

## DISCLAIMER

**Before visiting any of the sites described in the New England Intercollegiate Geological Conference guidebooks, you must obtain permission from the current landowners.**

Landowners only granted permission to visit these sites to the organizers of the original trips for the designated dates of the conference. It is your responsibility to obtain permission for your visit. Be aware that this permission may not be granted.

Especially when using older guidebooks in this collection, note that locations may have changed drastically. Likewise, geological interpretations may differ from current understandings.

Please respect any trip stops designated as “no hammers”, “no collecting” or the like.

Consider possible hazards and use appropriate caution and safety equipment.

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NEW ENGLAND INTERCOLLEGIATE FIELD GEOLOGY MEETING  
BATES COLLEGE- Host  
Lewiston, Maine  
Oct. 12-13, 1934

The Department of Geology of Bates College extends a cordial invitation to the annual field meeting to be held in the vicinity of Lewiston, Maine. In order that there may be trips of different kinds Dr. Edward H. Perkins, of Colby College, will conduct special trips to points where glacial geology is well illustrated. Dr. Lloyd W. Fisher, of Bates College, will conduct trips to illustrate rock types, structures and physiography. The complete schedules of the trips to be taken are not quite complete for some revision is necessary because of the condition of some of the secondary roads.

Dr. Perkins intends to visit the large glacial kettle hole at Gray; the Kettlebottom at West Bowdoin; well developed eskers near Poland and Sabattus; glacial deltas near Leeds, Maine, and numerous other localities. Complete schedule of his trips will be mailed to all members some time before the meeting. We want all interested in glacial geology to understand that there will be special trips to illustrate that phase of geology.

HOW TO REACH LEWISTON:-From Worcester and vicinity:-Routes 12 and 110; 110 thru Lowell, Lawrence, Haverhill and Amesbury to U.S. Route 1 at Smithtown; route 1 to Portland; 100 to Lewiston.  
Boston and vicinity:-Route U.S. 1 to Portland; 100 to Lewiston.

Southern New Hampshire and Vermont:-  
U.S. 4 to Dover; Me. 9 to Wells; route U.S. 1 to Portland then 100. Or, from Franklin, N.H. 11 to Laconia, U.S. 3 to Meredith, N.H. 25 to Standish; unmarked connecting macadam road to Gray-join 100 to Lewiston; Or, from Meredith, U.S. 25 to West Ossipee, N.H. 16 to Fryeburg, Me. Me. 18 to south of Naples, Me. 116 to Mechanic Falls, Me. 121 and 11 to Auburn to join 100.

Burlington and vicinity-U.S. 2 to Montpelier, St. Johnsbury, Lancaster, N.H., Bethel, Me. then Me. 26 to Welchville, route 121 through Mechanic Falls to Auburn at rt. 100.  
Auburn, Maine, police insist on a FULL STOP at a STOP sign.

HOW TO REACH BATES COLLEGE:-Entering on Auburn route 100 follow through Auburn, cross river, Main street Lewiston, strait through. After traffic booth, Lisbon and Main street follow 100 past three traffic signals, turn right at fourth, route 126-the Buick Company will be on your left. Follow car track past the next signal, turn left at blinker with car line. At Bates Campus car line turns right; down two blocks to Campus and Nichols street-Carnegie Science Hall is on your left; department is on fourth floor.

## OPTIONAL FRIDAY MORNING TRIP.

Set odometer at 0 miles leaving Department of Geology Building, Campus and Nichols. Leave 9 a.m. or soon thereafter; rocks-pogmatite and granite quarries; glacial sand plain; abandoned meanders, etc.

00.00 miles-north on Campus avenue to College street, left with car tracks to Main Street, west on Main street, cross the Androscoggin, through on Court st., Auburn, across railroad tracks and up hill.

