EARTH SCIENCE FIELD TRIP

GUIDE LEAFLET

OREGON AREA

OGLE AND LEE COUNTIES
OREGON AND DIXON QUADRANGLES

A Field Demonstration
in conjunction with
EARTH SCIENCE TEACHER CONFERENCE
Gilbert O. Raasch, leader

Lorado Taft Field Campus
October 18, 1952
Exit to Frank Lowden State Park. Turn right (S) and descend hill ("escarpment").

**STOP NO. 1. Dipping Strata.**

Outcrop on left shows Ordovician (Platteville) limestone layers dipping (sloping) northeasterly. These strata were deposited as horizontal sheets of limy mud over the floor of an ancient sea and tilted to their inclined position by earth movements (folding and faulting) some hundreds of millions of years later.

Continue ahead.

**STOP NO. 2. Platteville Escarpment.**

View is across flat ground to 150-foot bluff lying less than a mile to the east. This bluff is capped by same northeasterly dipping limestone seen at Stop No. 1. Below the limestone are soft layers of St. Peter sandstone, which erode rapidly except where protected by the limestone caprock. Such an erosional line of cliffs or bluffs protected by hard capping strata is called an "escarpment."

The flat land in the foreground is an alluvial floodplain built by the Rock River many thousands of years ago, when it was carrying an overload of sand and gravel washed out from a melting glacier that stood about 50 miles upstream. This was the Cary (Valparaiso) Glacier of the Wisconsin (4th) Stage of glaciation (see Stop No. 8). Such a valley fill of sand and gravel deposited in front of a melting glacier is called a "valley train." The present Rock River has entrenched itself below this valley train level.

Continue ahead (S) along river.

**STOP NO. 3. Franconia Greensand.**

Ledges in foreground represent the oldest rock that comes to the surface anywhere in Illinois. This is a sandstone and sandy shale containing a high proportion of a dark green mineral called glauconite.

This "greensand" contains the remains of trilobites which tell us that the rock is Cambrian in age and belongs to the Franconia Formation (see Geologic Column). The trilobites belong to the species: *Dikelocephalus freeburgensis* Feniak, *Saukiella minor* Ulrich and Resser, and *Illaenurus truncatus* Feniak.

The rock layers dip northeast, and the east wall of the quarry is made by a higher Cambrian limestone, the St. Lawrence Formation. This is a buffy, very finely crystalline magnesian limestone (dolomite) in places with wavy laminations, which are evidence of deposition of the rock by algae. Algal reef limestones of this type were formed from New York to Wisconsin and Texas at this time and everywhere contain certain similar species of primitive snails (gastropods) as well as trilobites and other fossils.
To reach the Franconia greensand at Stop No. 1 (where Ordovician-Platteville limestone was at the surface) one would have to bore down nearly 1000 feet. The Franconia rock is brought to the surface here by a great upward fold in the strata of the earth's crust. Erosion later planed off the summit of this upfold (arch or anticline) and cut down to the Cambrian sandstone in its core.

0.0 1.6 Continue ahead (E) up steep grade; note Platteville escarpment just ahead.

0.2 1.8 Intersection; turn right (S).

0.2 2.0 Stop sign. Cross Route No. 64 and continue ahead (S) on black top road.

0.3 2.3 Note sand dunes on right.

0.7 3.0 STOP NO. 4. Park along roadside. **St. Peter Sandstone.**

Low knolls are composed of St. Peter sandstone, wasting rapidly here where unprotected by the Platteville limestone cap.

0.0 3.0 Continue ahead (S) over railroad overpass. St. Peter sandstone is exposed in the railroad cut.

0.6 3.6 Cross Honey Creek and enter Daysville.

0.4 4.0 Turn left (SE) on gravel road in Daysville.

0.2 4.2 Road turns half left (E). Route for next 5 miles is through Oregon Basin, a low-lying area resulting from the erosion of the weak St. Peter sandstone in a belt south of the Platteville escarpment.

1.1 5.3 Intersection. Turn right (S) at boulder fence.

1.1 6.4 Road turns left (E).

0.1 6.5 Intersection; continue ahead (E).

1.0 7.5 Caution. Narrow bridge.

0.7 8.2 Road curves right (S).

0.3 8.5 Intersection; continue ahead (S).

0.2 8.7 Road jogs left and right.

0.3 9.0 Road turns left (E).

