Expedition, Gmelin met up his longtime traveling partner G. F. Müller in Solikamsk at the house of Demidov. Gmelin describes Grigorii Akinfievich and his family as remarkably educated and well-mannered. Their children, who were between the ages of the five and nine, were particularly impressive, studying several languages and conducting themselves "as if they were much older." In addition to keeping a well-ordered and well-stocked pharmacy, "Mr. Demidov," Gmelin reports "is a great lover of Natural History, and particularly of botany [*krauterwissenschaft*], in pursuit of which he not only keeps a large herbarium of dried plants, but he also has an elegant garden [*zierlichen Garten*], which he maintains at great expense and which has an greenhouse [*Orangerie*] that is princely for this land." Unperturbed by locals who questioned the usefulness of keeping such an expensive garden, Gmelin writes that Demidov deeply valued "the innocent pleasure of God's creations."[102]

Georg Wilhelm Steller, who also visited Demidov's Solikamsk garden as a member of the Second Kamchatka Expedition somewhat later may well have had a more nuanced understanding of Demidov's botanical pursuits. Though Steller did not leave any descriptions, his only trace was the temporary garden he planted on Demidov's estate to keep his collections alive, Steller and Demidov apparently planned to conduct a survey of the flora of the Urals. According to Steller's accomplished biographer the two came up with a "definite plan for a

[102] Johann Georg Gmelin, *Reise durch Sibirien, von dem Jarh 1733 bis 1743,* Vol. 4 (Göttingen: Abram Bandenhoecks, 1752), 520.

Flora Permiae," focusing on the Perm region. And thus "Steller became busy making excursions, often accompanied by Demidov, collecting and describing the plants. Three strenuous but delightful summer months were spent in this absorbing occupation."[103] Grigorii Akinfievich himself bemoaned the loss of Steller for numerous reasons, but certainly among them was Demidov's sense of loss at not being able to finish his flora of the Perm region with an expert at his side.

Somewhat later, just before Demidov's death in 1761, the travelling Astronomer, Jean-Baptiste l'abbe Chappe d'Auteroche stopped in Solikamsk on his way to Tobolsk where he was to observe the transit of Venus. While Grigorii Akinfievich himself was not in Solikamsk to receive his visitor, Chappe d'Auteroche was met by Demidov's agents who knew of his arrival in advance. Chappe d'Auteroche, who was never particularly silent about the rigors of Siberia's climate, writes that the winters posed a particular challenge to Demidov's gardens, "where there are twelve lovely greenhouses [*serres*] … filled with lemons and oranges. Here one can find all the fruits of France, Italy, and a number of other plants from different countries." Like Gmelin, Chappe d'Auteroche points out that these greenhouses were absolutely unique for the region, though there were similar ones in Moscow and St. Petersburg. "Without these greenhouses," he concludes "there would be no vegetables anywhere in the city during the long winter."[104]

Chappe d'Auteroche also mentions that Grigorii Akinfievich kept a Russian gardener, who along with horticulture knew some physics as well. His talents were such that though he was untrained he "had an excellent capacity for acquiring knowledge."[105] These talents were

[103] Stejneger, *Georg Wilhelm Steller*, 465.

[104] Jean-Baptiste Chappe d'Auteroche, *Voyage en Siberie,* Vol. 1 (Paris: Chez Debure, 1768), 49.

[105] Chappe d'Auteroche, *Voyage en Siberie,* 50.

clearly not lost on Demidov who encouraged them, supplying the gardener with a library containing books on mathematics, physics and botany, as well as all sorts of instruments.

Some years after Grigorii Akinfievich died, the garden, which was subsequently maintained by his sons, was visited by Ivan Ivanovich Lepekhin (1740-1802) a student of Krasheninnikov, professor of Natural History at the Academy and director of the Academy's botanical garden. Lepekhin encountered Demidov's Solikamsk garden in 1771, remarking briefly upon the incredible number of various fruiting trees, all of which clearly had been well tended. Some thirty years after Gmelin's initial encounter, Lepekhin too notes that this garden is not typical of what one normally finds on the road to Siberia. "True," he writes, "not every one can be as wealthy as the Demidov family, going to such extremes to create a garden," however, "many of the surrounding locals could emulate the example, with the right trees of course, commensurate with their condition."[106] While Gmelin suggested in 1742 that the value in this expensive and outlandish pastime was delight in the divine creation of the natural world, Lepekhin suggests that there is a educational value in it as well.

Lepekhin, unlike the other two visitors, continues on to the plants themselves, praising the collection, writing: "How glorious is this garden of diverse plants, and with what great zeal plants are brought from distant parts of the world, which the reader may now see listed here."[107] Lepekhin's list, covering the following fifty pages of his travel memoir describes over 450 individual plants, classifying them according to the Linnaean system and listing them alphabetically. Though Grigorii Akinfievich does not seem to have chosen to use the Linnaean system for his garden during his lifetime, his correspondence with Gerber suggests that he

[106] I. I. Lepekhin, *Prodolzheniie Dnevnykh Zapisok Puteshestviia Ivana Lepekhina … po raznym provintsiiam Rossiiskago Gosudarstva v 1771 godu* (St. Petersburg: Imperatorskaia Akademiia Nauk, 1814), 135.

[107] Lepekhin, *Prodolzhenie Dnevnykh Zapisok*, 136.

nevertheless kept a thorough and up-to-date herbarium, which would have served the same function as a catalogue and would have guided him one way or another through his remarkable living collections.

Grigorii's older brother Prokofii Akinfievich may have had experience with Grigorii Akinfievich's garden, though there is as yet surprisingly little to suggest what the nature of that relationship may have been. Once in Moscow, Prokofii Akinfievich almost immediately began laying the foundations for a large botanical garden of his own on his new estate along the Moscow River. Construction of Prokofii Akinfievich's garden began in 1756 and required significant restructuring of the original landscape to make it suitable as a garden. For upwards of two years, some 700 men moved earth from higher parts of the estate down to the banks of the river in order to build up and level out the property into a series of large, descending steps, ending at the Moscow River with a special enclosure for water birds. Demidov initially appointed the land specifically for fruit trees, which he collected with a passion. Only later, did he begin to use his greenhouses, outdoor beds, and gardening expertise to host more exotic, botanically interesting species. (See figure 11)

Like Grigorii's garden in Solikamsk, Prokofii's garden in Moscow proved attractive to travelling naturalists, especially Peter Simon Pallas, the Academy's chair in Botany and Natural History after Lepekhin. When Pallas visited Prokofii's garden in 1781 he decided to stay for an extended period and to create a catalogue of it with the full support of its patron. Pallas's account, which begins with a long narrative introduction, suggests that Prokofii Akinfievich himself was a constant and active presence in the garden. In his dedication to his temporary patron, Pallas writes to Prokofii that "in order to become the master of your perfect garden … [and] suffering

from a love for that science, you have taken upon yourself, to the surprise of everyone, every difficulty and discomfort of the open air… watching over it [and over] the very gardeners."[108]

While Pallas's catalogue appears to have been thorough, organized according to the Linnaean system and listed by class, Prokofii, however, was not satisfied with this volume and five years later, in 1786, he published his own catalogue of this garden, in Russian.[109] Demidov's Russian language volume was based on the classificatory work preformed by Linnaeus and yet in its format it followed Lepekhin's list of Grigorii Akinfievich's collection, adopting an alphabetical order for the transliterated Russian binomials. The work ends with a brief, two page essay on how to force seeds to start, in this case by using wet moss and a warm room. "I have gathered here from the four corners of the world more than eight thousand different plants with their botanical characteristics and explanations of their nature for one purpose, to incite amazement [*vozbudit udivlenie*] at the wisdom of the greatness of God."[110]

The patrons, Grigorii Akinfievich and Prokofii Akinfievich clearly travelled, but where to and how much is not clear. Their gardens, however, were connected with the scientific tour of Europe through Prokofii Akinfievich's liaison, Emelian Solodovnikov, and through Grigorii Akinfievich's own children, who grew up to receive their education in Germany, the Netherlands, even studied under Linnaeus in Uppsala for some time.[111]

The shadow of this "Mr. Solodovnikov" in these letters gives some indication of the ways in which Prokofii Akinfievich called upon the wider merchant network to facilitate collecting

---

[108] P. S. Pallas, *Enumeratio Plantarum Horto … Dni. Procopii a Demidov…* (Sanktpeterburg: Pri Imperatorskoi Akademii Nauk, 1781), vii.

[109] Prokofii Akinfievich Demidov, *Katalog Rasteniiam po alfavitu …* (Moskva: F. Gippius, 1786).

[110] Demidov, *Katalog Rasteniiam*, n.p. On the second page of the Russian language dedication, immediately following the title page.

[111] Petr Grigorievich Demidov, Aleksandr Grigorievich Demidov and Pavel Grigorievich Demidov, *Puteshestvie brat'ev Demidovykh po Evrope: pis'ma i podnevnye zhurnaly 1750-1761 gody* (Moscow: Indrik, 2006).

plants. Prokofii Akinfievich certainly travelled himself to Europe and is known to have gone to great lengths while there to obtain plants for his garden, but his correspondence frequently mentions using Solodovnikov to deliver letters, seed packets, and herbaria sheets. Solodovnikov delivered these things not only to Thouin in Paris, but to Demidov's son-in-law Khozikov in St. Petersburg, as well as to his sons overseeing the family factories in Tula. Though he is difficult to trace, it appears that Emelian Solodovnikov was a merchant from Tula who eventually settled in St. Petersburg, achieving rank in 1783.[112] There is evidence to suggest that Solodovnikov's own trade network may have extended from St. Petersburg to Astrakhan.[113] Like Demidov, a busy life in trade and a great deal of travel did not seem to stop Solodovnikov from engaging in botanical hobbies, for he may also have been the same "E. Solodovnikov" listed as the translator of a horticultural treatise published by Prokofii Akinfievich at his own expense.[114]

Prokofii relied heavily on Solodovnikov and was fairly close to him if the myriad of diminutive names and constant chiding are any indication. In a letter to Khozikov in the fall of 1783, Prokofii asks for help making arrangements for a trip to Leiden. "I intend," he writes, "to go to Leiden and describe the gardens," and therefore he needs Khozikov to send him a schedule of ships leaving St. Petersburg, information about the customs through Kronstadt and to secure for him a carriage (presumably to St. Petersburg). "And if you cannot help," he writes "maybe you too have disappeared along with Emelianushke." Solodovnikov (or, Emelianushke here), the usual go-between in these matters, appears to have been less and less at Demidov's beck and call

[112] Listed among the "gentlemen trustees" of Moscow's Foundling home is one "Emelian Solodovnikov, tulskii kupets," in *Adres-Kalendar Rossiiskoi … Mesiatsoslov s rospisiu chinovnykh osob v gosudarstve na leto ot rozhdestva khristova 1783* (Sanktpeterburg, 1783), 125.

[113] *Russko-Indiiskie Otnosheniie v XVIII veke* (1965), 391.

[114] *Legchaishee pravilo na opytakh osnovannoe, prilezhnym nabliudeniem kotorago za neskol'ko let zdes' poiavivshuiusia vsegda tsvetushuiu zemlianiku … perevedeno s nemetskago E. Solodovnikovym* (St. Petersburg: Akademia Nauk, 1779.

and Demidov vents his frustration to Khozikov, writing: "Please, tell me, is Emelianushke lazy or too stuck up to deliver a journal on time?"[115]

As Demidov was dispatching Solodovnikov to deliver and collect plants around Russia and Europe, his garden in Moscow proved to be an important meeting place for the Moscow's rising merchant elite. The diary of Ivan Tolchenov indicates that the busy merchant routinely visited Demidov's "orangeries" through the late 1770s and early 1780s. More telling indeed is the fact that the gardens and greenhouses of the merchant Makarov and a Mr. Streshnev of Beliaevo both also feature in his itinerary, forming a web of garden spaces that Tolchenov would visit after conducting business in town, or on his way to dinner with a friend. Tolchenov was not just visiting to take in the view. During one visit in December of 1779 he mentions speaking to Demidov's gardener and receiving from him plans to build a greenhouse on his own property.[116]

Both Demidovs, Prokofii and Grigorii Akinfievich, were remarkably successful at blending their trade networks that spanned western Europe with their botanical interests. In the process they helped to generate new textual forms of botanical discourse in Russia that allowed for the play of elite sensibilities and the mixture of intimate familial and professional relationships in the space of the garden.