- 1.8-keep left on hill at fork; top of hill continue left with car tracks; straight ahead where car tracks turn left.
  - 2.7-Leave Lewiston quadrangle and enter Poland quadrangle.
  - 3.0-Descend hill and enter valley of Little Androscoggin river.
  - 3.2-Cross Taylor Brook-outlet from Taylor Pond into L.A. river.
  - 3.5-STOP sign; turn right on highway 11 and 121.
  - 4.2-Keep straight through-road right goes to Mt. Apatite.  
Dumps of Mount Apatite visible right from highway.
  - 5.6-Walker's Garage and just beyond, 5.7-misfit stream.
  - 5.9-Pogmatite, right side of road.
  - 6.8-Little Androscoggin river to left.
  - 7.0-Village of Minot.
  - 7.7-Cross L.A. river; note abandoned meander south side.
  - 8.2-Big bend of L.A.; and 9.7-Big cut-off bend of L.A.
  - 10.2-10.4-10.5-10.6-misfit streams. SLOW-sharp curves ahead.
  - 11.1-sharp left turn; 11.2-sharp right turn
  - 11.3-cross Little Androscoggin river; turn right; then follow left of Tarbox garage, route 121; 11.5-cross railroad; stay on 121.
  - 12.2-old river channel; 12.3-cross railroad.
  - 12.8-Libbey-Dingley dam, left; 12.9-Gravel Pit-right.
  - 13.9-Three distinct river terraces and big S-meander of Little Androscoggin to left; 14.1-artificial cut-off-SLOW.
  - 14.3-GRANITE QUARRY-STOP-arrive about 9.35 leave about 10.00
- Those interested in river and glacial work continue straight ahead
- 15.2-Left of highway, large artificial abandoned meander.
  - 15.6-Minister brook-incising; old channels; cut-offs; looking south-in valley-sand plain. Turn here and retrace to meet at quarry.
  - 14.3-Retrace from quarry over route 121 to Mechanic Falls, and then routes 121 and 11 to
  - 22.9-Walker's Garage-SLOW.
  - 23.1-Turn left-Haskell's Corner school-dirt road, upgrade, ROUGH.
  - 23.6-Past second farm on right is ledge where tourmaline was first found in Maine-the Hatch Ledge.
  - 24.0-Turn into KEITH'S QUARRY-arrive about 10.20-time available, about 45 minutes. Leave quarry about 11. Retrace to route 121.
  - 25.0-Turn left on route 121-11 to Auburn
  - 27.2-Turn left at cross-roads and follow through into Auburn and Lewiston-arriving in time for luncheon and brief rest before the afternoon trip.

SCHEDULE FOR MORNING GLACIAL TRIP TO BE MAILED OUT LATER.

## MINERAL, ROCK and STRUCTURE TRIP

Friday, October 12, 1934

Set odometer at 0.00 miles leaving Campus and Nichols street-  
STARTING TIME 1 p.m.-PLEASE BE PROMPT-DAYLIGHT FADES EARLY.

Trip follows same route as Friday morning trip to mile 4.2

4.2-Turn right onto Garfield-Minot-Rifle Range road.

4.35-Left onto Rifle Range road-past rifle range-through gate.

5.1- MOUNT APATITE-famous old mineral locality; arrive about  
1.25 p.m. leave about 2.25 p.m.

Retrace steps back to routes 121 and 11 and turn left .

7.1- cross roads-straight through.

7.5- cross Taylor Brook; 8.0- bear left along car line.

8.5- intersection with 4 and 100;STOP;turn left onto cement;keep  
Esso sign on right;SLOW; pass Tydol and Shell and turn sharp  
left crossing car track,railroad onto loose bouldery road to

8.8- FRANKLIN QUARRY; development of black tourmaline. 2.40 - 2.50  
retrace to Shell gas station; cross railroad tracks and turn  
sharp left; through two blocks city streets; STOP SIGN; cross  
double car tracks Court Street; one block ahead STOP SIGN turn  
right,through one street then down steep hill; cross car track  
and keep left of Ford Motor Sales Company on brick paving;SLOW;  
sharp right hand turn and trucks coming out. Park away from  
buildings Penley's Slaughter House- CITY RAPIDS-arrive 3.00  
and leave 3.30. Things of interest-numerous pot holes; under-  
cutting; pegmatite sills and dikes; basic, faulted dike, meta-  
morphics.

Retrace to Ford Plant and go straight across car tracks  
keeping Y.M.C.A. to right and Postoffice to left; approach a  
10.0-traffic light at Auburn Theatre; turn left; through next  
light, cross Androscoggin river; and at next traffic light-

10.4-turn right onto Lincoln street,Lewiston;Gulf station to left.

10.9-first light on Lincoln street,turn left; cross railroad-  
limestone outcrop to right; cross canal and turn sharp right

11.0-onto Canal street; follow through

11.3-route junction with 196-Lisbon street-car tracks-strait ahead.

