GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, 1945

1945 INDEX
to
GEOLOGICAL NEWS - LETTER
Volume 11

Compiled by Lloyd Ruff, John Allen, and Ewart Baldwin

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GEOLOGICAL SOCIETY NEWS LETTER

Vol. 11, No. 1 January 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 SW. 6th Ave. at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 SW. Taylor Street between SW 4th and SW 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 NE. 45th Avenue. Room open from 5 to 9 p.m. Round table discussions from 7 to 9. Open to members, their families and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Jan.12 — Speaker: Dr. Warren D. Smith.
Subject: "The Earth Sciences (Geology and Geography) in Relation to War and Peace." This should be of exceptional interest to our members in view of Dr. Smith's work during the past summer. He has addressed our Society on numerous occasions and has always had appreciative audiences. We are fortunate to secure him at this time.

Sunday Jan.14 — Work Night: This will be another rock night. Bring your rocks for identification. Mr. Minar will be on hand to give instructions on hand-grinding and polishing of rock and mineral specimens.

FROM THE EDITOR'S CHAIR

With this issue we welcome in a new year and as our president remarked at the luncheon meeting, a little late but nevertheless with good wishes for the best that is possible for everyone. Just in case you haven't noticed this is the first issue of Volume 11 of the NEWS - LETTER and marks the beginning of a new decade in Geological Society history. Several interesting articles are at hand for publication in the coming issues. John Allen has contributed the first of a series entitled "From a Field Geologist's Notebook" and Number 1 is published herewith. Another of Prof. Geo. F. Beck's fossil wood series also appears in this issue and we have permission to publish the geology papers which were presented at the Oregon Academy of Science meeting in January 1944. We are pleased to present also "The Christmas Diary" by the Treashers since many of the members are not on their subscription list.

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LUNCHEON NOTES - THURSDAY, DECEMBER 7, 1944

The entrance of Dr. Stevens, fresh from Washington, New York, and way points filled the last of the two dozen available places at the tables where we enjoyed our soup, salad, roast beef, pumpkin pie, and rolls WITH butter, all accompanied with cheerful chatter about this and that with a little geology thrown in for seasoning.

Kenneth N. Phillips presided in the absence of President Bates who was to be installing a furnace in his home. Mr. Phillips remarked that if President Bates could turn the heat on in his home as he does on the members of the society when he wishes them to perform some task for GSOC he would not need a furnace.

Miss Henley passed around four Christmas cards that she had bought for absent members of the Society. These were signed by the members present.....John Robinson had a photograph showing the tank, pump, and gas motor operated by natural gas near Sumner, Washington. This installation was mentioned at a previous luncheon..... Chairman Phillips had a sample of pitch belonging to Leo Simon, that was found inside a boulder in Johnson Creek at SE. 122nd Avenue, Portland, by John R. Leach. Mr. Phillips connected this find with a statement by Dr. Donald Lawrence that he had seen the lava from Mexico's new volcano, Paricutin, pushing down small pine trees, from which he thought pitch might be distilled and later be found in the vesicles in the hardened lava.....Dr. Courtland L. Booth introduced Mr. and Mrs. Thompson of the Seattle Gem Society who are stopping off in Portland to look at some of the collections of rare stones in the homes of Portland people. They were the guests of Dr. and Mrs. Booth, and were on their way to Los Angeles to spend the winter.....Mrs. Gordon and Mrs. Reeves of Salem were introduced by Mrs. Stockwell, and Mr. Libbey introduced Mr. Stewart, new member of the staff of the State Department of Geology and Mineral Industries, and Mrs. Stewart, who is also a professional paleontologist.