0.0 9.0 STOP NO. 5. Park along roadside and walk ½ mile west to quarry. **Ordovician Fossils.**

As at Stop No. 1, we have here Ordovician (Platteville) limestone dipping north. At this point a fault (or rift line) south of the quarry, had dropped the limestone down hundreds of feet below where it should normally lie. The tilting of the strata occurred at the time of the movement along the fault. This great fracture in the earth's crust runs from near Joliet west northwest to Oregon and beyond. It takes its name from Sandwich, through which it passes. It can be compared to the famous San Andreas and Owen's Valley rifts of California, but of course has ceased to be active long, long ago.
The thin-bedded upper layers in the quarry are rich in fossils of many kinds, including numerous species of brachiopod, pelecypod (clam), gastropod (snail), and cephalopod shells, as well as bryozoa, trilobites, cup corals, and pieces of crinoid stems. The 24 feet of thin-bedded limestone with abundant fossils is the Mifflin Member of the Platteville Formation.

0.0 9.0 Continue ahead (E).

0.1 9.1 Intersection; turn right (S) on winding road.

1.0 10.1 Cross creek and turn right (W) at intersection.

0.1 10.2 Turn left (S) at Washington Grove Church.

0.5 10.7 Quarry on left is operating in Cambrian, St. Lawrence dolomite, which is crushed for roadstone and for agricultural lime.

0.4 11.1 STOP NO. 6. Park along roadside and walk east into quarry. St. Lawrence Reef Limestone.

The rock in the quarry is Cambrian, St. Lawrence dolomite, and is about the same age as the strata in the operating quarry much farther down the slope. The north dip of the strata brings the formation downward in that direction.

White drusy quartz lines the open cavities which abundantly traverse the dolomite. Fossils are much less in evidence; caplike and coiled snail shells (Hypsoloconus, Scaevogrya) and parts of trilobites (Plethometoruna and Saukiella) are most numerous. Except for thinly stratified layers near the top, much of the quarry rock occurs in solid masses, which were the cores of reefs made by algae (Cryptozoon).

0.0 11.1 Continue, turning right (W) at Prairie Star School.

0.3 11.4 STOP NO. 7. Park along roadside; remain in cars. Lancaster Peneplain.

Although the earth and stone dropped by the melting of the Illinoian ice sheet mantles the surface, the hills consist of bedrock which has been molded by erosion through an immense span of time.

As we look north, in the foreground the terrain slope regularly downward parallel to the top of the hard St. Lawrence (Trempealeau) dolomite. In the middle distance a low ridge stands up north of the line of the Sandwich fault and is underlain by masses of limestone. Beyond this lies the broad valley of the Oregon Basin, carved in the soft St. Peter sandstone, while the high hills on the horizon are the Platteville escarpment.

In spite of the many rock-controlled irregularities, a sweep of the horizon in any direction shows that all of the highest hills rise to about the same elevation.

Once the whole of the region lay at this level. Sea level stood then much higher than it does today, and a long period of uninterrupted erosion had worn down the country close to this old sea level. Later, sea level dropped some hundreds of feet and once again streams were able to intrench their valleys, to meet the sea. Thus today, the old plain of erosion is preserved only on the summits of the highest hills. Such a plain is called a peneplain.
The Ice Age (Pleistocene) lasted about 1,000,000 years. But only during a minor portion of this time was Illinois actually covered by the continental glaciers. The great ice sheets entered Illinois territory at four distinct times, separated by mild periods of much longer duration.

Only one of the four invasions is known to have reached the Oregon-Dixon region. This was the third, or Illinoian, glaciation, which extended over nearly all of present Illinois.

When the Illinoian glacier melted away, it left behind whatever earth and stone it had picked up and carried with it on its long journey from northeast Canada. This material it dropped as an unsorted mixture of clay, sand, pebbles, and boulders called "glacial till."

Such a "till" is exposed in the lower part of the cut here. Most of the pebbles in the till have flat sides, a "facet" produced as the stones, embedded in the ice, were dragged over rock masses. This grinding action often had the effect of smoothing and striating the facets.

The glacial till is heterogenous not only as to the size of the fragments but also as to their composition. The advancing glacier collected rocks of many kinds from formations of many ages along its thousand mile course. Much of the rock is Silurian limestone from the region directly to the east, but there are also many kinds of igneous and metamorphic rocks from the ancient pre-Cambrian formations of northeast Canada. Among these are such rocks as granite and gabbro (once molten but cooled slowly deep underground), porphyry and basalt (once molten but cooled rapidly, possibly as surface lava flows), gneiss and schist (crystalline rocks that were drawn out in bands in a half molten condition deep underground), as well as many other rocks of various ages.