11.5-cross railroad track and turn sharp right-LEWISTON CITY QUARRY.  
Limestone,metamorphosed;cut by pegmatites and at least 16 basic  
dikes; some minor faulting. Arrive 3.45 leave about 4.20.

11.8-leaving CITY QUARRY turn right onto LISBON STREET-up hill.

This is route 196 to Brunswick. Straight through to

13.4-GAUVIN MOTOR COMPANY-cross car tracks;dirt road to right;  
cross railroad; CROSS ROADS 13.8-BRIEF STOP; turn left at  
cross roads and meet route 196 at 14.1-TURN RIGHT onto 196.

15.3-Crowley's junction-BAD CURVE-stay on macadam; 15.8-large  
barn right side of road;turn right just beyond to 16.2-GRANITE  
QUARRY to right-hidden by trees.Best to continue on road 0.1  
mile turn and come back to quarry entrance;arrive 4.20-4.30  
retrace to route 196 and left to Crowley's junction-

17.1-straight through on dirt road,leaving macadam;17.3-railroad.

18.2-WISEMAN FARMS-STUDY of STRUCTURE here and at 18.3 at inter-  
section with WEBSTER street-leaving about 4.50.

18.9-CONTACT METAMORPHISM-cinnamon garnets;in hillside right from  
highway. Leave about 5.10.

19.0-Turn right; 19.2-PHASES of GRANITE. Leave about 5.20.

Friday afternoon rock and mineral, etc., trip concluded.

19.6-left at cross roads; 19.7-left side of road, brief stop if time permits.

20.8-STOP SIGN-Lewiston-Sabattus road-turn left onto macadam.

21.1-Pass entrance to THORNCRAG-Stanton Bird Sanctuary and Bates Outing Club cabin-to right.

21.5-Garcelon bog to left. 5.30

22.0-Intersection with Campus Avenue-TEXACO station ahead-right.

NOTICE:-Those staying at DeWitt Hotel go straight ahead and follow car tracks where they bear left. Arrive DeWitt Hotel-mile 23.0

Those staying at the Littleton, Auburn House or Elm House-turn right onto Campus avenue and follow car tracks making left turn onto Main street at Buick Building; Littleton hotel is 23.5 mile on right side of street, beyond Empire theatre; continue straight for Auburn, cross river-Auburn house just beyond bridge and Elm House just beyond first traffic light.

EVENING MEETING-4th floor of Carnegie Science Hall,  
Bates Campus at Campus avenue and Nichols street at 7.45 p.m.

MINERAL, ROCK and STRUCTURE TRIP-SATURDAY, OCTOBER 13.  
(Glacial Geology schedule to be mailed out later)

Same meeting place as other trips- 8.30 a.m.

Walk to Mt. David-low prominence of pegmatite on Bates Campus.

Leave Campus at 9.00 for illustration of various types of rocks encountered in immediate vicinity. Trip must stay together because of circuitous route.

0.0- east on Campus avenue, leaving from Nichols street at 9.00

0.4- turn left follow car tracks on route 26.

1.3- Thorncrag gate on left.

4.3-Turn sharp left onto dirt road to Hedgehog Hill-NORMAL GRANITE-arrive about 9.10 and leave 9.25. (Turn cars on crest of hill-mile 4.6) Retrace to route 26-STOP SIGN-4.8; turn left for short distance on macadam and then right onto dirt road "Sylvia's Place."

5.7- Granite gneiss, probably equivalent of Hedgehog Hill granite-arrive 9.32 and leave 9.40.

5.9-Gate, Chapelle farm-arrive 9.45, leave 9.55; SEDIMENTARY? Gneisses.

6.0-Thru second gate, close it; turn left; 6.1-right hand fork.

6.2-Probable stop; 6.3-PEGMATITE invasion into LIMESTONE-arrive 9.57 leave 10.07.

6.8-STOP SIGN-cross car track and turn right onto macadam 126.

8.6-cross electric and steam railroad; SLOW; at ESSO station

8.8-turn right off macadam.

9.0-GRANITE-arrive 10.15, leave 10.20.

9.6-Valley of Sabattus river to right.

9.7-Left on road marked Monmouth.

9.8-LIMESTONE-hillside to left-arrive 10.25 leave 10.35.