Dr. Stevens, when asked to say something about his trip to the eastern cities said that in spite of having a priority for travel by air he had to lay over six hours in Salt Lake City and four hours in Chicago. His luggage strayed somewhere along the route and he did not get hold of it again until just before he was leaving New York City to go to the home of Malcom Pirnie, President of the American Society of Civil Engineers at Scarsdale. Dr. Stevens, who is to succeed Mr. Pirnie in office, was called to Washington by Edward Stettinius, to confer on matters of foreign policy. In New York he met with the presidents and secretaries of the five leading engineering societies of the United States, and after all that, had to return to Portland by train, which, should we say, was "some come down." In speaking about the prospects of Portland's new museum Dr. Stevens said that a general meeting will be held on January 5th to get the project under way.

O.E.S.

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REMINDER

Don't forget the Oregon Academy of Science Meeting at the Public Library on January 13, 1945. A goodly number of interesting titles of papers have been submitted and an informal luncheon is scheduled at the Winter Garden - 425 SW. Taylor St.

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TERTIARY WOODS OF WESTERN MONTANA

Several interesting specimens of petrified wood from the Bozeman beds near Three Forks and others from the Yellowstone Park area have been received from Dean F. B. Cotner of the Montana State College. From the first group one specimen (no.2103) matches two osage orange (Toxylon--no.1628,1962) examples from Rockville, eastern Oregon. Osage orange wood is virtually the duplicate of black locust (Robinia) but Miss Webber has named the latter at Last Chance Gulch of the Mojave on the basis of variable fiber diameter. I have ventured to label the Montana and Oregon woods Toxylon for lack of this contrasting fiber diameter. The second Bozeman wood (no.2106) is an ideal example of redwood with traumatic duct rows.

The Yellowstone woods are of especial interest at this time. One from Specimen Ridge (no.2105) is an example of the so-called classic redwood. More has been written about this Yellowstone wood than probably any other American petrified trees. Four authorities, Felix, Knowlton, Platen, and Read, all agree that traumatic ducts are not apparent in hundreds of specimens examined. The Cotner specimen bears none. In a forthcoming paper to appear in NORTHWEST SCIENCE I have raised the question as to whether such a wood may, with confidence, be referred to the redwood.

A second Yellowstone specimen from Lamar River (no.2108) is one of the pines generally reported from this classic ground. For serious study this small limb section is inadequate, but it does indicate clearly the character of the field pitting and, on the negative evidence of no dentate ray tracheids observed, could represent the first known white pine from the area.

George F. Beck
December 13, 1944.

THE CHRISTMAS DIARY

(Published annually by the firm of Treasher, and Treasher. Subscription price, one letter at least once a year, just for old times sake. The official address, which you will note and use as directed is: 3932 12th Ave., Sacramento (17) California.)

We're short of red points, of bacon, of butter, of cigarettes, of matches, of nylon stockings, and so on far into the night. But one thing we are not short of this year, is our wish for a Merry Christmas to each of you. For in spite of all the inconveniences of war time, which do not really matter at all, we still have our friends, and our privilege of sending to you our best wishes for the Holidays and the coming year.

Chronology

As stated in Volume eleven, the Treasher's moved to Sacramento last Thanksgiving where Ray took up work with the U.S. Engineer Department as civilian geologist. Mabel remained in Grants Pass as living conditions in war-crowded Sacramento are not to be bragged about. In due time, the Treashers discovered that renting living quarters was out of the question, so they purchased a small home near the southeast city limit.

The house is situated on a corner lot, 50' X 115', complete with "garage". The house has a living room, dinette, kitchen, bath, and two small spaces that pass for bedrooms in these times. The former owners were not too "work brittle" on keeping the place up, so there were millions of things to be done. The "backyard" once was a garden (?). This had to be cleaned up, grass planted over part of it, and the remainder prepared for garden. A picket fence had to be built around the backyard. Hosts of shelves had to be installed inside the house and garage, not to mention such things as bookcases, and so forth. Checking over their rather incomplete diary, the following notes are gleaned:

1943

Nov. 25. Arrived in Sacramento, and with considerable luck, found an auto camp in which to headquarter.
Nov. 26. Ray reported to the U.S.E.D. ready for work. Jessie began looking for a place to rent.
Dec. 10. Gave up trying to rent a place. Began dickering for a place to buy.
Dec. 15. Discovered that places are pitifully overpriced. Nothing in sight.
Dec. 25. Found a place - started arrangements for purchase.