From Postnikov, to Shchepin, to Linnaeus to the Demidovs, the move to collect in Europe had profound effects on the production of botanical knowledge in the Russian Empire. Foremost among them was the increasingly confident Russian voice in botanical discourse in general at this time. From Shchepin's chemical-botanical evaluation of the power of kvass, to the Demidov brothers' particular interest in conveying the Russian names of plants to the likes of

[115] Demidov, *Pisma i Dokumenty*, 170-171. "A'ezheli onogo ne'smozhesh, ne'vprech' 'li Vas s 'Emel'ianushkom. Pozhalui, taki skazhi mne, Emel'ianushka leniv ili spesiv, ne'umet' okuratno zhurnal vest', a'vse po'kolikam, shto emu v'pochtovoi den' v'golovu voidet'."

[116] Ivan Alekseevich Tolchenov, *Zhurnal ili Zapiski i Prikliuchenii Ivana Alekseevicha Tolchenova* (Moscow: Institut Istorii SSSR, 1974), 155-156.

Linnaeus and Thouin, all suggest not just an increased ability of Russians to insert their local knowledge into the wider botanical arena, but also the welcome reception of it by European scholars and botanists. The generation of botanical knowledge in this context was particularly textual, encoded in letters and catalogues more so and more broadly than had been done previously. Prokofii Akinfievich's alphabetical Russian catalogue of plants is perhaps one of the clearest manifestations of this impulse, but so too are the increasing number of herbaria circulating into and out of Academy circles, among noblemen and to and from students and their mentors. Finally, this nexus of mobility, space and knowledge production illustrates the real and sustained influence of Russian culture into botanical practice of the early modern era.

Conclusion

From the middle of the seventeenth through the middle of the eighteenth centuries, botanical practice took root, grew, and eventually came to infuse Russian imperial practice, while in the process preparing and displaying Russia's wealth of flora for a global scientific audience. This dissertation has shown how different regimes of collection helped to create different spaces of botanical cultivation in the early modern Russian Empire, which in turn served as crucial sites for the production of scientific knowledge. The sibling acts of collection and cultivation, forming the Baconian foundation for the study of natural history, in the Russian Empire were both highly dependent upon imperial infrastructures of transport and accommodation as well as more traditional Russian one for moving things across the landscape.

From the summer travels of seventeenth-century *travniki*, to the southern itineraries of Chancellery doctors, to the Siberian expeditions of Academy botanists, to the European excursions of Russian students and noblemen, ways of moving through the space, whether by river, overland by horse and cart, or upon a ferry headed for a populous European city, composed itineraries that directly affected the creation and growth of Russia's apothecary and botanical garden spaces. In this way, the Russian imperial landscape, political, cultural and physical, infiltrated scientific practice at its most basic level – in turning plants and seeds, flowers, roots and leaves into reliable scientific objects that could be described, preserved, presented and circulated throughout the botanical community.

The intimate relationship between collection, cultivation and mobility, colored and shaped by the Russian imperial context, has been highlighted and investigated throughout this dissertation in order to suggest some of the ways in which the early modern scientific knowledge

can be linked with the site of its production as well as to the networks of exchange that helped it to spread from place to place. Visible in Russia's apothecary and botanical gardens then, was both the expanse and the expansion of seventeenth- and eighteenth-century Russian Empire. The production of botanical knowledge in the Russian Empire at the turn of the eighteenth century, though couched in terms of universalist scientific practice and hidden within the standardized institution of the botanical garden, nevertheless carried the stamp of its Russian origins, born of Russian imperial techniques for moving through, understanding and therefore knowing the natural world.

While the results of this dissertation clearly demonstrate how science and empire met on the Russian landscape, it may be less clear how the evidence given here moves scholarly discussion any closer to a more insightful narrative of the distinctly Russian approach to nature. There are, however, a number of themes that have continually cropped up that do shed light on this particular historical ambition. First and foremost, service and obligation, pervade this dissertation and deeply influenced the ways in which Russians interacted with and within apothecary and botanical garden spaces. The obligation or *povinnost'* of various peasant communities coupled with the responsibility of *travniki* and local governors to provide the plants ordered by the Chancellery reveal the early influence of the Muscovite service model on the collection and preparation of medicinal plants. While Chancellery doctors and Academy naturalists may have been hired to travel down the Volga or into Siberia, their interlocutors at the various places where they stopped to collect would have enjoyed no such guaranteed remuneration and were instead obligated to aid in the travels of naturalists by fiat of imperial decree. Likewise the emergence of Russian students executing university study and amassing botanical collections abroad as part of their duty to their science and to their state was a form of

personal professional advancement to be sure, but continually called upon the rhetoric of duty and responsibility. The travels of Shchepin, therefore are not so dissimilar from the peregrinations of the *travnik*, both engaged in collecting, preparing and dispatching an array of plants back to their respective employers. In the end, service and obligation proved to have been remarkably flexible ways for Russian imperial subjects, *travniki* and *studenty* alike, to gain access to the institutions of collection and cultivation in the Russian Empire, as well promising new avenues for social and professional advancement.

Similarly, the theme not just of the control, but of the ownership of the products of nature has appeared throughout this dissertation, marking a consistent approach by the state and its various institutions (the Chancellery and the Academy) to the discovery, description and circulation of the Empire's flora and fauna. Controlling nature, or attempting to utilize natural resources to the best of anyone's ability, which included acclimatizing valuable plants and discovering new and potentially profitable species, was as much on the agenda for Russia as anywhere else. In the Russian Empire, however, there was also an articulated belief that the natural phenomena that issued from its various imperial borderlands, including the southern Volga, the steppe, and Siberia, constituted the intellectual property of the state and not the individual collector. The Russian imperial state, in the form of the Apothecary (Medical) Chancellery and the Academy of Sciences, claimed and sustained ownership and control of the flora and the fauna of the Russian Empire.

This claim was not entirely hegemonic and was at times disputed. It was dispute directly (and unsuccessfully) by Daniel Gottlieb Messerschmidt who lobbied for his own right to own the specimens he collected. It was disputed indirectly by the Grigorii Akinfievich Demidov, who bypassed the Academy entirely, sending Steller's living botanical collections directly on to

Linnaeus in Uppsala. These plants had been the property of the Second Kamchatka Expedition, and thus the Academy of Sciences, when Steller put them into the ground, but two years on, the plants that Grigorii Akinfievich and his gardener collected and sent to Linnaeus were individuals grown from seed and at least a generation removed from Steller's originals.

Even if the Russian Empire's claims to the proprietary nature of its flora may well have looked better on paper than in actual effect, nevertheless they comprise a distinct approach to the natural world solidly based on other Russian imperial policies and practices. Moreover, the claim of Russia's imperial institutions to ownership of the products of nature was by and large upheld by Russian as well as foreign servitors in the employ of the Chancellery and the Academy. Georg Wilhelm Siegesbeck guarded the Academy's proprietary rights over the flora of Siberia as zealously as did Stepan Petrovich Krasheninnikov. Nationality was not, it would seem, a determining factor when it came to understanding and obeying the rules of botanical practice in the Russian Empire.

The existence of Grigorii Akinfievich Demidov's Solikamsk gardener, a Russian tending some 500 different plants, preparing specimens to be sent to Paris and Uppsala, and given access by a wealthy patron to books of botany, horticulture and other sciences, clearly indicates that the lived experience of Russian imperial subject within the space of the botanical garden was far more varied than these institutions, the Academy and the Chancellery, reveal. It is for future research to go beyond the institutional foci of this dissertation, and look for the ways in which noblemen, peasants, and everyone in between moved through the landscape, collected plants, cultivated gardens and sought to insert their voice into the growing chorus of Russian-accented botanical discourse in the global scientific community of the early modern era.

Figures

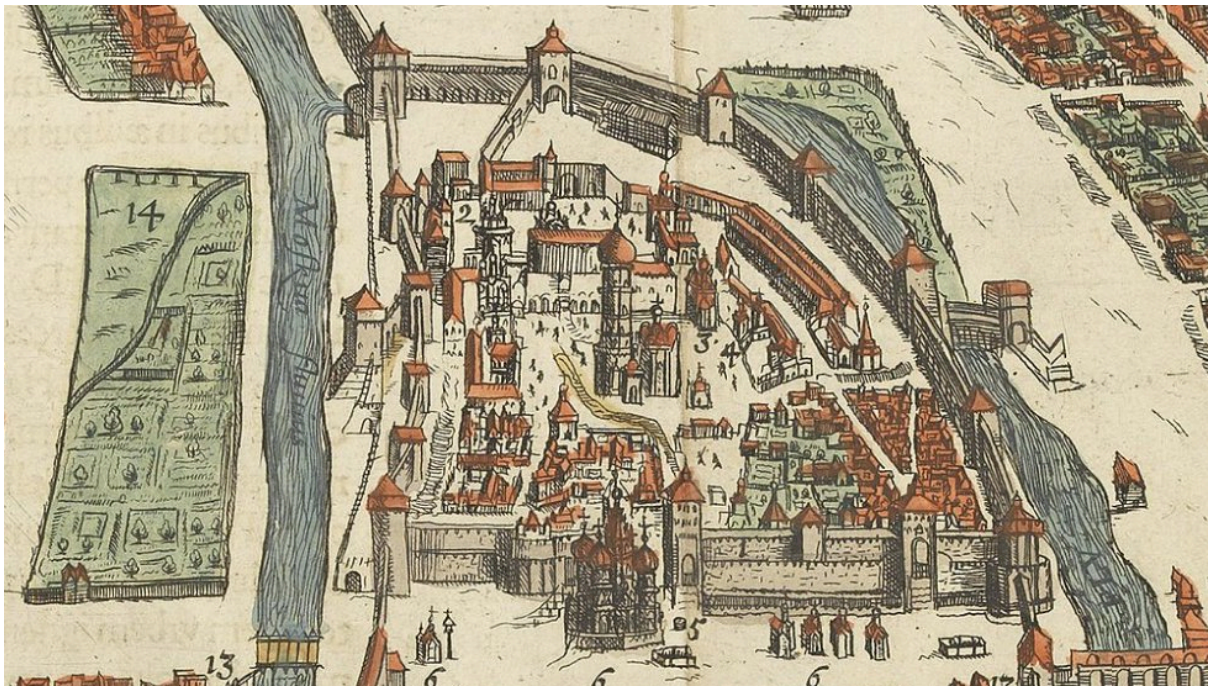

Figure 1: Detail from "Sigismund Map" which was originally drawn around 1601. The "tsar's garden" is featured on the left and indicated with the number 14. The pharmacy garden of the Apothecary Chancellery is located in the upper right, along the small river (Neglinnaia) that traces the walls of the Kremlin. This version was reprinted in 1657. (Scan provided by Barry Lawrence Maps, ltd.)