10.0-Cross Sabattus river; 10.1-right hand fork;

10.8-sharp right onto route 9; follow through to 12.0-INTERESTING OUTCROP of a variety of rocks; large feldspar crystals; small beryl crystals. Go to top of hill to turn cars- good view of surrounding country- arrive 10.50 and leave 11.10.

Retrace on route 9 to first cross roads and arrive there at

14.8-Turn right;

- Saturday morning, October 13, 1934, trip-concluded
- 14.8-turn right at cross roads; 14.9-pass Pleasant Hill cemetery on right.
- Brief stops will be made for those interested in glacial geology.
- 15.1-Large kettle hole to left; 15.2-large kettle hole-right.
- 15.2-Descending ice contact slope-gravel pit to left.
- 15.6-STOP sign-Sabattus Esker ahead to left- Sabattus Mountain directly ahead; turn right onto macadam-route 126-about 11.25
- 16.8-Turn right onto gravel road at sign "Wiscasset."
- 17.6-Sabattus schist with granite veinlets in fractures. 11.30-11.35 Follow route 197 - outcrops fairly common- 18.1-badly weathered.
- 18.2-TURN CARS at road that goes left up slope and retrace steps to Route 126.
- 19.7-STOP sign-route 126, turn left toward Sabattus area
- 20.8-Turn right on road toward Sabattus mountain.
- 21.1-STOP-walk west to lake-GNEISSES AND PEGMATITES; glacial grooves difference in resistance to weathering. Leave 11.50-return to cars at 12.15. Retrace steps to route 126.
- 21.4-STOP sign-turn right.
- 22.0-SABATTUS LAKE-arrive about 12.20
- LUNCHEON AND MEETING PLACE. THE GLACIAL GROUP WILL MEET THE ROCK AND MINERAL GROUP HERE.

No schedules have been prepared for the afternoon trips. These will be available soon but no time estimates will be made. The rock and mineral group will go eastward on route 126 to Wales to study some interesting contact mineral formation; then northward to view some basic phaneritic rocks. If time permits this group will cross the north end of Sabattus Lake to Greene and thence across the Androscoggin river to reach the Lewiston-Augusta road. Journeying along this road toward Lewiston are some interesting structural studies. The glacial group will resume studies of glacial features in the general vicinity of Sabattus Lake after the luncheon and meeting.

## RESUME

- Fri. 12-a.m. Optional trip for those arriving early.
- Fri. 12-p.m. Mineral and Rock trip as outlined.
- Glacial schedule to be furnished later.
- Fri. 12-7.45-Meeting, Bates College.
- Sat. 13-8.30-Mineral and Rock trip as outlined.
- Glacial schedule to be announced.

afternoon trips to be planned as time permits.

NOTICE:-SPECIAL SUNDAY TRIPS will be made to Buckfield or Topsham-interesting pegmatite localities; and Perkins has indicated his willingness to conduct special glacial trips Sunday. Do not hesitate to ask about these trips.

QUADRANGLES-Lewiston, Poland, Gray, Freeport and Gardiner.

PLEASE MAIL SLIP WITH INFORMATION REQUESTED-see page 2

NEIFGM-GLACIAL-1

FRIDAY afternoon, October 12, 1934-Trip leaves corner of Campus avenue and Nichols street-Bates Campus at 1 p.m.  
Set odometer at 0.00 miles and follow route of Friday afternoon ROCKS and STRUCTURE trip to:-