Above the stony glacial till, lies several feet of brown, ashy, silty earth, called "loess." The minute loess grains are shown by the microscope to be extremely angular, so that they mesh together and enable the unconsolidated material to stand in vertical banks.

The loess is a deposit of wind blown dust picked up from the bare river flats of the Ice Age and dropped over the uplands. Most of the loess accumulation took place during the colder periods, when the Illinoian glacier was retreating and when later glaciers of Wisconsin age approached the area.

The loess grades upward into the present-day soil.
Clear Creek. Farm road east of creek runs in direction of a small ag–
stone quarry in Lower Ordovician (Shakopee) dolomite, underlain by soft,
clean New Richmond sandstone. These formations lie between the Oneota
and St. Peter formations, previously mentioned (see Geological Column).
A strong southwest dip of the strata can be seen here; a consequence of
their lying on the southwest flank of the Ashton Arch, a large upfold of
the strata south of the Sandwich fault line.

Intersection; turn left (S) at Prairieside School.


For next two miles course is over flat terrace levels in the valley
train of the Rock River. The highest of these was built at the time the
Cary glacier stood 50 miles upstream. An intermediate terrace is believed
to have existed later in the Wisconsin glacial stage, when the Rock River
drained a large glacial lake in the vicinity of Fond du Lac, Wisconsin.
The lowest level (to be seen close to the creek south of Kingdom) is the
present floodplain of the Rock.

Enter Kingdom and descend terraces to Franklin Creek (20.1).

Road jogs right and left.

Intersection; turn right (W).

Road turns left (S).

Road turns half right (SW) and crosses Chamberlain Creek.

Intersection; turn sharp right (N).

Road jogs left and right.

Road turns left (W).

Cross creek and turn right (N) with road.

Road turns left and winds.

Danger. Stop sign. Turn left (S) onto Route No. 2. Cuts show St. Peter
sandstone.

Caution. Turn left (W) along minor road following power line.

Intersection; turn right (N).


In pre-glacial times, the Rock River was the major drainage artery
that entrenched its valley below the level of the Lancaster Penplain.
The river then continued south below Rockford toward Princeton, as shown
by data from deep borings through the Illinoian glacial deposits.

The Illinoian glacier dispossessed the Rock River, and when the
ice sheet melted away, the rejuvenated Rock was unable to find its old
valley south of Rockford and carved a new course westward through Byron,
Oregon, and Dixon, toward the Mississippi (see chart in appendix).

In carving its new valley, the Rock River used the valleys of numer-
ous smaller streams, which it connected by cutting through the divides
separating them. Where the river cut through the old divides, steep
bluffs flank the stream today, as at Lowden Park, in the vicinity of Grand Detour. Where the river used pieces of former stream valleys, the present valley is wider and the slopes lower and more gentle.

From the Devils Backbone to Grand Detour, the river now follows an old valley, which might best be referred to as the "East Branch of Pine Creek" (in which case, the present Pine Creek would be the "West Branch").

At Stop No. 10, however, the old valley is blocked by a thick glacial deposit (moraine and outwash), which caused the river to deflect its valley westward from Grand Detour to Lowell Park. The stump of the old cutoff valley of East Branch can be seen stretching off to the left.

The steeply sloping plain before us in the head of the valley is the outwash plain of sand and gravel deposited in front of a temporary ice stand which built a range of irregular hills that runs through here in a northwest-southeast direction (and which we will see at Stop No. 11). Such a range of hills is called a "moraine."

0.0 25.7 Continue ahead, past pit in outwash.
0.8 26.5 Intersection; turn right (N).
0.1 26.6 Intersection; continue ahead (N) and ascend grade.
0.2 26.8 Trail, right, leads ¼ mile through woods to river, where an 80-foot bluff of St. Peter sandstone shows an excellent anticlinal fold in the strata. The fold shows better in perspective from the opposite side of the river.
0.2 27.0 Forks; go right (N) and follow winding road westerly along ice-contact face of moraine line.

The same moraine which blocked "East Branch" at Stop No. 10 continues beyond this point. The rolling knob and kettle topography is characteristic of moraines.