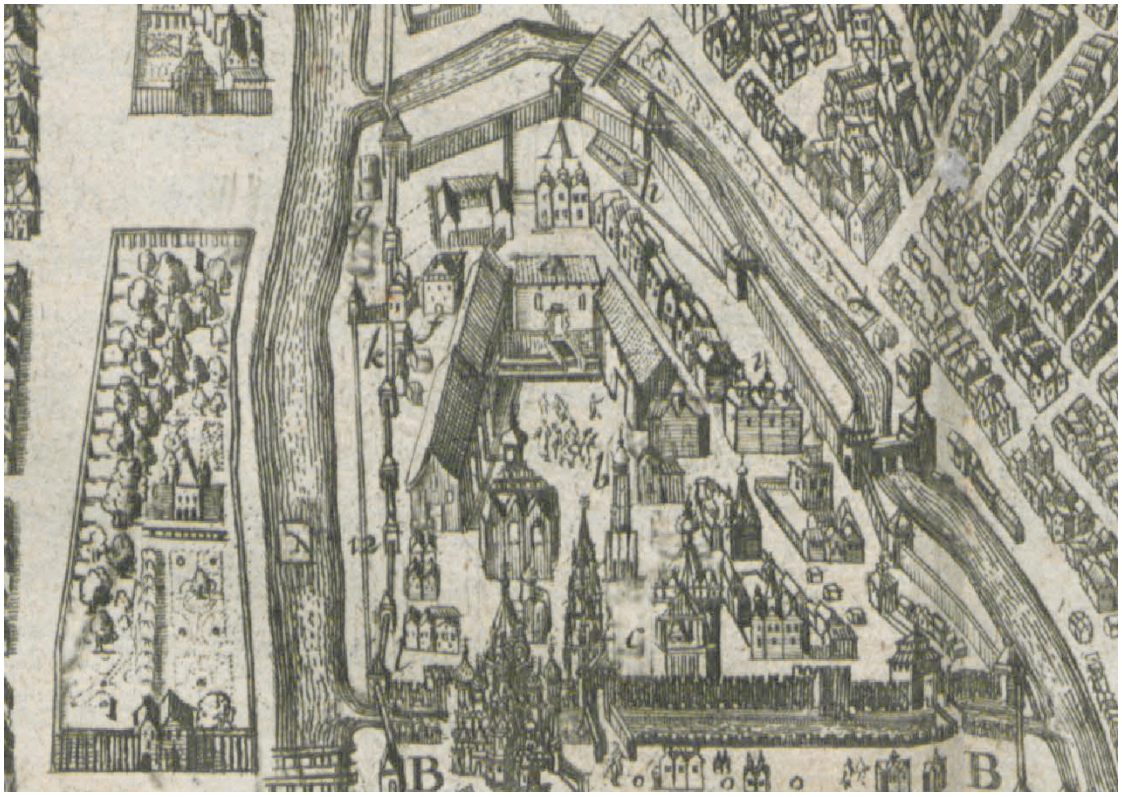

Figure 2: Detail from Olearius's map of Moscow included in the second edition (1647) of his travels. The "tsar's garden" is located on the lower left, and the pharmacy garden of the Apothecary Chancellery is on the upper right (denoted with the Greek letter "**α**"). Image provided by the University of Tartu.

Figure 3: Detail of a manuscript map in the documents of the Apothecary Chancellery, featuring the pharmacy garden from the seventeenth century. RGADA, F. 27, op. 1, pt. 4, № 59. "Map of the area between the Neglinnaia river, from the tower at Kamennyi most, to the pharmacy garden and [from] Bolshaia street to the Znamenka." (Scan provided by the Russian State Archives of Ancient Acts, Moscow.)

Figure 4: From Schober's *Memorabilia Russo-Asiatica* "Ephedra Pseudo-Rubus Volgensis." SPB ARAN, R. IV, op. 1, No. 326, pg. 87 v. (Scan provided by the Archives of the Russian Academy of Sciences, St. Petersburg Branch.)

Figure 5: Detail of the vignette appearing above the dedicatory text for the first volume of the journal of the Academy of Sciences, *Commentarii Academiae Scientiarum* (Petropoli, 1728). Image provided by Biodiversity Heritage Library. Notice the implied proximity and connection between the Baltic Sea on the left, featuring the ports of St. Petersburg, Reval and Riga and the Caspian Sea on the Right, featuring the city of Derbent.

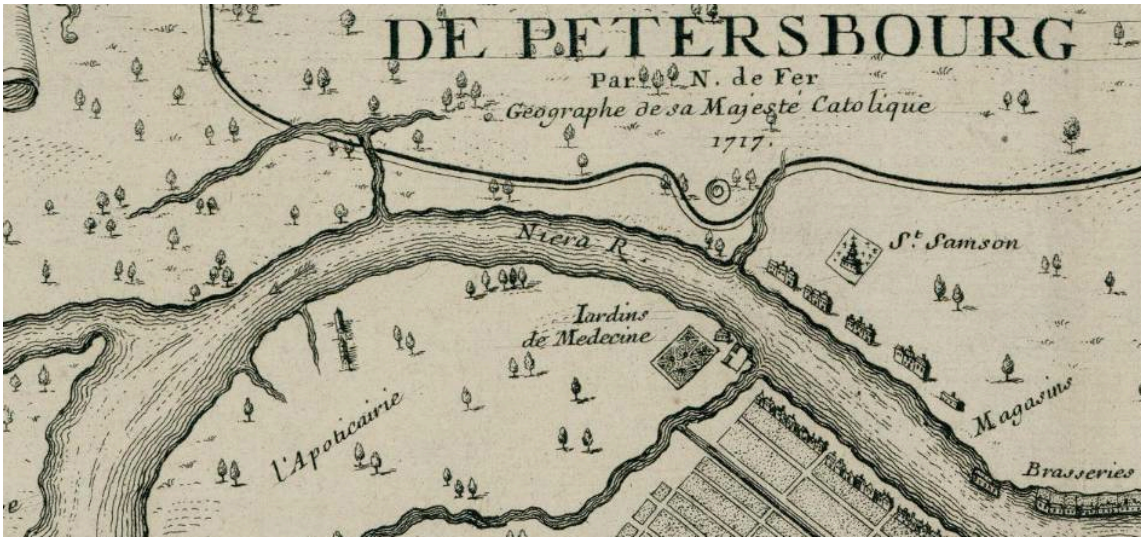

Figure 6: Medical Garden on Aptekarskii Island. Detail from "Plan de la Nouvelle Ville de Petersbourg," by Nicolas de Fer, 1717.

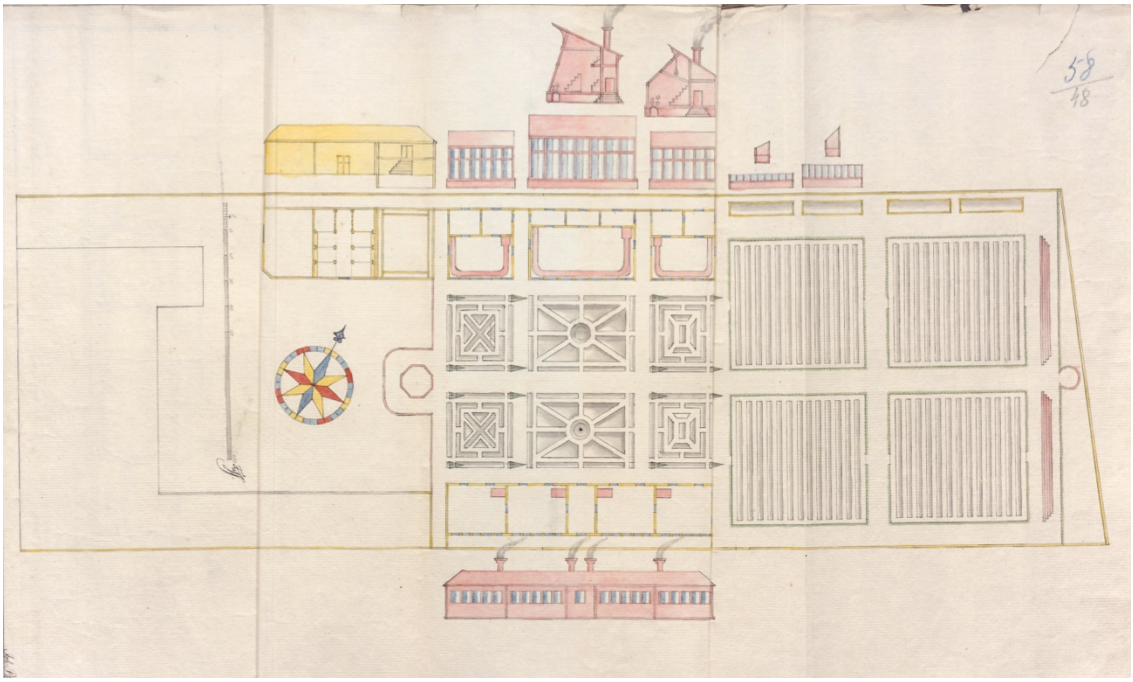

Figure 7: This fold out sketch of the grounds of the Botanical Garden on Vasil'evskii Island accompanies a letter signed by Arto. Guisseppe Trezzi and Contradt Oßner attesting to the repairs necessary for the Botanical Garden dated 19 February 1739. SPF ARAN, F. 3, op. 1, No. 48, pg. 58. (Scan provided by the Archives of the Russian Academy of Sciences, St. Petersburg Branch).

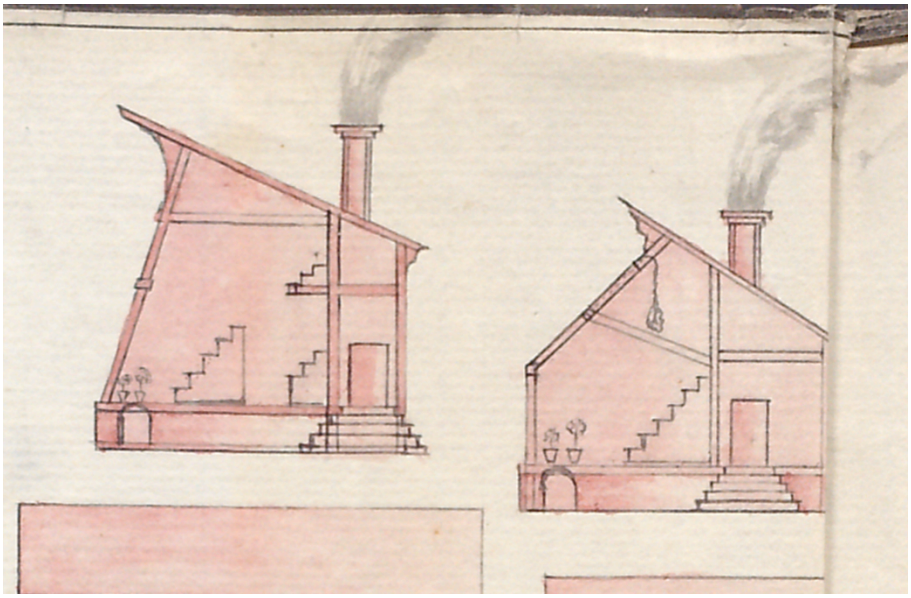

Figure 8: Detail of the Greenhouses from Trezzini's sketch map of the Academy's Botanical Garden, 1739. SPF ARAN, F. 3, op. 1, No. 48, pg. 58.