- 3.6-STOP SIGN; turn right with Rock and Structure trip; RT. 121 to northwest-wind drifted sand; route is across sand plain.
- 4.3-Straight through. (ROCK trip turns right on Garfield rd.) Dumps of Mt. Apatite visible to northwest.
- 5.1-northwest slope of hill to right where original find of Maine tourmalines was made.
- 5.8-underrit stream; 6.0-inclusions of schist in pegmatite;
- 6.9-Little Androscoggin river to left.
- 7.1-Village of Minot; 7.4- Little Androscoggin river.
- 7.8-Cross Little Androscoggin river; note abandoned meander.
- 9.3-Excellent example of sand plain.
- 9.7-Big abandoned meander of Little Androscoggin.
- 10.2-Ahead- five elevated abandoned meanders.
- 10.9-Entering Mechanic Falls; 11.2-SHARP LEFT; 11.3-RIGHT.
- 11.4-Cross Little Androscoggin river. TURN RIGHT and then keep right at Tarbox garage.
- 12.3-RAILROAD; 12.5-Cross Bog Brook.
- 12.7-SHARP LEFT-do not cross railroad.  
Kame terrace and ice contact slope to right; at least three levels of terraces.
- 12.9-Railroad. 13.2-PIT-STOP-Kame terrace- 15 minutes.  
Retrace from this stop to Mechanic Falls.
- 15.0-Mechanic Falls; turn right at Tarbox Garage-route 121.
- 16.5-Pit to right; kame terrace; bouldery; sand plain on top-5 min.
- 17.3-Three river terraces and S-meander of Little Androscoggin; artificial cut off of river ahead to left; to right-sandy kame terrace-glacial boulders.
- 17.8-Stratified clay in river bank on cut-off.
- 17.9-Granite quarry (Friday morning trip)
- 18.2-Good view of sand plain with river terraces; road travels top of river terrace.
- 18.8-STOP-to left-big cut off of Little Androscoggin-artificial.
- 19.2-Minister Brook-underrit stream-left meandering on abandoned meander of Little Androscoggin-incising.
- 19.6-STOP-turn left onto route 26 to Poland Springs.
- 19.8-Cross Little Androscoggin.
- 20.7-Good points ahead for viewing valley of Little Androscoggin to left from ridge. Long level stretch ahead is part of an elevated peneplain (Fisher and Perkins). Elev. 520ft.
- 24.0-Morey farm-leaving the peneplain.
- 24.6-Intersection with route 11-strait ahead on 26-sand plain.  
Raspberry hill-monadnock-distant left.
- 25.4-strait through-route 11 goes right to Naples.
- 25.5-Granite-left.
- 25.8-entering Poland; 26.2-Poland Cross Road-through.
- 26.3-Beginning of ESKER-left; 26.7-Road on esker-Lower Range Pond, left, unnamed pond, right; 27.1-leave esker.
- 27.2-PIT in ESKER; stop for 10 minutes.

NEIFGM-Glacial-2

- 27.9-Esker to left;            28.4-Middle Range Pond.  
 28.7-Poland Springs Hotel Grounds.    29.5-leaving Poland Spgs.  
 30.2-Strait through; route 122 goes to Danville and Lewiston.  
 30.9-Abandoned Shaker Village.  
 31.1-High Level Kame Terrace to left.  
 32.1-New Shaker Village; Sabbathday Lake to left.  
 33.1-Irregular ice margin deposit along right hillside.  
 33.5-Pegmatite ledges to right-hummocky kame topography.  
 33.8-End of Sabbathday Lake.  
 33.9-Centennial Spring-dirt road left-possible short trip.  
     If taken, please reset odometer at 33.9 on route 26.  
 34.5-Entering Gray Sand Plain.  
 35.2-Shallow pits show structure of sand plain, on left.  
 36.6-Dry Pond-topographic map; "Crystal Lake".  
 37.3-Dry Mills-through.  
 38.3-to left-part of the great GRAY kettle fields. This kame  
     field represents a deposit which may be contemporaneous  
     with the Winnepesaukee moraine.  
 38.9-hummocky nature more pronounced.  
 39.5-Entering Gray village-the village is on a flat topped  
     wash deposit and the kame field extends southwest.  
 40.0-STOP-Gray village; turn left onto 3-4-100-cement.  
 40.2-SHARP LEFT TURN-keep on cement.  
 40.4-Kame terraces on right, highway follows a lower terrace.  
 40.7-on left-ice contact slope drops off into basin once  
     filled with ice.  
 41.5-Going down slope of ice contact to kame field.  
 41.9-Kame topography.  
 42.4-SAWYER'S STORE: SLOW:    42.5-SHARP RIGHT ONTO GRAVEL.  
 44.0-Kettle hole, left;    44.3-Kettle hole-right.  
 44.5-STOP-GREAT KETTLE HOLE and gravel pit. 30 minutes.  
     Retrace from here to 3-4-11 to Lewiston.  
 46.6-Routes 3-4-11-STOP SIGN-right onto cement.  
 52.0-Village of Upper Gloucester.  
 54.1-Kame topography;    54.5-Trap dike-left; FOLLOW RIGHT  
     HAND SWING OF CEMENT HIGHWAY THRU DANVILLE JUNCTION.  
 55.4-Stratified marine clay in road cuts;    55.7-BRICKYARD.  
 57.1-Trap dike, left side of road.    58.1-LITTLE ANDROSCOGGIN.  
     River terraces ahead.  
 58.7-Top of sand plain in which river has cut.  
 59.7-Taylor Brook;    stay on route 100 through Auburn.  
 61.3-ELM HOUSE-left;    61.4-AUBURN HOUSE-left.  
     Cross Androscoggin river;    63.2-LITTLETON HOTEL-left.  
 63.4-Traffic booth-turn right two blocks, then left one  
     block to DEWITT HOTEL.  
     Ahead on 100 and route 126 to BATES COLLEGE.