1944

Jan. 1. Moved into house with equipment loaned them by friends.
Jan. 7. At long last, the household goods arrived. Had the house wired for power so Jessie could use her electric range.
Jan. 15. Jessie acquires a kitten. The diary says -- "Kitten named 'Trouble' adopted by the house. Long haired and full of the devil."
Jan. 21. Lumber and stuff arrived with which to construct shelves, bookcases, and what-have-you?
Jan. 25. They acquire an orange tree and thus become "native sons." Jessie officiates at the planting.
Jan. 25. Ray acquires a real man-sized desk on which to store his stuff.
Jan. 26. One section of bookcases completed. Still need to be painted.
Jan. 30. Bookcases for living room installed. Still need to be painted.
Feb. 6. Took a short ride east of town with the Deans. Our first trip into the hinterland of California.
Feb. 13. Bookcases completed for Ray's room.
Feb. 22. Jessie painted bookcases while Ray was in the field. The house stinks of paint.
Feb. 29. Began spading garden, cleaning out the old grass and preparing to plant things.
March - Still spading
Apr. 7. Lumber for picket fence arrived.
Apr. 9. Installed 15 feet of 6-foot fence between house and garage.
Apr. 25. Had radishes and spring onions from our own garden. Ordinarily we would just be planting garden.
May 7. Completed construction of the picket fence. Wow, what a job!
May 8. Began the lovely job of applying paint to the fence.
May 18. Finished the second coat of paint on the fence. Can call this job finished.
May 19. "Trouble" proved to be a male, and took a trip to the Vet. Was renamed "Toughie" for good and sufficient reasons.
May 28. Garden well under way. The constant job of fighting weeds is with us - also irrigating.

June 4. Our nice green lawn showed up its true color, yellow, with dandelions. Evident that considerable work will have to be done to eliminate the pretty flowers. Spare time in June spent in mowing the lawn, and trying to eradicate the weeds. Not much success.

June 12. Installed Koolshades at a number of the windows to help eliminate some of the summer heat which we are beginning to conscious of.

July 3. Rock wool insulation installed overhead. Will it help keep the house cool during the summer and will it help keep it warm in winter?

July 6. Hot weather really is with us, although "natives" insist that it is unusual. We can keep the house delightfully cool.

July 22. First of Jessie's Heavenly Blue morning glories in blossom on her birthday. Was she pleased??!!

July 29. Installed support for berry vines. Also fixed the clothesline so that it will support the "wash" with a reasonable security.

August - Ray in the field most of this month so the home work fell behind. Jessie busy with the garden and her flowers and her work with the Red Cross.

Sept. 4-9. Some real hot weather - when it did not cool off well at night. Enjoyed our backyard.

Sept. 17. Began the job of putting away the garden for the "winter." Still digging dandelions. Unending job.

October - Jessie's chrysanthemums are beginning to blossom and is she proud of them!! All the neighbors are getting the benefit as well as the homestead.

November - Begins to feel like winter. The heater is going part of the time.

Nov. 12. Installed weather-stripping at most of the windows and around the doors. Ray still in the field quite a bit of the time.

Nov. 19. Discovered bermuda grass is a tiresome weed. Gave up trying to dig it out of the lawn. At least it is green most of the year. Ordered some dwarf fruit trees, when, and if, delivered.

Nov. 26. Began major operation of rehanging an inside door to meet with Jessie's ideas of what the inside of a house should be.