Irregular ridges of glacial till, with varying quantities of sand and gravel, resulted from a long stand of the ice front. The ice front was stationary because the rate of melting of the ice was equal to the rate of forward motion. Consequently, unusual quantities of earth and stone were dropped here; and when the ice finally melted away, a ridge of glacial drift remained to mark the site of the old battle line between the forces of heat and of cold.

0.0 28.2 Continue ahead (W).
0.2 28.4 Intersection; turn left (S). Travel for next mile is over very flat rock terrace made by the top of the Platteville limestone.
1.1 29.5 Descend from terrace, over ledges of Platteville limestone exposed in creek.
0.2 29.7 Intersection; angle to right.
0.3 30.0 Quarry in Platteville limestone in bluff to left. For next two miles route lies between Rock River on right and low bluffs and ledges of Platteville limestone on left.
STOP NO. 12. Turn left south of Medusa Cement Company office and cross to east quarry face. Continue north on quarry road to present working face.

The Dixon quarry shows excellent stratification in horizontal beds of Platteville limestone. Fossils are numerous in the thin bedded Mifflin member, which is the principal quarry stone. Stony glacial till overlying the bedrock contains a variety of transported rocks. The grinding, polishing, and plucking of the bedrock by the overriding ice sheet can be observed at the southwest end of the active quarry.

End of Conference - Bon Voyage

Junction may be made with Route No. 2 directly south of the quarry. To pick up Routes 30A and 52, go right, into Dixon.
EARTH HISTORY OF OREGON - DIXON AREA

THE ICE AGE

Something over 20,000 years ago, a great continental glacier stood in southern Wisconsin, 50 miles north of Oregon. As this glacier melted, it liberated great quantities of stone and earth that it had carried with it from as far north as the interior of Canada. The melting of the ice mass also liberated great quantities of water. This water, discharging down the valley of the Rock, carried with it clay, sand, and gravel. The clay, the murky waters carried onward to the Gulf of Mexico, but much of the sand and gravel was dropped along the course of the great stream across the Oregon and Dixon area.

Some tens of thousands of years earlier, a glacier spreading out from the south end of Lake Michigan approached the Rock River Valley from the southeast, but did not cross it in the Oregon - Dixon area.

Both of these ice advances belong to the last, or Wisconsin, stage of glaciation.

During the previous stage of glaciation, the Illinoian stage, however, all of the state of Illinois, disappeared temporarily beneath the grinding ice of a continental ice sheet. This ice invasion turned the Rock River out of its old valley that it had spent millions of years carving deep into the bedrock strata. When the Illinoian glacier melted away, great masses of earth and stone were left behind to block the old valley below Rockford, and the restored Rock River was forced to cut a new channel, which it still follows today from Byron to Rock Island.

A mild climate interval of some 100,000 years intervened between the disappearance of the Illinoian ice sheet and the coming of the Wisconsin ice sheet. Vegetation returned to the region, soils developed, and rain waters, descending into the glacial deposits, dissolved the lime from the upper portion, and carried it downward beyond the reach of plants. When the Illinois glacier was retreating and also when the Wisconsin glacier was advancing, much dust was blown up from the river flats by the wind and deposited over the upland as a powdery earth called "loess."

Earlier in the Ice Age (Pleistocene Period) two other continental ice sheets (the Nebraskan and the Kansan) invaded Illinois, but there is no evidence that either of them entered the Oregon - Dixon area.

THE LOST INTERVAL

Back of the Ice Age we enter a long "lost interval," during which the Oregon - Dixon area stood at moderate elevations above the sea. Under these conditions, the land was slowly eroded and the wastage of the land was carried off by the streams and deposited as sediment in distant seas. Therefore no rocks were formed in the region and no fossils preserved, to record for us here, events in the days of the dinosaurs (Mesozoic Era) and of the strange mammals which succeeded them (Tertiary Period).

Back of the time of the dinosaurs, coal-bearing deposits of the Pennsylvanian Period and reef limestones of the Silurian seas were most likely laid down over the Oregon - Dixon area. But if so, erosion has removed them long ago, and stripped away the bedrock down to the very ancient Ordovician and Cambrian limestones and sandstones.
If the cover of glacial debris could be stripped off the hilltops, it would be clearly seen that the ridges all rise to a level skyline lying around 800 feet above the sea. Between these ridge tops, valleys have since been carved, but once the whole region lay at the level of the ridge tops.