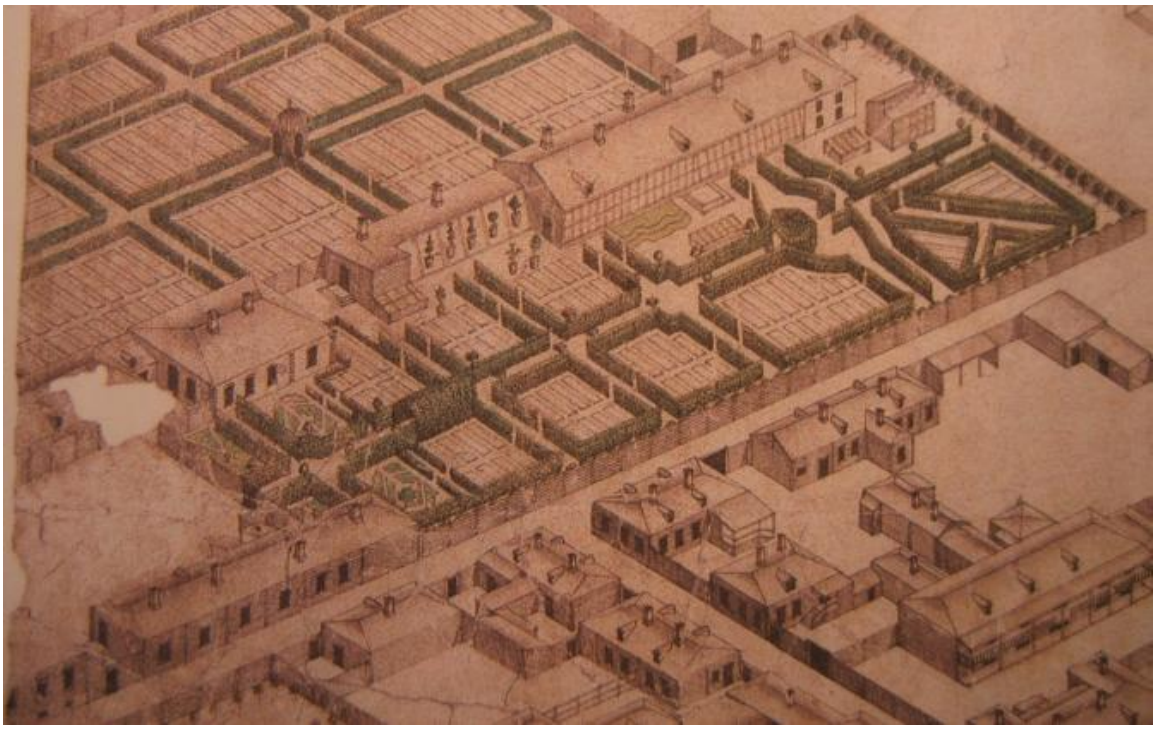

Figure 9: the Botanical garden of the Academy of Sciences on Vasil'evskii Island. From: P. de Sent Iler and I. Sokolov, *Aktsionometricheskii Plan Sankt-Peterburg, 1765-1773*. (Sankt-Peterburg: Kriga, 2003).

Figure 10: [Album Autograph], Constantinus Scepin [Constantine Shchepin], 29 June 1758. In the album of Johannes le Francq van Berkhey. (National Library of the Netherlands, KB: 132 F 13/1) (Digitized and made available online by the National Library of the Netherlands: http://opc4.kb.nl/DB=1/PPN?PPN=311728669)

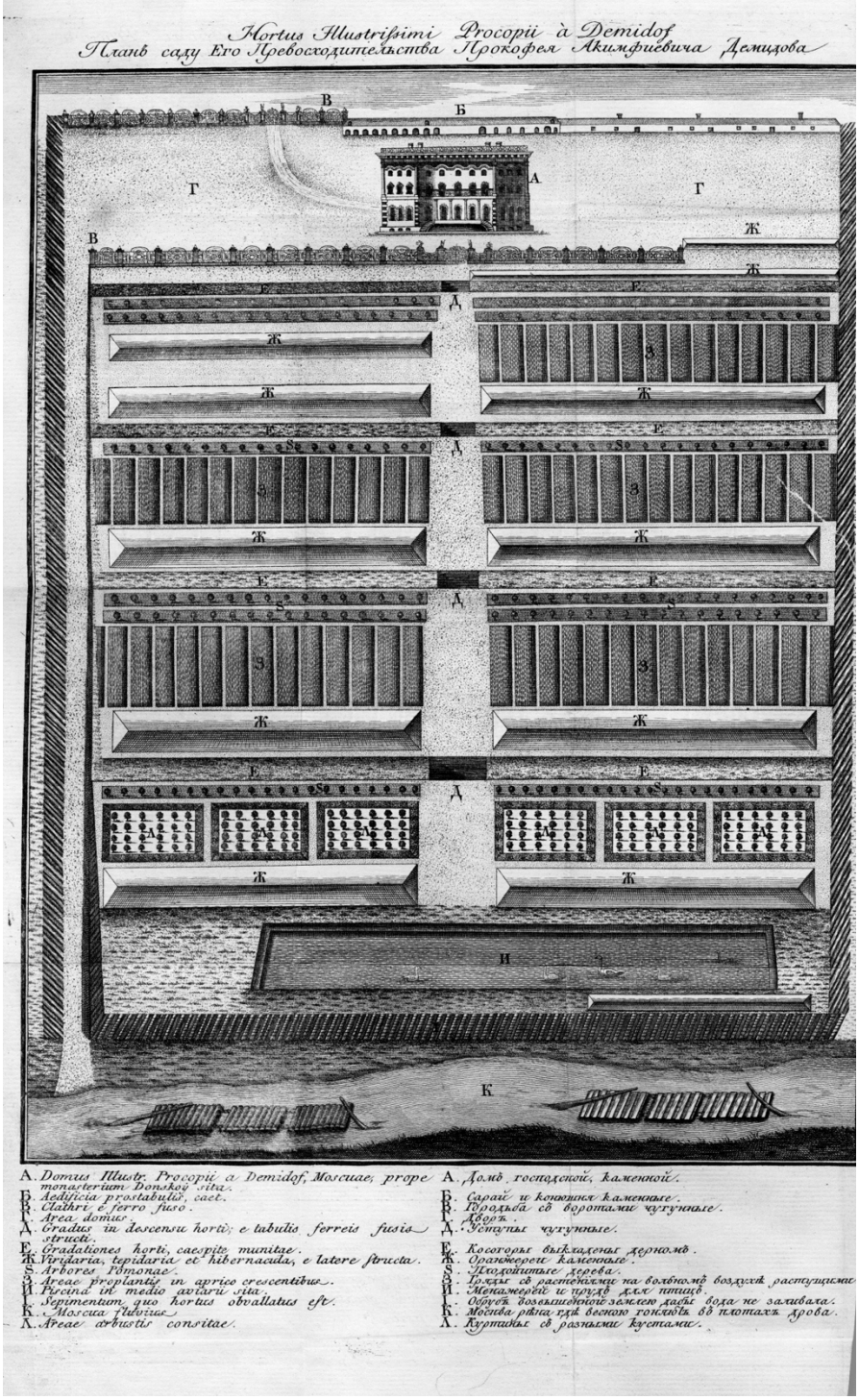

Figure 11: P. S. Pallas, *Enumeratio Plantarum Horto … Dni. Procopii a Demidov* (St. Petersburg: Imperatorskaia Akademiia Nauk, 1781). This frontispiece features Prokofii Akinfievich's Demidov's botanical garden in Moscow. (Scan provided by the Russian National Library, St. Petersburg).

Bibliography

Archival Resources

AVMF. *Arkhivy Voenno-Morskogo Flota.* St. Petersburg, Russian Federation.

Fond 138, *opis'* 1, "Ekspeditsiia nad verfiami i stroeniiami (1732-1751)."

Fond 177, *opis'* 2, "Prikaz Voinskogo morskogo flota."

Fond 223*, opis'* 1, "Rukopisi Petra Velikogo i drugie dokumenty, postupivshiie iz admiralteistv-soveta (1659-1813)."

Fond 233, *opis'* 1, "Kantseliariia general-admirala F. M. Apraksina (1695-1762)."

The Linnaean Correspondence Online. (http://linnaeus.c18.net/)

LSS MSS. *Linnaean Society Manuscript Collections*. London, England.

RGADA. *Rossisskii Gosudarstvennyi Arkhiv Drevnykh Aktov.* Moscow, Russian Federation.

Fond 27, *opis'* 1, "Fond Tainykh Del."

Fond 143, *opis'* 1, *opis*' 2 and *opis'* 3, "Aptekarskii prikaz."

Fond 199, *opis'* 1 and *opis'* 2, "Portfeili G. F. Millera (1593-1800)."

Fond 346, *opis'* 1 and *opis'* 2, "Meditsinskaia Kantselariia (1737-1745)."

SPB II. *Sanktpeterburg Institut Istorii*. St. Petersburg, Russian Federation.

Kollektsia 104, "(1722-1735) Dokumenty kasaiutsia vydachi zhalovan'ia i deneg za otdel'nye liudy."

Kollektsia 105, "Dokumentov kontsa 17- nachala 18-ogo veka (1672-1713 gg.)."

Kollektsia 115, "Kollektsiia rukopisnykh knig (16-19 vv.)."

Kollektsia 238, *opis'* 1 and *opis'* 2, "Kollektsiia Likhacheva (rukopisnye knigi)."

SPF ARAN. *Sanktpeterburgskii Filal Arkhivy Rossiiskoi Akademii Nauk*. St. Petersburg, Russian Federation.

Fond 3, *opis'* 1, "Kantseliariia AN (1725-1766); Komissia AN (1766-1803)."

Fond 3, *opis'* 14, "Botanicheskii sad."

Fond 21, *opis'* 1, "Miller, Gerard-Fridrikh."

Fond 120, *opis'* 1, "Areskin, Robert Karlovich."

Razriad I, *opis'* 14, "I. Amman, I. G. Gmelin, I. G. Siegesbeck, A. V. Martini – rukopisnye trudov (1733-1750)."

Razriad I, *opis'* 15, "Spiski rastenii i semian, sostoiavlenye I. Amman, I. G. Gmelinym, V. G. Stellerom, I. G. Sigezbekom i dr. (1731-1744)."

Razriad I, *opis'* 19, "Rukopisi Geintsel'mana, I. G., risunki i tablitsy k trudu Buksbauma, I. Kh., 'Centuria.'"

Waller Ms benl. Waller Manuscript Collection. Uppsala University, Sweden. (http://cerl.epc.ub.uu.se/)

Published Primary sources

Akty Istoricheskie, sobrannye i izdannye Arkheograficheskogo kommissiei. 5 vols. St. Petersburg: Ekspeditsii zagotovleniia Gosudarstvennykh bumag, 1841-1842.

Amman, Johann. *Stirpium Rariorum in Imperio Rutheno sponte provenientium Icones et Descriptiones*. St. Petersburg: Academiae Scientiarum, 1739.

Antonova, K. A., N. M. Goldberg, and T. D. Lavrentsova. *Russko-indiiskie otnosheniia v XVII v., sbornik dokumentov*. Moscow: Nauka, 1958.

Aphonin, Matheus. *Dissertatio academica demonstrans Usum Historiae Naturalis in Vita Communi*. (1766)

Atlas Russicus. Russischer Atlas: Welcher in einer General-Charte und neunzehen Special-Charten des gesamte Russische Reich und dessen angraentzende Laender, nach den Regein der Erd-Beschreibung. St. Petersburg: Academie der Wissenschaften, 1745.

Barskii, V. G, and A. M. Lazarevskii, "Odinatsat Pisem peshekhoda Vasilia Grigorevicha Barskogo (1723-1746)." *Russkii Arkhiv* 9 (1874), 513-532.

Bruyn, Cornelius de. *Travels into Muscovy*. 2 vols. London: A. Bettesworth, 1737.

Buxbaum, Johann Christian. *Plantarum minus cognitarum Centuria I – V complectens plantas circa Byzantium & in oriente observatas*. 5 vols. St. Petersburg: Academiae, 1728-1740.

Buxbaum, J. C. *Enumeratio Plantarum Accuratior in Agro Hellnsi*. Halle: Magdeb, 1721.

Çelebi, Evliya Efendi. *Narrative of Travels in Europe, Asia, and Africa in the Seventeenth Century*. London: Oriental Translation Fund, 1850.

Chardin, Jean. *Voyages du Chevalier Chardin, en Perse et autre lieux de l'Orient*. 2 vols. Paris: Le Normant, 1711.

Chappe d'Auteroche, Jean-Baptiste. *Voyage en Siberie*, 2 Vols. Paris: Chez Debure, 1768.

Commentarii Academiae Scientiarum Imperialist Petropolitanae, 14 vols. St. Petersburg: Typis Academii, 1728-1751.

Demidov, Petr Grigorievich, Aleksandr Grigorievich Demidov and Pavel Grigorievich Demidov. *Puteshestvie brat'ev Demidovykh po Evrope: pis'ma i podnevnye zhurnaly 1750-1761 gody*. Moscow: Indrik, 2006.