Dec. 3. Put the Christmas Diary "to bed" so that it can get into the mail early. You can find us listed in the 'phone book if you come to town, so you have no excuse. In the meantime

MERRY CHRISTMAS & HAPPY NEW YEAR

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LUNCHEON NOTES - THURSDAY, NOVEMBER 30, 1944

Mr. Davis very proudly exhibited a book on the Geography of Puerto Rico which he had received from O. R. Bean, his former boss. Dr. Booth called attention to a recent article in Desert Magazine by Charles Kelly on Fruita, Colorado, and adjacent areas of Colorado and Utah. Specimens today included a tooth from Pine Creek near Baker, Oregon, which Dr. Lowry brought. Mr. Hancock tentatively identified it as Equus occidentalis, a Pleistocene horse. Mr. Sandoz had a moss agate from central Oregon and a piece of lava cinder from near Madras. Dr. Booth's guest was Mr. Harold M. Smith of Seattle who made a few remarks about Mt. Mica in Maine and also told of his experience in the Ottawa museum in Ottawa, Canada. Mr. Hancock invited the Geological Society members to attend the Oregon Agate and Mineral Society's auction on December 1 and annual Christmas party on December 15. H. Bruce Schminky was announced as the chairman for the annual banquet. Mr. Calef reported a rumor of oil near Eugene which prompted Mr. Sandoz to comment on some gas wells at Tacoma.

L.L.R.

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FROM A FIELD GEOLOGIST'S NOTEBOOK

I

If all large animal life were excluded from a forested or brushed-over area for a period of five years, it would become almost impenetrable. Deer trails or cattle trails are the first trails, and a good woodsman (and every geologist must be something of a woodsman) never "kicks against the pricks" - he follows the animal trails, which follow the lines of least resistance, and the shortest distances between two points - usually between the prairies and the water-holes. Trails, depending upon the topography and the type of vegetation, follow the creek-bottoms, the ridge-tops, or the side-hills. When they do the latter, the animals, although no geometers, follow "big circles" and the trails rise over the ridges and drop in the ravines. I imagine that the reason "Rogers Rangers" had such a tough time travelling that relatively short distance (in miles) through the north woods, was that as they said, the country was absolutely devoid of game.

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The "second law of superposition" might be that law which permits one to trace a formation or the contact between two formations along a side-hill. The contact is always at or close above the highest point at which float pebbles from the lower formation are found. Where outcrops are absent, gopher holes are a boon, since they frequently bring up, through many feet of unidentifiable soil, pebbles which can be recognized.

* * * * * *

The time of sprouting of the new grass in California is a good one for geological work. Formations can be traced by the "grasscrop" - a line of more luxuriant vegetation which marks a porous, water-bearing layer. Attitudes may even be taken, and "grassdips" plotted when such a ledge crosses a ridge. Sometimes certain flowers will grow only on one formation. One formation with limestone boulders grows Calochortus albus and astragalus (loco-weed) which does not grow on adjacent formations. When they are in bloom, you can map the flower beds, and be right.

* * * * * *

Taking dips and strikes: Weathered rocks present a host of problems to the structural geologist. Are you taking that joint plane for a bedding plane? or is it a cross-bed rather than a true dip? Or is it slaty cleavage and not true bedding? Has the outcrop slumped or slid from its true position? Sometimes a little digging will help, other times if you dig you destroy that faint color trace which enables you to get the dip and strike. I mark all my attitudes with an alphabetical scale: (A) for good exposures, many feet wide, no possibility of error; (B) for one small exposure, may not be representative; (C) for what can be read easily, but may not be a true dip and strike; (D) for that suggestion of an attitude you <u>hope</u> is the true attitude ... and which, if it checks with others in the area, you can use.

John Eliot Allen

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 2 January 25, 1945

SOCIETY ACTIVITIES

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TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Jan.26 — "Central Idaho in Color" by Lloyd L. Ruff. This will be a kodachrome travelogue bringing you the geology and scenery of the Salmon and Clearwater River basins of Idaho.