In those days this level represented a low plain, close to the level of the sea. Such a plain, cut by erosion of the strata down to base level, is called a peneplain. Later sea level dropped some hundreds of feet, and streams, entrenching again down into the bedrock, carved the region into a network of ridges and valleys.

ANCIENT SEAS OF ILLINOIS

Many of the Ordovician bedrock layers that have been uncovered by erosion during the "lost interval" and since the "ice age" contain fossils of sea animals. These tell us that the strata were, for the most part, laid down over the floors of ancient seas that covered much of the interior of the continent. The most advanced animals of those days were the somewhat crab-like trilobites, and shell fish called cephalopods. Present-day cephalopods include octopus, squids, and cuttle-fish, but the Pearly Nautilus (hero of Oliver Wendall Holmes' famous poem) is the living cephalopod most like those of Ordovician days. Then, some 350 million years ago, some of Nautilus' ancestors built chambered shells that were coiled, others curved like a horn, others straight and many feet long.

Besides these creatures were snail-like gastropods, clam-like pelecypods, the oldest true corals, sponges, and a large number and variety of brachiopod shells and moss-like bryozoan colonies. The bryozoans are minute animals, which, like corals, build colonies of living stone.

Up-folding and up-thrusting of the strata in the Oregon area in places has brought still older Cambrian formations to the surface. These take us back over 400,000 years to a time before pelecypods, corals, and bryozoans existed with cephalopods almost unknown. The quarries in Cambrian rocks of the Oregon area yield chiefly trilobites and gastropods, some coiled and some cap-like.

THE PRE-CAMBRIAN FOUNDATION

Wells in the Oregon - Dixon area do not penetrate deeper than the Cambrian, but we know from studies farther north that below this there is a "foundation" of very ancient, twisted and altered crystalline rocks. Some of these rocks once were sediments. Others are igneous rocks that were long ago intruded as molten masses deep underground or extruded to the surface as lava flows. The Pre-Cambrian rocks are the most ancient known to man.
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<tr>
<th>Periods</th>
<th>Epochs</th>
<th>Remarks</th>
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<td>Proterozoic</td>
<td>Known as &quot;Pre-Cambrian Time&quot;</td>
<td>In deep wells only</td>
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<tr>
<td>Archeozoic</td>
<td></td>
<td></td>
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<tr>
<td>Paleozoic</td>
<td>Ordovician</td>
<td>Galena dolomite&lt;br&gt;Decorah dolomite&lt;br&gt;Platteville dolomite&lt;br&gt;Glenwood shale&lt;br&gt;St. Peter sandstone&lt;br&gt;Shakopee dolomite&lt;br&gt;New Richmond sandstone&lt;br&gt;Oneota dolomite&lt;br&gt;Trempealeau dolomite&lt;br&gt;Franconia greensand&lt;br&gt;Galesville sandstone&lt;br&gt;Eau Claire shale, etc.&lt;br&gt;Mt. Simon sandstone</td>
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<td>Silurian</td>
<td>Upper Ordovician</td>
<td>Not present in Oregon Area</td>
</tr>
<tr>
<td>Devonian</td>
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<tr>
<td>Mississippian</td>
<td></td>
<td>Not present in Oregon Area</td>
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<tr>
<td>Pennsylvanian</td>
<td></td>
<td>Not present in Oregon Area</td>
</tr>
<tr>
<td>Triassic</td>
<td></td>
<td>Not present in Illinois</td>
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<tr>
<td>Jurassic</td>
<td></td>
<td>Not present in Illinois</td>
</tr>
<tr>
<td>Cretaceous</td>
<td></td>
<td>Not present in the Oregon Area</td>
</tr>
<tr>
<td>Tertiary</td>
<td>Pleistocene</td>
<td>Recent post-glacial stage&lt;br&gt;Wisconsin glacial stage&lt;br&gt;Sangamon interglacial stage&lt;br&gt;Illinoian glacial stage&lt;br&gt; Earlier glaciations not represented by deposits in Oregon Area.</td>
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<tr>
<td>Quaternary</td>
<td>Pliocene&lt;br&gt;Miocene&lt;br&gt;Oligocene&lt;br&gt;Eocene&lt;br&gt;Paleocene</td>
<td>Not present in the Oregon Area.</td>
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<tr>
<td>Recent post-glacial stage</td>
<td>Wisconsin glacial stage</td>
<td>Sangamon interglacial stage</td>
</tr>
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</table>

Recent post-glacial stage
Wisconsin glacial stage
Sangamon interglacial stage
Illinoian glacial stage
Earlier glaciations not represented by deposits in Oregon Area.