Demidov, Prokofii Akinfievich. "Prokofii Akinfievich Demidov. I. Dva pis'ma k detiam …" *Russkii Arkhiv* 7 (1873), 2230-2287.

Demidov, Prokofii Akinfievich. *Prokofii Akinfievich Demidov. Pis'ma i Dokumenty*. Ekaterinburg: Demidovskii Institut, 2010.

Demidov, Prokofii Akinfievich. *Katalog Rasteniiam po alfavitu sobrannym is chetyrekh chastei sveta* ... Moscow: F. Gippius, 1786.

Deschisaux, Pierre. *Description d'un voyage fait a Saint Petersbourg*. Paris: Thiboust, 1728.

Deschisaux, Pierre. *Mémoire pour servir à l'instruction de l'histoire naturelle des plantes de Russie, et à l'établissement d'un jardin botanique à Saint-Pétersbourg*. [Paris]: [s.n.], 1725.

Dopolneniia k Aktam Istoricheskim, sobrannye i izdannye arkheograficheskoi komissiei. 12 vols. St. Petersburg: Vtoroe Otdelenie Sobstvennoi E. I. V. Kantseliarii, 1746-1872.

Florinskii, V. M. *Russkie prostonarodnye travniki i lechebniki. Sobraniie meditsinskikh rukopisei XVI i XVII stoletiia*. Kazan: Universitetskaia Tipografiia, 1880.

Fontenelle, Bernard de. *Razgovory o mnozhestve mirov gospodina Fontentella*, Antiokh Kantemir trans. St. Petersburg: Imperatorskoi Akademiia Nauk, 1761.

Giul'denshtedt, Iogann Anton. "Puteshestviia v Malorossiu Akademika Giuldenshtedta i kn. Dolgorukago." *Kievskaia Starina* 50 (1893), 412-441.

Gmelin, Johann Georg. *Flora Sibirica sive Historia Plantarum Sibiriae*, 4 vols. St. Petersburg: Academiae Scientiarum, 1747-1769.

Gmelin, Johann Georg. *Reise durch Sibirien, von dem Jahr 1733 bis 1743*, 4 vols. Göttingen: Abram Bandenhoecks, 1751-1752.

Graham, Alan. "Plantae Rariores Camschatcenses: A Translation of the Dissertation by Jonas P. Hallenius, 1750." *Brittonia* 18 (1966), 131-139.

Gurliand, I. Ia. *Mozhzhevelovaia povinnost': Materialy po istorii administratsii Moskovskogo gosudarstva vtoroi poloviny XVII veka*. Iaroslavl: Gubernskoe Pravlenie, 1903.

Histoire de l'Académie Royale des Sciences. *Année 1720*. Paris: de l'Imprimerie Royale, 1722.

Hoffmann, Georg Franz. *Hortus Mosquensis. Enumeratio plantarum et seminum Hortus Botanici Mosquensis*. Moscow: Caesareae Universitatis, 1807.

Iakovlev, V. *Domostroi: po rukopisiam Imperatorskoi Publichnoi Biblioteki*. St. Petersburg: Imperatorskaia Akademiia Nauk, 1867.

Krasheninnikov, Stepan Petrovich. *S. P. Krasheninnikov v Sibiri: neopublikovannye materialy*. Moscow: Nauka, 1966.

Krasheninnikov, Stepan Petrovich. *Opisanie Zemli Kamchatkia s prilozheniem raportov, donesenii i drugikh neopublikovannykh materialov*. Moscow: Glavsevmorputi, 1949.

[Krasheninnikov] Krascheninnikow, Stephani and David de Gorter. *Flora Ingrica ex schedis Stephani Krasheninnikow*. Petropoli: Typis Academiae Scientiarum, 1761.

Krasheninnikov, Stepan Petrovich. *Opsianie Zemli Kamchatki*. 2 vols. St. Petersburg: Imperatorskaia Akademiia Nauk, 1755.

Lavie, Henri. "Donoseniia franstuzskago konsula v Peterburga Lavi … c 1719 po 1722 g." *Sbornik Imperatorskago Russkago Istoricheskago Obshchestva*, 40 (1884), 3-4.

Legchaishee pravilo na opytakh osnovannoe, prilezhnym nabliudeniem kotorago z neskol'ko let zdes' poiavivshuiusia vsegda tsvetushuiu zemlianku … perevedeno s nemetskago E. Solodovnikovym. St. Petersburg: Akademiia Nauk, 1779.

Lepekhin, I. I. *Prodolzheniie Dnevnykh Zapisok Puteshestviia Ivana Lepekhina … po raznym provintsiiam Rossiiskago Gosudarstva v 1771 godu*. St. Petersburg: Imperatorskaia Akademiia Nauk, 1814.

Lerche, Johann Jacob. *Rußische-Kaiserlichen Collegienraths, und Doctors der Arzeneywissenschaft, Lebens- und Reise-Geschichte, von ihm selbst beschreiben*. Halle: Curtis Witwe, 1791.

Lerche, Johann Jacob. “Descriptio Plantarum quarandum partim minus cognitarum Astrachanensium et Persiae Provinciarum Caspio Mare adiacentium iuxta methodum sexualem excellentissimi Domini Archiatri Caroli de Linne.” *Novo acta physico-medica Academiae caesarae leopoldino-carolinae naturae curiosorum* 5 (1773), 159-206.

[Linnaeus] von Linné, Carl. *Nemesis Divina*. M. J. Petry, trans. Dordrecht: Kluwer, 2001.

[Linnaeus] von Linné, Carl. *Species Plantarum: A Facsimile Edition*. Vol. 1. London: John Ray Society, 1957.

[Linnaeus] von Linné, Carl, Richard Pulteney, Carl Troilius and William George Matton. *A General View of the Writings of Linnaeus*. London: J. Mawman, 1805.

Mamonov, N. E., ed. *Materialy dlia istorii meditsiny v Rossii*. 4 vols. St. Petersburg: Tipo-Lithografiia B. G. Ianpol’skago, 1881-1885.

[*MIIAN*] : *Materialy dlia Istorii Imperatorskoi Akademii Nauk*. 10 vols. St. Petersburg: Imperatorskaia Akademiia Nauk, 1885 - 1900.

Naryshkin, A. “Pokhvala Peterburgu.” *Ezhemesiachnye sochineniia* December (1756), 551-552.

Nevskaia, N. I. ed. *Letopis’ Rossiiskoi Akademii Nauk*, *vol. 1 (1724-1802)*. St. Petersburg: Nauka, 2000.

Novombergskii, N. *Materialy po istorii meditsiny v Rossii*. 5 vols. St. Petersburg: Altushera, 1905-1910.

Olearius, Adam. *The Travels of Olearius in Seventeenth-Century Russia*. Samuel H. Baron ed. and trans. Stanford: Stanford University Press, 1967.

Pallas, P. S. *Enumeratio Plantarum Horto … Dni. Procopii a Demidov …* St. Petersburg: Pri Imperatorskoi Akademii Nauk, 1781.

Perry, John. *The State of Russia Under the Present Czar*. London: Benjamin Tooke, 1716.

Pouncy, Carolyn Johnston. *The Domostroi: Rules for Russian Households in the Time of Ivan the Terrible*. Ithaca: Cornell University press, 1994.

[*PSZ*] Speranskii, M. M., ed. *Polnoe Sobranie Zakonov Rossiiskoi Imperii*. *Sobranie Pervoe.* 45 vols. St. Petersburg: Vtoroe Otdelenie Sobstvennoi Ego Imperatorskogo Velichestva Kantseliarii, 1830.

Schober, Gottlob. “Auszug aus D. Gottlob Schobers bisher noch Ungedrucktem Werke: Memorabilia Russico-Asiatic.” *Sammlung Russische Geschichte* 7 (1762), 1-157.

Schober, Gottlob. “Beschreibung des Schwefel-Brunnens der Sergiewsk an dem Flusse Sok von D. Gottlob Schober.” *Sammlung Russische Geschichte* 4 (1760), 541-548.

Schober, Gottlob. “Beschreibung des St. Peters-Bades bey Terki.” *Sammlung Russische Geschichte* 4 (1760), 157-175.

[Shchepin, Constantine] Scepin, C. *Schediasma chemico-medicum inaugurale de acido vegetabilicum annotationibus botanicis*. Lugundi Batavorum: s.p., 1758.

Sheremetev, Boris Petrovich. *Zapiski Puteshestviia … grafa Borisa Petrovicha Sheremeteva*. Moscow: Imperatorskii Universitet, 1773.

Siegesbeck, Johann Georg. *Primitae Florae Petropolitanae sive Catalogus Plantarum tam indigenarum quam exoticarum, quibus instructus fuit Hortus Medicus Petriburgensis*. Riga: Samuel Laur. Frölich, 1736.

“Stat’i o tutovykh dereviakh i o prizyve iz za more sadovnikiv.” *Zapiski otdeleniia Russkii i Slavianskoi Arkheologii Imperatorskago Russkago Arkheologicheskago Obshchestva* 2 (1861), 376-387.

Strahlenberg, Philip Johan Tabbert von. *Das Nord- und Ostliche Theil von Europa und Asia*. Stockholm: In Verlag des Autoris, 1730.

Tolchenov, Ivan Alekseevich. *Zhurnal ili Zapiski i prikliuchenii Ivana Alekseevicha Tolchenova*. Moscow: Institut Istorii SSSR, 1974.

Tolstoi, Peter. *The Travel Diary of Peter Tolstoi: A Muscovite in Early Modern Europe*, Max Okenfuss ed. and trans. DeKalb: Northern Illinois University Press, 1987.

Tolstoi, P. A. *Puteshestvie stolnika P. A. Tolstogo po Evrope (1697-1699)*. Moscow: Nauka, 1992.

Tournefort, Joseph Pitton de. *Relation d’un Voyage du Levant, fait par ordre du Roy*. 3 vols. Lyon: Chez Anisson et Pousuel, 1717.

Tournefort, Joseph Pitton de. *A Voyage into the Levant* … 2 vols. London: D. Browne et al., 1718.

Tournefort, Joseph Pitton de. *Institutiones Rei Herbariae*. 3 vols. Paris: Typografia Regia, 1700.

Vitsen, Nikolaas. *Puteshestvie v Moskoviiu*. St. Petersburg: Simpozium, 1996.

Secondary Sources

Alexander, John T. "Medical Professionals and Public Health in 'Doldrums' Russia (1725-62)," *Canadian-American Slavic Studies* 12 (1978), 116-135.

Annenkov, N. *Botanicheskii Slovar'.* St. Petersburg: Imperatorskaia Akademiia Nauk, 1878.

Appleby, John H. "Robert Erskine – Scottish pioneer of Russian Natural History." *Archives of Natural History* 10 (1982), 377-398.

Arber, Agnes. *Herbals: Their Origin and Evolution. A chapter in the history of botany, 1470-1670*. Cambridge: [Cambridge] University Press, 1953.

Artsikhovskii, Artemii Vladimirovich, ed. *Ocherki russkoi kul'tury XVII v.* Vol. 2. Moscow: Moskovskii Universitet, 1979.

Augstein, H. F. "From the land of the Bible to the Caucasus and beyond: The shifting ideas of the geographic origin of human kind." In *Race, Science and Medicine, 1700-1960,* eds. Ernst Waltrust and Bernard Harris pp. 58-79. London: Routledge, 1999.

Baehr, Stephen Lessing. "From History to National Myth: *Translatio Imperii* in Eighteenth-Century Russia." *Russian Review* 37 (1978), 1-13.

Bankovskii, L. "Botanicheskii sad Grigoriia Demidova." *Nauka i Zhizn'* 2 (2007), n.p. (http://www.nkj.ru/archive/articles/9021/)

Baron, Nick. "New Spatial Histories of Twentieth-Century Russia and the Soviet Union: Surveying the Landscape." *Jahrbücher für Geschichte Osteuropas* 55 (2007), 374-400.