Friday Feb.9 — "Down the River of No Return" - motion pictures of the recent U.S. Army Engineers expedition down the Salmon River in Idaho. A sequel to the above program.

Friday Feb.23 — Annual Business Meeting - plus added attraction.

Friday Mar.9 — 10th Annual Banquet - mark your calendar.

NEWS NOTES

Donald O'Conner has returned for his second term at the University of Oregon where he is majoring in psychology.

The Society extends its sympathy to Rose Jennings in the recent passing of her mother in the east.

From an article by Mrs. Ralph Gustafson of Seattle entitled "A Vacation in Central Oregon" in The Mineralogist for January 1945, we note the following entry for July 18, 1944: "Friday ranch headquarters.....on a low hill we found some tents. There were several parties from Portland, including Mr. and Mrs. A. W. Hancock, the well known fossil collectors. At this time, Hancock explained that he was not searching for old bones, but hoped to dig some fine agates."

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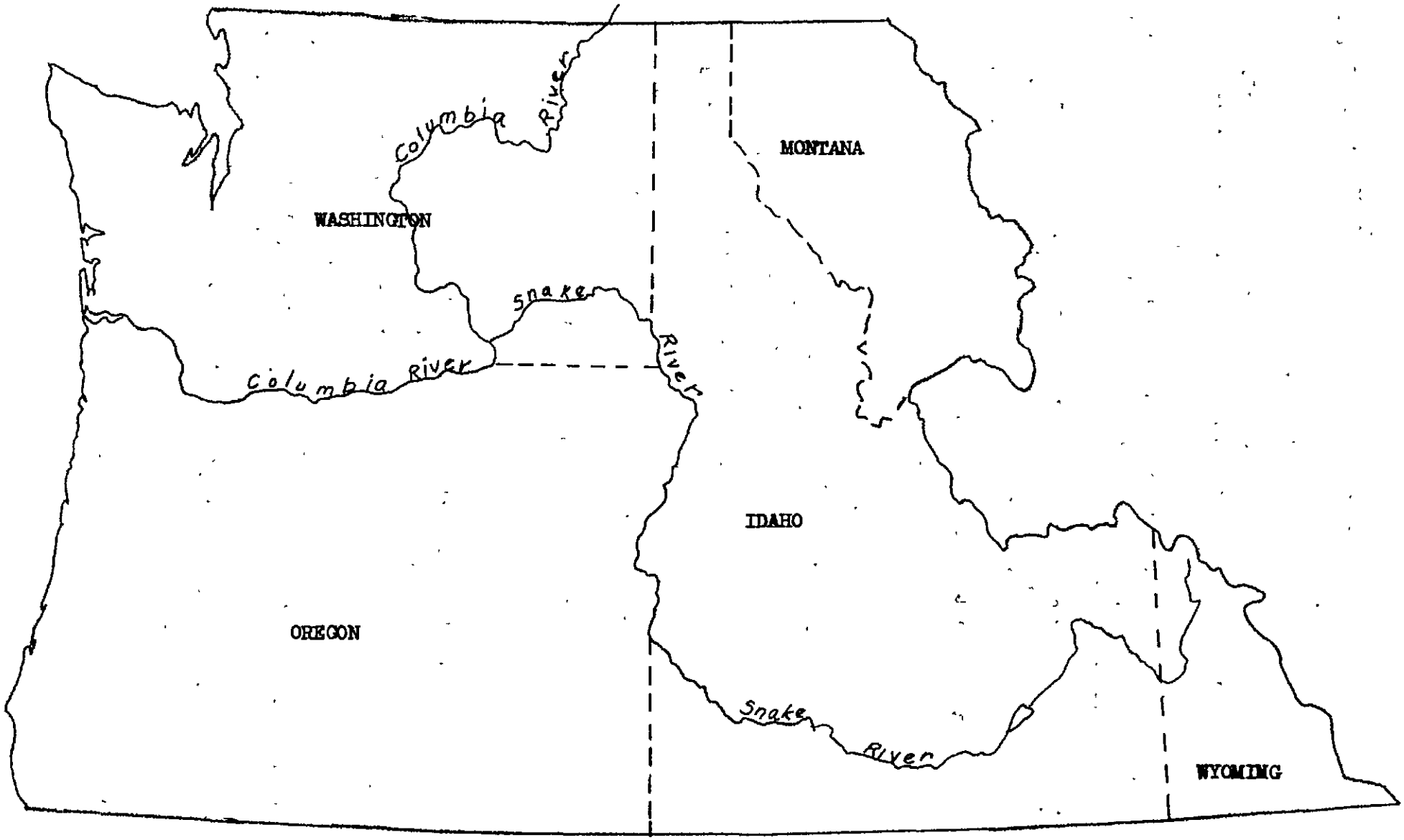