NEIFGM-Glacial-3

GLACIAL TRIP-Saturday morning-October 13.

Leave corner of Bates Campus-Campus avenue and Nichols street at 8.30; set odometer at 0.00; head cars east.

- 0.00 Campus and Nichols street; east three blocks, right onto wide street-Central avenue-High School and Armory to left; STOP-sign; goes strait through onto Ash street and follow it through city-west to dead end, one block beyond traffic light at Lisbon street.
- 1.00-dead end-turn left onto Canal street; three blocks;
- 1.3-Turn right onto Cedar Street-car tracks on this street; cross canal; railroad;through traffic light at Lincoln st., and cross south bridge to AUBURN; to your left is the section of AUBURN that was completely destroyed by fire last year; to your right, on Auburn side, is mouth of the Little Androscoggin.
- 1.7-Turn left at west end of bridge and parallel Androscoggin river downstream-through the new AUBURN.
- 2.1-Directly across river is the CITY QUARRY-limestone cut by at least 16 basic dikes of which seven are visible from right bank of river.
- 2.6-AUBURN PACKING and PROVISION COMPANY-STOP-GLACIAL KALE TERRACE-15 minutes. Then follow down drive along river.
- 3.0-Gullied kame terraces to right.
- 3.7-Right side of road-limestones cut by trap rocks-vest pocket edition of the CITY QUARRY. Brief stop.
- 4.2-Look at this-we'd appreciate advice on this.
- 5.0-Pegmatite ledges to right in field.
- 5.2-Left side of road-buried esker.
- 5.9-Right-stream entrenched in river terrace; 2 terraces visible.
- 6.6-Nice stream sculpturing;terraces visible on north side of Androscoggin river, too.
- 6.8-Pronounced terrace to right of highway.
- 7.5-Climb spur of intermediate river terrace.
- 8.3-Excellent view of Androscoggin river terrace on north side.
- 9.0-S bend in road; terraces on north side of river near river; terraces on south side further back.
- 9.3-At House with "Christmas trees" enter FREEPORT QUAD."
- 9.7-Terraces-right; 10.6-Gerrish brook-meander scar.
- 10.8-Note decided change in topography. Probably beginning of glacial deposit that blocked course of Androscoggin and caused it to swing to northeast.
- 11.2-Village of Durham; left of band stand onto route 9.
- 11.3-along route 9-topography probably due to glacial deposits and may represent a dam. Irregular ice front deposits.
- 12.7-sharp descent-turn sharp left with route 9-follow Lisbon Fall signs.
- 12.9-Newell Brook-meander of brook with inter-meander scar; north of Newell Brook, a higher meander scar.
- 13.0-Sand plain; 15.1-Steep hill-clay, right bank.
- 15.4-route 9 goes left-trip goes straight ahead to
- 15.5-GRAVEL PIT-stop of 10 minutes-part of BURIED ESKER. Retrace to route 9-turning left at exit of pit.