Basalla, George, "The Spread of Western Science." *Science* 156 (1967), 611-622.

Bassin, Mark. "Russia between Europe and Asia: the Ideological Construction of Geographical Space." *Slavic Review* 50 (1991), 1-17.

Bassin, Mark, Christopher Ely, and Melissa Stockdale, eds. *Space, Place, and Power in Modern Russia: Essays in the New Spatial History*. DeKalb: Northern Illinois University Press, 2010.

Becker, Elise Marielle. *Medicine, Law, and the State in Imperial Russia*. Budapest: Central European University Press, 2011.

Beissinger, Mark R. "The Persistence of Empire in Eurasia." *AAASS NewsNet* 48 (2008), 1-8.

Bekasova, A. B. "Academia Lugundo Batava Libertatis i Rossiia (Iz istorii russko-gollandskikh nauchnykh sviazei v XVIII veke) *Naukovedenie* 1 (2001), 157-188.

Belokurov, Sergei. *O Biblioteke Moskovskikh Gosudarei v XVI stolietii*. Moscow: G. Lissner i A. Geshel', 1898.

Bespiatykh, Iu. N. *Peterburg Anny Ioannovy v inostrannykh opisanniakh*. St. Petersburg: Blits, 1997.

Biagioli, Mario. *Galileo Courtier: The Practices of Science in the Culture of Absolutism*. Chicago: University of Chicago Press, 1994.

Bleichmar, Daniela. *Visible Empire: botanical expeditions and visual culture in the Hispanic Enlightenment*. Chicago: University of Chicago Press, 2012.

Bodin, Per-Arne. "The Terrestrial Paradise: the garden as topos in Russian medieval culture." In *Byzantine Gardens and Beyond,* eds. Helena Bodin and Ragnar Hedlung, 175-183. Uppsala: Uppsala Universitet, 2013.

Boeck, Brian J. *Imperial Boundaries: Cossack Communities and Empire-Building in the Age of Peter the Great*. Cambridge: Cambridge University Press, 2009.

Bogoiavlenskii, N. A. *Drevnerusskoe vrachevanie v XI-XVII vv. Istochniki dlia izucheniia istorii russkoi meditsiny*. Moscow: Medgiz, 1960.

Bol'shaia meditsinskaia entsiklopediia. Vol. 4: Bogoliubov-Vezalii. Moscow: Gosudarstvennoe izdatel'stvo meditsinskoi literatury, 1958.

Bourguet, Marie-Noelle, Christian Licoppe and H. Otto Sibum, eds. *Instruments, Travel and Science: Itineraries of precision from the seventeenth to the twentieth century*. London: Routledge, 2002.

Brockway, Lucile. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. New Haven: Yale University Press, 2002.

Bryce, W. J. "Russian Collections in the Sloane Herbarium." *Archives of Natural History* 32 (2005), 26-33.

Bryce, W. J. *A Botanist's Paradise: The Establishment of Scientific Botany in Russia in the Eighteenth Century*. Swansea: Royal Horticultural Society, 2008.

Burbank, Jane, Mark von Hagen, and Anatolyi Remnev, eds. *Russian Empire: Space, People, Power, 1700-1930*. Bloomington: Indiana University Press, 2007.

Chernyi, V. D. *Russkie srednevekovye Sady: opyt klassifikatsii*. Moscow: Rukopisnye Pamiatniki Drevnei Rusi, 2010.

Conroy, Mary Schaeffer. *In Health and in Sickness: Pharmacy, Pharmacists, and the Pharmaceutical Industry in Late Imperial, Early Soviet Russia*. Boulder, CO: Eastern European Monographs, 1994.

Cook, Harold. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven: Yale University Press, 2007.

Cooper, Alix. *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe*. Cambridge: Cambridge University Press, 2007.

Cosgrove, Denis and Stephen Daniels, eds. *The Iconography of Landscape: Essays on the symbolic representations, designs and use of past environments*. Cambridge: Cambridge University Press, 1988.

Cracraft, James. *The Petrine Revolution in Russian Culture*. Cambridge: Belknap, 2004.

Cracraft, James. *The Petrine Revolution in Russian Architecture*. Chicago: University of Chicago Press, 1988.

Cresswell, Tim. *On the Move: Mobility in the Western World*. London: Routledge, 2006.

Cronon, William ed. *Uncommon Ground: Toward Reinventing Nature*. New York: W. W. Norton & Co., 1995.

Daston, Lorraine. "The Ideal and the Reality of the Republic of Letters in the Enlightenment." *Science in Context* 4 (1991), 366-386.

Daston, Lorraine, ed. *Biographies of Scientific Objects*. Chicago: University of Chicago Press, 2000.

Delbourgo, James and Nicholas Dew. *Science and Empire in the Atlantic World.* New York: Routledge, 2008.

D'iakonov, M. A. *Bobyli v XVI i XVII vekakh*. St. Petersburg: V. S. Balasheva, 1896.

Dickinson, Sara. *Breaking Ground: Travel and National Culture in Russia from Peter I to the Era of Pushkin*. Amsterdam: Rodopi, 2006.

Drayton, Richard. *Nature's Government: science, imperial Britain, and the 'Improvement' of the World*. New Haven: Yale University Press, 2000.

Dubiago, T. B. *Russkie reguliarnye sady i parky*. Leningrad: Gosudarstvennoe Izdatel'stvo po stroitelstvu, arkhitekture i stroitelstvu materialisma, 1963.

Dunning, Chester S. L. *Russia's First Civil War: The Time of Troubles and the Founding of the Romanov Dynasty*. University Park: Pennsylvania State University Press, 2001.

Ely, Christopher. *This Meager Nature: Landscape and National Identity in Imperial Russia*. DeKalb: Northern Illinois University Press, 2002.

Faber, George Stanely. *Horae Mosicae: Or, a Dissertation on the Credibility and Theology of the Pentateuch*. London: F. C. and J. Rivington, 1818.

Farber, Paul Lawrence. *Finding Order in Nature: the Naturalist Tradition from Linnaeus to E. O. Wilson*. Baltimore: Johns Hopkins Press, 2000.

Findlen, Paula. *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*. Berkeley: University of California Press, 1994.

Fischer, F. E. L. "Notiz über den Kaiserlichen botanischen Garten zu St. Petersburg." *Verhandlungen des Vereins zur Beförderung des Gartenbaues in den Königlich Preußlichen Staaten* 17 (1844), 275-284.

Fisher, Alan W. *A precarious balance: conflict, trade and diplomacy on the Russian-Ottoman frontier*. Istanbul: Isis Press, 1999.

Fisher, Raymond H. *The Russian Fur Trade 1550-1700*. Berkeley: University of California Press, 1974.

"Fleuriau, Charles Jean-Baptiste, comte de Morville (1686-1732)." *In Biographie Universelle*, *Vol. 30*, 228. Paris: Chez L. G. Michaud, 1821.

Floryan, Margarethe. *Gardens of the Tsars: A Study in the Aesthetics, Semantics and uses of Late 18th Century Russian Gardens*. Aarhus: Aarhus University Press, 1996.

Foucault, Michel. *The Order of Things. An Archaeology of the Human Sciences.* New York: Vintage Books, 1970.

Foust, Clifford. *Rhubarb: The Wondrous Drug*. Princeton: Princeton University Press, 1992.

Foust, Clifford. *Muscovite and Mandarin: Russia's trade with China and its settling, 1727-1805*. Chapel Hill: University of North Carolina Press, 1969.

Franklin, Simon and Emma Widdis, eds. *National Identity in Russian Culture: An Introduction*. Cambridge: University of Cambridge Press, 2004.

Freeze, Gregory L. "The *Soslovie* (Estate) Paradigm and Russian Social History." *The American Historical Review* 91 (1986), 11-36.

Gibson, James R. *Essays on the History of Russian Cartography, 16th to 19th centuries*. Toronto: University of Toronto Press, 1976.

Gillispie, Charles Coulston. *Genesis and Geology: A Study in the Relations of Scientific Thought, Natural Theology, and Social Opinion in Great Britain, 1790-1850*. Cambridge: Harvard University Press, 1951.

Glacken, Clarence J. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press, 1967.

Gnucheva, V. F. *Materialy dlia istorii ekspeditsii Akademii Nauk v XVIII – XIX vekakh*. Moscow: Akademii Nauk SSSR, 1940.

Golinski, Jan. *Making Natural Knowledge: Constructivism in the History of Science*. Cambridge: Cambridge University Press, 1998.

Goodman, Dena. *The Republic of Letters: A Cultural History of the French Enlightenment*. Ithaca: Cornell University Press, 1994.

Gopal, Surrendra. "Marwari Barayev: An Indian Trader in Russia in the Eighteenth Century." in *The Indian Trade at the Asian Frontier,* edited by Stephen, S. Jeyaseela, 231-239. New Delhi: Gyan Publishing House, 2008.

Gopal, Surrendra. *Indians in Russia in the Seventeenth and Eighteenth Centuries*. Calcutta: Naya Prokash, 1988.

Gordin, Michael. "The Importation of Being Earnest: The Early St. Petersburg Academy of Sciences." *Isis* 91 (2000), 1-31.

Graham, Loren R. *Science in the Soviet Union: a short history.* Cambridge: Cambridge University Press, 1993.

Graham, Loren R. *What Have We Learned about Science and Technology from the Russian Experience?* Stanford: Stanford University Press, 1998.

Griffin, Clare. "The Production and Consumption of Medical Knowledge in Seventeenth-Century Russia: The Apothecary Chancery." Ph.D. Diss., University College London, 2012.

Griffin, Clare. "Rog edinoroga: meditsina i tainye sredstva pri Moskovskom dvore." *GIIM: Doklady po istorii 18 i 19 veka* (2010), (http://www.perspectivia.net/content/publikationen/vortraege-moskau/griffin_medizin)

Grishin, Alexander. "Vasyl Hryhorvyc Barsk'kyj: An Eighteenth-Century Ukrainian Pilgrim in Italy." *Harvard Ukrainian Studies* 17 (1993), 7-26.

Hachten, Elizabeth A. "In Service to Science and Society: Scientists and the Public in Late-Nineteenth-Century Russia." *Osiris* 17 (2002), 171-209.

Hans, Nicholas. "Russian Students at Leyden in the 18th Century." *The Slavonic and East European Review* 35 (1957), 551-562.

Harrison, Peter, Ronald L. Numbers, Michael H. Shank. *Wrestling with Nature: from omens to science.* Chicago: University of Chicago Press, 2011.

Harvey, David. *David Harvey: a critical reader*. Malden MA: Blackwell, 2006.

Heesen, Anke te. "Boxes in Nature." *Studies in History and Philosophy of Science* 31A (2000), 381-403.

Hellie, Richard. *The Economy and Material Culture of Russia, 1600-1725*. Chicago: University of Chicago Press, 1999.

Hellie, Richard. *Enserfment and military change in Muscovy*. Chicago: University of Chicago Press, 1971.

Helms, Mary. *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance*. Princeton: Princeton University Press, 1988.

Hughes, Lindsey. *Russia in the Age of Peter the Great*. New Haven: Yale University Press, 1998.

Hyde, Elizabeth. *Cultivated Power: flowers, culture, and politics in the reign of Louis XIV*. Philadelphia: University of Pennsylvania Press, 2005.

Ippolitova, A. B. *Russkie rukopisnye travniki XVII – XVIII vekov: Issledovaniie folklora i etnobotaniki.* Moscow: Indrik, 2008.

Iurkin, I. N. *Demidovy – Uchenye, inzhenery, organizatory nauki i proizvodstva*. Moscow: Nauka, 2001.

Jardine, N., J. A. Secord and E. C. Spary. *Cultures of Natural History*. Cambridge: Cambridge University Press, 1996.