"THE OREGON COUNTRY" - OREGON TERRITORY 1846

THE ORIGIN OF THE SOCIETY'S NAME

Possibly some of the newer members of the Geological Society of the Oregon Country ponder on the significance of the name applied to our Society, organized in, and holding its meetings in Portland. Every member should know the origin of this name and the meaning of its application to our group.

At the meetings held in the spring of 1935 to prepare a constitution and by-laws for the Society, considerable discussion developed in connection with choosing a name. Suggestions were numerous. The name finally chosen was that suggested by Dr. E. T. Hodge who gave such logical arguments that his suggestion was adopted unanimously by the committee. In effect, Dr. Hodge pointed out that, aside from Coast streams, the old Oregon Territory which comprised the present states of Oregon, Washington, and Idaho, and small parts of Montana and Wyoming, coincided with the limits of the Columbia River Drainage area within the United States, and contained the great Columbia basalt flows, the Cascades, the picture geology east of the Cascades, and the western slopes of the Continental Divide. It presented opportunity to study the geology of the Northwest in the vastness of the actions which produced the physiography of the region.

With respect to the use of the word "Country" instead of territory, that too was founded upon excellent logic. The territorial claims of the United States upon the Pacific Northwest were based upon the explorations of Lewis and Clark in 1806-7. By a treaty with England in 1846, the northern boundary was finally placed at the 49th parallel. The southern boundary was, of course, the 42nd parallel forming the northern boundary of what is now the states of California, Nevada, and Utah at that time under the sovereignty of Mexico where it remained until the close of the Mexican War in 1848. Since the western boundary to the Louisiana Purchase contiguous to this area was along the crest of the Rocky Mountains, this line of demarcation formed the eastern boundary of the Oregon Territory. This vast area was popularly referred to in the parlance of the day as the "Oregon Country," as indeed it was. It is not only a political province, it is also a logical economic entity as shown on the accompanying map.

Passing time to the extent of ten years justifies the selection of the name. The years ahead of the Society possess great potentialities in study and exploration. In view of all this, would it not be fitting to give more prominence to the name, Geological Society of the Oregon Country? This could be accomplished by redesigning the cover of the Bulletin, which at present shows the seal of the Society, to show both the seal and the map. Shall we not call this a challenge to the imaginations of the editor and his Board of Publications?

F. L. Davis.

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LUNCHEON NOTES - DECEMBER 14, 1944

Twenty-two members and guests were present after the arrival of Dr. Booth.-- The butter was by courtesy of Mr. Minar and was very efficiently distributed by our genial secretary Miss Ada Henley.

Mr. Minar upheld the specimen end of the luncheon alone with a piece of oölite from California which he had secured from Dr. Booth after the doctor had been the successful bidder at the Agate Society auction.

The Service committee - Vance and Davis - took orders for Lewis McArthur's new edition of "Oregon Geographic Names." - Ye editor passed around a copy of Robert Bailey's "River of No Return."