NEIFGM-Glacial-4

- 15.8-right on route 9 over Androscoggin river; left at north end of bridge following route 9; right at dead end and cross railroad tracks-straight ahead-make no turns in LISBON FALLS-route followed is 125.
- 16.4-straight ahead on route 125; 17.2-Sand plain.
- 19.0-underfit stream on right; 19.2-gravel pit in kame.
- 19.6-straight through leaving route 125 which swings right-follow West Bowdoin signs.
- 19.9-Fisher stream; 20.2-Purinton Brook.
- 20.4-Cross-roads-West Bowdoin- straight through.
- 20.7-SLOW-look left ahead-topographic feature-KETTLEBOTTOM-wind driven sand and sand dune left; pegmatite and schist right. 20.8-Go through gate to left of highway. 30 min.
- RETRACE TO WEST BOWDOIN CROSS-ROADS.
- 21.5-West Bowdoin turn sharp right, down hill.(Lewiston signs)
- 21.7-Through-over sand plain. Kame terrace deposits on valley sides opposite Kettlebottom.
- 22.6-keep straight ahead; 23.8-keep straight ahead.
- 24.2-take right hand road at fork.
- 24.5-cross roads-Brick house-straight through.
- 25.2-Intersect route 9, right on route 9 up hill.
- 25.6-Good view of surrounding country. Good peneplain due west.
- 25.7-Interesting exposure, pegmatite, gneiss, schist, dikes, and on top of rise-large feldspar crystals, some beryl-right side.
- 26.3-Pegmatite, schist; kame topography both sides of road.
- 26.7-ahead-to northeast from Maxwell brook-front of Sabattus delta; 27.3-straight through.
- 27.5-cross roads-leave route 9-turn sharp right onto top of delta- elevation 320 to 340 feet; cemetery on delta top.
- 27.8-kettle to left-position of ice at time of formation of the delta; 27.9-kettle to right; descend ice contact slope.
- 28.0-pit in ice contact slope edge of delta.
- 28.2-Sabattus mountain ahead-kame topography.
- 28.3-STOP SIGN, turn right onto routes 9 and 126.
- 29.1-Kame topography;
- 29.5-LEAVE ROUTES 9 and 126 and turn right onto 197-RICHMOND rd.
- 30.0-Pit in front of delta-left of road. 30.1-PIT-left.
- 31.0-Between 30.1-and here, just beyond last pit you crossed divide between Kennebec drainage, northeast, and Androscoggin drainage, southwest. TURN at road that goes left up hill and retrace to route 126.
- 32.4-Route 126-(Note:-Perkins might decide to turn right here depending on time available)  
Turn left toward Sabattus village;
- 33.2-kames, south side of road.
- 33.4-cross-roads-straight through-then STOP-Sabattus ESKER-deposited by tributary stream that built delta to south.
- 33.8-Meet rock and structure group at Sabattus Lake. LUNCH and meeting.

AFTERNOON TRIP ON PAGE 5.

NEIFGM-Glacial-5

Saturday afternoon, October 13-Glacial trip.

After the luncheon and the annual meeting at Sabattus Lake both parties will travel eastward over highway 126 to Wales turning northward at that point to see possible glacial spillways that are associated with the metamorphosed rocks of the region. Both parties will follow approximately the same route northward to the village of Leeds. Here the glacial party will see another large delta and enroute the rocks and structure party will see granites, metamorphics and some basic dikes. Both parties will come together on the Lewiston-Augusta road north of the village of Green.

Members who will want to leave the trips at this point will travel to Lewiston or Augusta over route 100.

There are other glacial features to be seen in the immediate vicinity. The rock and structure party will travel to Lewiston stopping at as many points of interest as time will permit.

NOTE:-

GLACIAL and ROCK and STRUCTURE TRIPS

Dr. Edward H. Perkins and Dr. Lloyd W. Fisher want to repeat the invitation sent out on the first sheets concerning special Sunday trips. The former will be glad to conduct any party to points of interest in the Lewiston, Poland and Freeport regions, or in the vicinity of his home "grounds" Waterville. Dr. Fisher will be glad to take a party to Buckfield, Topsham or any other mineral locality. We would appreciate if any members desiring these Sunday trips would make know their intentions at a date early enough for planning of such trips.

COME TO BATES. We believe we have some interesting geology to show you.

FURTHER NOTE

Please keep in mind that the Friday afternoon trip leaves the Bates Campus promptly at 1.00 and parties must keep on schedule to cover the entire trip before nightfall. The Saturday morning trips will leave promptly at 8.30. Time of departure of Saturday afternoon trip will depend on length of luncheon and meeting. Two hours and a half will be sufficient for this trip.



- ⋯ Sand
- Kames
- ▨ Kame Terraces
- - Esker
- △ Delta

Glacial Deposits Lewiston Quadrangle



- // // // // GLoucester  
 Glacial Deposits  
 Poland Quadrangle  
 . . . . Sand Clay Plains  
 o o o o Kames  
 // // // // Kame Terraces  
 [Blue shaded box] **ESKER**