Johnson, Nuala C. *Nature Displaced, Nature Displayed: Order and Beauty in Botanical Gardens*. London: I. B. Tauris, 2011.

Jones, Ryan Tucker. *Empire of Extinction: Russians and the North Pacific's Strange Beasts of the Sea, 1741-1867*. Oxford: Oxford University Press, 2014.

Kappeler, Andreas. *The Russian Empire: A Multiethnic History.* Harlow: Longman, 2001.

Karavaev, M. N. "Rol' Moskovskogo meditsinskogo ogoroda v razvitii botaniki v nachale XVIII v. Soobshchenie 2." *Biulletin Moskovskogo Obshchestva Ispytatelei Prirody, Otdel biologicheskii* 77 (1972), 142-148.

Karavaev, M. N. "Materialy po istorii Moskovskogo aptekarskogo ogoroda v pervoi polovine XVIII v. Soobshcheniie 1." *Biulleten Moskovskogo Obshchestva Ispytatelei Prirody, otdel' biologicheskii* 76 (1971), 147-151.

Keenan, Paul. "The Summer Gardens in the Social Life of St. Petersburg, 1725-1761." *The Slavonic and East European Review* 88 (2010), 134-155.

Khodarkovsky, Michael. *Russia's Steppe Frontier: The Making of a Colonial Empire, 1500-1800.* Bloomington: Indiana University Press, 2002.

Khodarkovsky, Michael. *Where Two Worlds Met: The Russian State and the Kalmyk Nomads, 1600-1771*. Ithaca: Cornell University Press, 1992.

Kistemaker, Renee E., Natalya P. Kopaneva, Debora J. Meijers, and Georgy V. Vilinbakhov, eds. *The Paper Museum of the Academy of Sciences in St Petersburg c. 1725-1760: Introduction and Interpretation*. Amsterdam: Royal Netherlands Academy of Arts and Sciences, 2005.

Kivelson, Valerie. "'Between All Parts of the University': Russian Cosmographies and Imperial Strategies in Early Modern Siberia and Ukraine." *Imago Mundi* 60 (2008), 166-181.

Kivelson, Valerie. "'The Souls of the Righteous in a Bright Place': Landscape and Orthodoxy in Seventeenth-Century Russian Maps." *The Russian Review* 58 (1999), 1-25.

Kivelson, Valerie. *Desperate Magic: The Moral Economy of Witchcraft in Seventeenth-Century Russia*. Ithaca: Cornell University Press, 2013.

Kivelson, Valerie. *Cartographies of Tsardom: The Land and its Meaning in Seventeenth-Century Russia*. Ithaca: Cornell University Press, 2006.

Kivelson, Valerie, ed. *The New Muscovite Cultural History: a collection in honor of Daniel B. Rowland*. Bloomington, IN: Slavica Publishers, 2009.

Klein, Ursula. "Shifting ontologies, changing classifications: plant materials from 1700 to 1830." *Studies in History and Philosophy of Science* 36 (2005), 261-329.

Kniazhetskaia, E. A. "U istokov russkoi botaniki (300-letiu s dnia rozhdeniia Peter I). *Botanicheskii Zhurnal* 57 (1972), 139-147.

Koerner, Lisbet. *Linnaeus: Nature and Nation*. Cambridge: Harvard University Press, 1999.

Kolchin, Peter. *Unfree Labor: American Slavery and Russian Serfdom*. Cambridge: Harvard University Press, 1987.

Kolchinskii, E. I., A. K. Sytin and G. I. Smagina, eds. *Estestvennaia istoriia v Rossii (ocherki razvitiia estestvoznaniia v Rossii v XVIII veke*. St. Petersburg: Nestor-Istoria, 2004.

Koroteeva, N. N. "Aptekarskii Prikaz – pervyi organ upravleniia medistinskim delom v russkom gosudarstve v XVI – nachale XVIII veka." *Vestnik Tiumenskogo gosudarstvennogo universiteta* 2 (2011), 90-95.

Koroteeva, N. N. "Stanovleniie i razvitiie aptechnoi sluzby v Rossii v XVI – nachale XX vv." Ph.D Diss., Kursk State University, 2011.

Kotilaine, Jarmo. *Russia's foreign trade and economic expansion in the seventeenth century*. Leiden: Brill, 2005.

Kotilaine, Jarmo and Marshall Poe. *Modernizing Muscovy: Reform and social change in seventeenth-century Russia.* London: Routledge-Curzon, 2004.

Krementsov, Nikolai. *Stalinist Science*. Princeton: Princeton University Press, 1997.

Kulakova, I. P. *Universitetskoe prostranstvo i ego obitateli*. Moscow: Novyi Khronograf, 2006.

Kulakova, I. P. "'Minervni Khram': Moskva i Moskovskii Universitet v XVIII veke." *Voprosy Istorii, Estestvoznaniia, i Tekhniki* 3 (1997).

Kuprianov, A. N. *Arabeskii botaniki*. Kemerovo: Masterskaia AZ, 2005.

Kuprianov, V. V. *K. I. Shchepin – Doktor meditsiny XVIII veka.* Moscow: Medgiz, 1953.

Kurchen-Golubov, V. S. ed. *Stoletie Voennago Ministerstva Glavnoe Voenno-Meditsinskoe Upravlenie*. St. Petersburg: Ministerstva vnutrennykh del, 1902.

Kushnarev, Evgenii G. *Bering's Search for the Strait: The First Kamchatka Expedition, 1725-1730*. Portland: Oregon Historical Society, 1990.

Larson, James L. *Reason and Experience: The Representation of Natural Order in the World of Carl von Linne*. Berkeley: University of California Press, 1971.

Latour, Bruno. *Science in Action: How to follow scientists and engineers through society.* Cambridge: Harvard University press, 1987.

Lavrov, A. S. *Koldovstvo i Religiia v Rossii, 1700-1740 gg*. Moscow: Drevlekhranilishche, 2000.

LeDonne, John. "Building an Infrastructure of Empire in Russia's Eastern Theater, 1650s-1840s." *Cahiers du Monde Russe* 47 (2006), 581-608.

LeDonne, John. "The Grand Strategy of Russian Empire, 1650-1831." In *The Military and Society in Russia, 1450-1917*, edited by Eric Lohr and Marshall Poe, 175-195. Leiden: Brill, 2002.

Lefebvre, Henri. *The Production of Space*. Oxford: Blackwell, 1991.

Lefevre, Wolfgang, ed. *Between Newton and Kant: Philosophy and Science in the Eighteenth-Century*. Dordrecht: Kluwer, 2001.

Lepenies, Wolf. "Linnaeus's *Nemesis Divina* and the Concept of Divine Retaliation." *Isis* 73 (1982), 11-27.

Lieven, Dominic. *Empire: The Russian Empire and Its Rivals*. New Haven: Yale University Press, 2000.

Likhachev, D. S. *Poeziia Sadov: k semantike sadovo-parkovykh stilei. Sad kak tekst*. Moscow: Novosti, 1998.

[Linnaeus, Carl] Linneus, Karl, N. V. Tsitsin, V. N. Skuchaev, N. A. Bazilevskaia, K. I. Meier, L. Ia. Bliakher, A. A. Shcherbakova. *Karl Linnei. Sbornik state. 250 let so dnia rozhdeniia 1707-1757*. Moscow: Akademiia Nauk SSSR, 1958.

Lipshits, S. Iu. *Russkie Botaniki Biografo-bibliograficheskii slovar'*. Vol. 1. Moscow: Moskovskoe Obshchestvo Ispytatel'ykh Prirody, 1947.

Lipskii, V. I. *Istoricheskii ocherk Imperatorskago S.-Peterburgskago botanicheskago sada (1713-1913)*. St. Petersburg: Gerol'd, 1913.

Liubimenko, Inna. "Vrachebnoe i lekarstvennoe delo v Moskovskom gosudarstve," *Russkii Istoricheskii Zhurnal* 1 (1917), 1-36.

Livingstone, David N. *Putting Science in its Place: Geographies of Scientific Knowledge*. Chicago: University of Chicago Press, 2003.

Lokhteva, G. N. "Materialy Aptekarskogo Prikaza – vazhnyi istochnik po istorii meditsiny v Rossii XVII v." In *Estestvennonauchnye znaniia v drevnei rusi,* ed. P. A. Simonov, 139-156. Moscow: Nauka, 1980.

Loviagin, A. M. "Nikolaii Vitsen iz Amsterdam u Patriarkha Nikona. (Iz neizdannoi gollandskoi rukopisi XVII veka)." *Istoricheskii Vestnik* 77 (1899), 874-879.

MacLeod, Roy, ed. *Nature and Empire: Science and the Colonial Enterprise.* Chicago: Chicago University Press, 2000.

Matthee, Rudi. "Anti-Ottoman Politics and Transit Rights: The Seventeenth-Century Trade in Silk between Safavid Iran and Muscovy." *Cahiers du Monde Russie* 35 (1994), 739-672.

Mazour-Matusevich, Yelena and Alexandra Korros, eds. *Saluting Aron Gurevich: Essays in History, Literature and Other Related Subjects*. Leiden: Brill, 2010.

Meehan-Waters, Brenda. *Autocracy & Aristocracy: The Russian Service Elite of 1730*. New Brunswick: Rutgers University Press, 1982.

Miller, David Philip and Peter Hanns Reill, eds. *Visions of Empire: Voyages, Botany, and Representations of Nature*. Cambridge: Cambridge University Press, 1996.

Minzloff, R. *Catalogue raisonné des Russica de la Bibliothéque impériale publique de Saint-Petersbourg. Tom 1: Pierre le Grand dans la Littérature Étrangère.* St. Petersburg: I. I. Glasounow, 1872.

Mirskii, M. B. *Medistina Rossii X-XX vekov: ocherki istorii*. Moskva: Rosspen, 2005.

Mirskii, M. B. "Doktor Robert Erskin – Pervyi Rossiiskii Arkhiatr." *Otechestvennaia Istoriia* 2 (1995), 135-145.

Moon, David. "Peasant Migration and Settlement of Russia's Frontiers, 1550-1897." *The Historical Journal* 40 (1997), 859-893.

Moon, David. *The Plough that Broke the Steppes: agriculture and environment in Russia's grasslands, 1700-1914*. Oxford: Oxford University Press, 2013.

Müller-Wille, Staffan. "Collection and collation: theory and practice of Linnaean botany." *Studies in the History and Philosophy of Science*, *Part C* 28 (2007), 541-562.

Nekrasova, V. L. *Istoriia izucheniia dikorastushchikh syrevykh rastenii v SSSR*. Moscow: Akademii Nauk SSSR, 1958.

Neverov, Oleg Yakovlevich. "'His Majesty's Cabinet' and Peter I's *Kunstkammer*." In *The Origins of Museums: the Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe,* edited by Oliver Impey and Arthur MacGregor, 54-61. Oxford: Clarendon Press, 1985.

Novlianskaia, M. G. *Daniil Gottlieb Messerschmidt*. Leningrad: Nauka, 1970.

Novlianskaia, M. G. *I. K. Kirilov i ego Atlas Vserossiiksoi Imperii*. Moscow: Akademii Nauk, 1958.

Novombergskii, N. *Vrachebnoe delo v Rossii v polovine XVIII stoletiia*. Tomsk: Iakovleva, 1910.

Novombergskii, N. *Vrachebnoe stroenie v do-Petrovskoi Rusi*. Tomsk: Sibirsk, 1907.

Novombergskii, N. *Koldovstvo v Moskovskoi Rusi XVII-go stoletiia*. St. Petersburg: Altusher, 1906.

Novombergskii, N. *Ocherkii po Istorii aptechnago dela v do-Petrovskoi Rusi*. St. Petersburg: Tip. Ministerstva vnutrennykh del, 1902.

Ogilvie, Brian W. *The Science of Describing: Natural History in Renaissance Europe*. Chicago: University of Chicago Press, 2006.