Dr. Olivia McHugh of Salt Lake was introduced by Mr. Hancock. Dr. McHugh who is an enthusiastic member of the Salt Lake Mineral Society was attending an optometrists convention in the City of Roses. Mr. Libbey introduced Mr. John Collins and Mr. Garn Rynearson of the Spokane regional office of the U.S. Geological Survey. Mr. Collins told of the strategic minerals work done in the Pacific Northwest on chromite, lead and zinc, clays, cobalt, and copper.

L.R.

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STEVENS TO REPRESENT G.S.O.C.

345 U.S. Court House
Portland 5, Oregon
December 21, 1944

Mr. George H. Weber, Acting Chairman
Board of Incorporators
Oregon Museum Foundation, Inc.
401 Artisans Building
Portland 5, Oregon

Dear Sir:

Replying to your letter of December 18, I take pleasure in naming Dr. J. C. Stevens to represent the Geological Society of the Oregon Country on the Board of Trustees of the Oregon Museum Foundation, Inc.

Dr. Stevens' address is: 434 NE. Royal Court, Portland 15, Oregon. Telephone: EA. 9333.

Very truly yours,

/s/ E. N. Bates

President
Geological Society of Oregon

Note: The Geological Society has two other members represented on the Board of Trustees of the Oregon Museum Foundation, Inc. - Mr. F. W. Libbey represents the State Department of Geology and Mineral Industries, and Dr. C. L. Booth, the Oregon Agate and Mineral Society.

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PROPOSED BY-LAWS of the OREGON MUSEUM FOUNDATION INC.

Article I - Name

As set forth in the Articles of Incorporation the name of this organization shall be the OREGON MUSEUM FOUNDATION INC. which for brevity is herein referred to as the Foundation.

Article II - Management

Section 1. The management of this corporation shall be vested in a Board of Trustees of not more than twenty-five members, hereinafter called the Board, which shall be governed in all things by the authority set forth in the Articles of Incorporation.

Section 2. Included on the Board shall be a member selected from each of the following organizations as long as such organization remains in existence. Said member may be recommended by his or her organization to the Nominating Committee hereinafter provided for prior to the annual election.

1. The Oregon Historical Society
2. The Battleship Oregon Commission
3. The Dept. of Geology & Mineral Industries of Oregon
4. The faculty of the University of Oregon
5. The faculty of the Oregon State College
6. The City Council of the City of Portland
7. The Oregon Audubon Society
8. The Oregon Agate and Mineral Society
9. The Geological Society of the Oregon Country
10. The Oregon Manufacturers Association

The Board shall also include the following ex officio members whose terms of service shall be limited to the terms in office of each:

11. The Chancellor of the State Board of Higher Education
12. The State Superintendent of Public Instruction
13. The Superintendent of the Portland Public Schools
14. The Governor of the State of Oregon
15. The Mayor of the City of Portland

The remaining 10 members of the Board shall be elected from the membership at large by the members of the Foundation.

Section 3. The term of office for all members of the Board except the ex officio members provided for under Section 2 hereof shall be 3 years except that the first elected Board members shall determine among themselves by lot the names of six (6) who shall serve for one year and seven (7) who shall serve for two years. Failure of any one of the above named organizations to recommend a name for election as a member of the Board shall not prevent the members of the Foundation from electing a Board member from such organization.

Section 4. Any nine (9) members of the Board shall constitute a quorum at any meeting for the conduct of its business provided that all members of the Board shall have been notified in writing at least seven days in advance of the date of such meeting.