Not present in the Oregon Area.

Not present in Illinois

Not present in Illinois

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.

Not present in Oregon Area.
FIG. 1 - GENERALIZED BEDROCK MAP OF THE DIXON-OREGON-ROCHELLE AREA

- 5 Stop, with number
- Fault
- Boundary of Shelbyville (Tazewell) Hill

Legend:
- Maquoketa
- Galena
- Platteville
- Glenwood and St. Peter
- Shakopee
- New Richmond
- Oneota and Gunter
- Trempealeau
- Franconia
<table>
<thead>
<tr>
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<th>Sub-stages</th>
<th>Nature of Deposits</th>
<th>Special Features</th>
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</thead>
<tbody>
<tr>
<td>Recent</td>
<td></td>
<td>Soil, infant to youthful profile of weathering, lake and river deposits, dunes, peat.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>Fluvial deposition - Mississippi, Illinois, and Ohio river valleys; dune sand, some loess deposits along Mississippi River Valley; and deposits in Lake Chicago.</td>
<td>Lake Agassiz Torrent eroded Late Mankato deposits</td>
</tr>
<tr>
<td></td>
<td>Early</td>
<td></td>
<td>Lake Duluth Torrent eroded Early Mankato deposits</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Cary</td>
<td>Drift, loess, dunes, beginning of deposits in Lake Chicago</td>
<td>Forest bed, Two Creeks, Wisconsin</td>
</tr>
<tr>
<td>(4th glacial)</td>
<td>Tazewell</td>
<td>Drift, loess, dunes, lake deposits</td>
<td>Kankakee and Lake Maumee Torrents</td>
</tr>
<tr>
<td></td>
<td>Iowan</td>
<td>Drift, loess, dunes.</td>
<td>Fox River Torrent Westward diversion of Mississippi River into Iowa by Tazewell ice lobe</td>
</tr>
<tr>
<td></td>
<td>Farmdale</td>
<td>Loess (in advance of glaciation)</td>
<td></td>
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<tr>
<td>Sangamon</td>
<td></td>
<td>Soil, mature profile of weathering, alluvium, peat</td>
<td></td>
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<tr>
<td>(3rd interglacial)</td>
<td>Buffalo Hart</td>
<td>Drift</td>
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<td></td>
<td>Illinoisan</td>
<td>Payson (terminal)</td>
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<td></td>
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<td>Loveland (Pro-Ill.)</td>
<td></td>
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<tr>
<td>Yarmouth</td>
<td></td>
<td>Soil, mature profile of weathering, alluvium, peat</td>
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<tr>
<td>(2nd interglacial)</td>
<td>Kansan</td>
<td>Drift</td>
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<td></td>
<td>Aftonian</td>
<td>Soil, mature profile of weathering, alluvium, peat</td>
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<td>(1st interglacial)</td>
<td>Nebraskan</td>
<td>Drift</td>
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</tr>
<tr>
<td>Nebraskan</td>
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<td>Drift</td>
<td></td>
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<tr>
<td>(1st glacial)</td>
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GLACIAL GEOLOGY IN NORTHEASTERN ILLINOIS
Compiled by George E. Ekblaw from data furnished by the Survey
January 1, 1942
CENTRAL LOWLAND PROVINCE

OZARK PLATEAUS PROVINCE

COASTAL PLAIN PROVINCE

PHYSIOGRAPHIC DIVISIONS OF ILLINOIS

COMMON TYPES of ILLINOIS FOSSILS

Lithostrotion
Cup coral
Honeycomb coral

Archimedes
Fenestella
Branching

CRINOID
CYSTOID
PENTREMITTE

GRAPTOLITE
CORALS

BRYOZOA

BRACHIOPODS

Lingula
Orbiculoidea
Spiriferoid
Productoid
Pentameroid
COMMON TYPES of ILLINOIS FOSSILS

PELECYPODS

"Clam"
"Scallop"
Low-spired

High-spired

Flat-spired

GASTROPODS

Curved cone
Coiled cone (Nautilus)

CEPHALOPODS

Straight cone

OSTRACODS
(greatly enlarged)

CEPHALOPODS

Bumastus
Calymene (coiled)

Calymene (flat)

TRILOBITES
FIG. 8 - PLEISTOCENE HISTORY OF ROCK VALLEY