Okenfuss, Max J. “Russian Students in Europe in the Age of Peter the Great.” pp. 131-145 in Garrard, J. G. ed. *The Eighteenth Century in Russia*. Oxford: Clarendon Press, 1973.

Palentreer, S. “Sady XVII veka v Izmailove.” *Soobshcheniia Instituta istorii iskusstva AN SSSR* 7 (1956), 80-104.

Panich, T. V. *Literaturnoe Tvorchestvo Afanasiia Kholmogorskogo*. Novosibirsk: Sibirskii Khronograf, 1996.

Pekarskii, P. *Istoriia Imperatorskoi Akademii Nauk v Peterburg*. Vol. 1. St. Petersburg: Imperatorskaia Akademiia Nauk, 1870.

Perfil'ev, M. O. “Meditsinskoe delo v Rossii Polovinu XVII Stoletiia,” *Istoricheskii Vestnik* 13 (1883), 372-285.

Phillips, Edward J. *The Founding of Russia’s Navy: Peter the Great and the Azov Fleet, 1688-1714*. Westport, CT: Greenwood Press, 1995.

Poe, Marshall T. “Moscow, the Third Rome: The Origins and Transformations of a ‘Pivotal Moment.’” *Jahrbücher für Geschichte Osteuropas* 49 (2001), 412-429.

Poe, Marshall T. *“A People born to Slavery”: Russia in Early Modern European Ethnography, 1476-1748*. Ithaca: Cornell University Press, 2000.

Polovtsov, A. A. ed. *Russkii Biograficheskii Slovar’*. 25 vols. Moscow: G. Lissner and D. Sovko, 1908 – 1913.

Popov, G. *Russkaia narodno-bytovaia meditsina*. St. Petersburg: A. S. Surovina, 1903.

“Pos’et, Konstantin Nikolaevich.” In *Entsiklopedicheskii slovar’, vol. XXIVa*, edited by I. E. Andreevskii, 718-719. St. Petersburg: I. A. Efron, 1890-1907.

“Possuet de Rozier, Pierre-Vincent.” in *Les Français en Russie au siècle des Lumières …* vol. 2, 677. Ferney-Voltaire: Centre International d’Étude du XVIIIe Siècle, 2011.

Postnikov, P. V. and N. Iu. Bolotina. “‘Poluchil Ia chest’ v Versalii koroloia frantsuskago’: Rossiiskii diplomat P. V. Postnikov vo Frantsii (1702-1717 gg.).” *Istoricheskii Arkhiv* 6 (2010), 176-187.

Prokhorov, A. M. *Bolshoi entsiklopedicheskii slovar’*. Moscow: Sov. Entsiklopediia, 2000. (http://www.vedu.ru/bigencdic/70688/)

Raj, Kapil. *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900*. New York: Palgrave Macmillan, 2007.

Randolph, John W. *The House in the Garden: The Bakunin Family and the Romance of Russian Idealism*. Ithaca: Cornell University Press, 2007.

Renner, Andreas. *Russische Autokratie und europäische Medizin. Organisierter Wissenstransfer im 18. Jahrhundert*. Stuttgart: Franz Steiner Verlag, 2010.

Richter, V. *Istoriia meditsiny v Rossii*. 3 Vols. Moscow: N. S. Wsewolojsky, 1814-1820.

Richter, W. M. *Geschichte der Medicin in Russland*, vol. 3 (Moscow: N. S. Wsewolosky, 1817).

Rinella, Michael A. *Pharmakon: Plato, drug culture, and identity in ancient Athens.* Lanthan MD: Lexington Books, 2010.

Romaniello, Matthew P. *The Elusive Empire: Kazan and the Creation of Russia, 1552-1671.* Madison: University of Wisconsin Press, 2012.

Romaniello, Matthew P. and Trisha Starks, eds. *Tobacco in Russian History and Culture: From seventeenth century to the present*. New York: Routledge, 2009.

Rose, Valentin. *Die Handschriften-Verzeichnisse der Königlichen Bibliothek zu Berlin, Zwölfter Band: Verzeichniss der Lateinischen Handschriften*. Berlin: A. Asher, 1893.

Rowell, Margery. "Linnaeus and Botanists in Eighteenth-Century Russia." *Taxon* 29 (1980), 15-26.

Rowell, Margery. "Russian Medical Botany before the time of Peter the Great." *Sudhoffs Archiv* 62 (1978), 339-358.

Rowland, Daniel. "Moscow – The Third Rome or the New Israel?" *Russian Review* 55 (1996), 591-614.

Ryan, W. F. *The Bathhouse at Midnight: an historical survey of magic and divination in Russia*. University Park: Pennsylvania State University Press, 1999.

Saveleva, E. A. *Katalog knig iz sobraniia Aptekarskogo prikaza*. St. Petersburg: Biblioteka Akademii Nauk, 2006.

Schiebinger, Londa. *Plants and Empire: Colonial Bioprospecting in the Atlantic*. Cambridge: Harvard University Press, 2009.

Schiebinger, Londa, and Claudia Swan, eds. *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*. Philadelphia: University of Pennsylvania Press, 2005.

"Schober, Gottlob," pp. 206-207 in *Allgemeine Deutsche Biographie* 32 (1891) http://www.deutsche-biographie.de/pnd120057999.html

Schönler, Andreas. *The Ruler in the Garden: politics and landscape design in imperial Russia*. Oxford: Peter Lang, 2007.

Schulze, Ludmilla. "The Russification of the St. Petersburg Academy of Sciences and Arts in the eighteenth century." *British Journal for the History of Science* 18 (1985), 305-335.

Schwartz, Stuart B., ed. *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters between Europeans and Other Peoples in the Early Modern Era*. Cambridge: Cambridge University Press, 1994.

Shapin, Steven. "Placing the View from Nowhere: Historical and Sociological Problems in the Location of Sciences." *Transactions of the Institute of British Geographers* 23 (1998), 5-12.

Shapin, Steven. *A Social History of Truth: Civility and Science in Seventeenth-Century England*. Chicago: University of Chicago Press, 1994.

Shaw, Denis J. B. "Mapmaking, science and state building in Russia before Peter the Great." *Journal of Historical Geography* 31 (2005), 409 – 429.

Shaw, Denis J. B. "'A strong and prosperous condition' – the geography of state building and social reform in Peter the Great's Russia." *Political Geography* 18 (1999), 991-1015.

Shaw, Denis J. B. "Geographical practice and its significance in Peter the Great's Russia." *Journal of Historical Geography* 22 (1996), 160-176.

Shcherbakova, A. A. "Razvitie botanicheskikh znanii v Rossii do XVIII veka," *Trudy Institutua Istorii Estestvoznaniia i Tekhniki AN SSSR* 36 (1961), 136-175.

Shetler, S. G. *The Komarov Botanical Institute. 250 Years of Russian Research*. Washington D.C.: Smithsonian Institution Press, 1967.

Simonov, R. A., V. K. Kuzakov, and M. K. Kuzmin, "Estestvenno-Nauchnye znaniia." In *Ocherki russkoi kul'tury XVII, Vol. 2.* Edited by Artemii Vladimirovich Artsikhovskii, 47-70. Moscow: Moskovskii Universitet, 1979.

Siuzev, P. V. "Botanicheskaia starina," *Bulletin de la Société Imperiale des naturalistes de Moscou* 18 (1904), 427-434.

Slezkine, Yuri. *Arctic Mirrors: Russia and the Small Peoples of the North*. Ithaca: Cornell University Press, 1994.

Slovar' tserkovno-slavianskogo i russkogo iazyka. 4 Vols. St. Petersburg: Imperatorskaia Akademii Nauk, 1847.

Smagina, G. I. ed. *Nemtsy v Rossii: Istoriko-dokumentalnoe izdaniie.* (St. Petersburg: Liki Rossii, 2004). http://www.genrogge.ru/grbook/01.htm

Sokoloff, Dmitry D, Sergey A. Baladin, Ivan A. Gubanov, Charles E. Jarvin, Sergey R. Majorov, Sergey S. Simonov. "The history of botany in Moscow and Russia in the 18th and 19th centuries in context of the Linnaean Collection at Moscow University." *Huntia* 133 (2002), 129-191.

Sokolovskii, Mikhail. "Kharakter i znachenie deiatelnosti Aptekarskago Prikaza," *Vestnik Arkheologii i Istorii* 16 (1904), 60-89.

Solomon, Susan Gross. "Circulation of Knowledge and the Russian Locale." *Kritika* 9 (2008), 9-26.

Spary, E. C. *Utopia's Garden: French Natural History from Old Regime to Revolution*. Chicago: University of Chicago Press, 2000.

Stejneger, Leonhard. *Georg Wilhelm Steller: The Pioneer of Alaskan Natural History*. Cambridge: Harvard University Press, 1936.

Sunderland, Willard. *Taming the Wild Field: Colonization and Empire on the Russian Steppe*. Ithaca: Cornell University Press, 2004.

Sydorenko, Alexander. *The Kievan Academy in the seventeenth century*. Ottawa: University of Ottawa Press, 1977.

Sytin, A. K. "Osobennosti russkoi botanicheskoi illiustratsii pervoi poloviny XVIII veka," *Herba* (2009), n.p. http://herba.msu.ru/russian/journals/herba/icones/sytin2.html.

Sytin, P. V. *Istoriia planirovka i zastroiki Moskvy*. Moscow: [s.p], 1950.

Todes, Daniel P. *Darwin without Malthus: The Struggle for Existence in Russian Evolutionary Thought*. New York: Oxford University Press, 1989.

Trautvetter, E. R. *Grundriss einer geschichte der botanik in bezug auf Rusland*. St. Petersburg: Aus der Druckerei der Kaiserl. Akademie der Wissenschaften, 1837.

Unkovskaya, M. V. *Brief Lives: a handbook of medical practitioners in Muscovy, 1620-1701*. London: Wellcome Trust, 1999.

Unkovskaya, M. V. "Learning the foreign mysteries: Russian pupils of the Aptekarskii Prikaz, 1650-1700." *Oxford Slavonic Papers* 30 (1997), 1-20.

Vergunov, A. P., V. A. Gorokhov, P. I. Lapin, and L. N. Andreev. *Russkie sady i parky*. Moscow: Nauka, 1988.

Vucinich, Alexander. *Science in Russian History*. 2 vols. Stanford: University of Stanford Press, 1963.

Wirtschafter, Elise Kimerling. *The Play of Ideas in Russian Enlightenment Theater*. DeKalb: Northern Illinois Press, 2003.

Withers, Charles W. J. *Placing the Enlightenment: Thinking Geographically about the Age of Reason*. Chicago: University of Chicago Press, 2007.

Witzenrath, Christoph. *Cossacks and the Russian Empire: Manipulation, Rebellion and Expansion into Siberia*. New York: Routledge, 2007.

Wolff, Larry. *Inventing Eastern Europe: The Map of Civilization on the Mind of the Enlightenment*. Stanford: Stanford University Press, 1994.

Wortman, Richard S. *Scenarios of Power: Myth and Ceremony in Russian Monarchy.* 2 vols. Princeton: Princeton University Press, 1995.

Zabelin, I. E. "Moskovskie sady XVII stoletii," pp. 266-321 in Idem. *Opyty izhucheniia russkikh drevnostei i istoriia*, vol. 2. Moscow: Gracheva, 1873.

Zguta, Russell. "Monastic Medicine in Kievan Rus' and Early Muscovy." In *Medieval Russian Culture*, edited by Michael S. Flier and Henrik Birnbaum, 54-70. Berkeley: University of California Press, 1984.

Zguta, Russell. "Witchcraft and Medicine in Pre-Petrine Russia." *Russian Review* 37 (1978), 438-448.

Zmeev, L. F. *Russkie vrachebniki. Issledovanie v oblasti nashei drevnei vrachebnoi pismennosti*. St. Petersburg: V. F. Demakova, 1895.

Zmeev, L. F. "Pervyi v Rossii voenno-vremennyi gospital," *Istoricheskii Vestnik* 25 (1886), 104-113.