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LUNCHEON NOTES - DECEMBER 21, 1944

The holiday spirit pervaded the atmosphere of this pre-Christmas luncheon, presided over by Bruce Schminky, one of the past presidents. A special feature, the inspiration of Mrs. Stockwell, was the singing of carols, led by John Allen, accompanied on the piano by Mrs. Stockwell. At each place was a typewritten copy of three popular Christmas songs. A pleasant innovation.....Mr. Allen, returned for the holidays from his post-graduate work in California, reported having spent a day at the Permanente magnesium plant 50 miles south of San Francisco. This, he says, is just one of their many operations. Besides the largest cement plant in the world, they have a tremendous number of supplementary plants. He exhibited several most interesting specimens showing the various forms of magnesium, including one of large crystals and another of small ones, and described the manufacturing process (in terms too technical for this reporter's shorthand). Mr. Allen promises a written article on this subject in the near future.....The fiftieth anniversary number of the Mazama magazine was shown by Ken Phillips, this being the only publication of its kind, he comments, which has improved in size and quality in these times. It contains, among other things, an account by Frank Branch Riley of the first Mazama climb of Mount Hood, July 19, 1894; a detailed description of Paricutin by Lt. Donald B. Lawrence; many old time Mazama pictures; and a review by Arline Shaw of the three-act "Mazamapanorama" given at Timberline Lodge on July 22 - written in her characteristic original style - well worth reading. The five copies of the magazine brought by Mr. Phillips were soon taken (at $1.00 per copy) and each purchaser was presented with one of the beautiful colored pictures of western scenes issued by the Standard Oil Company..... "Ka-mi-Akin," the last hero of the Yakimas, a book by A. J. Splawn, containing a collection of Indian lore and pioneer anecdotes, was shown by Mr. Vance. The author is an authority on the early history of eastern Oregon and Washington. The book retails for $4.75.....A relief map showing the limits of the territory covered by the G.S.O.C., said to be one of the best relief maps of the northwestern states, was displayed by Franklin Davis.....Today's guest, presented by Ken Phillips, was Mr. Frank Cleaver, now a member of the Geological Survey..... President Bates reported having received a letter from George H. Weber, one of the incorporators of the Oregon Museum, requesting that he appoint an outstanding member of our group as service trustee for the Museum. Dr. J. C. Stevens, being the obvious choice, accepted the appointment.....The only other specimen shown besides John Allen's was a large, somewhat weighty gray and black mottled substance which was announced by Dr. Booth to be prehnite and solemnly received as such. After being duly admired, however, the Doctor admitted that if we had given it the old fashioned licking test, it would have been found to be halite - just common salt.....And here's news: Mr. Libbey says that a Christmas card recently mailed to Hi Wood brought the announcement that Hi is now a benedict, this personable young man having acquired a bride in Rhode Island. Hi is now stationed at Newport News, with prospects of being moved shortly to parts unknown.

A.H.

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PINS

A few of the Geological Society emblem-lapel pins are still available at the Kline Manufacturing Jewelry Co. on the top floor of the Journal Building. Price $1.65.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 3 February 10, 1945

SOCIETY ACTIVITIES

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TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Feb. 9 — "The River of No Return" - Something of the colorful and almost legendary history of Idaho's Salmon River climaxed by the showing of colored movies taken by Stanley Sporseen and Lloyd Ruff while on last summers U.S. Engineers Department expedition.

Friday Feb. 23 — Annual Business Meeting - plus added attraction.

Friday Mar. 9 — Tenth Annual Banquet at the Grace Memorial parish house, northeast 17th Avenue and Weidler Street. Price $1.50 per plate - get your reservations in early for "Ten Years in Review."

PROPHET IN HIS OWN COUNTRY

This city and the Pacific northwest are proud, and with warrant, of the choosing of John C. Stevens, inventor and consulting engineer, as president of the American Society of Civil Engineers, at the recent annual meeting of the society, held in New York. We of Portland, where Mr. Stevens has long had his residence, have learned to regard him as an authority in his field, especially that of the hydroplant, and as a community member who has always been to the fore, wholly without self-seeking, in the physical and cultural development of the city.

His attainments in his work as consulting engineer are eminent, but to his Portland friends these were apt to seem of less significance than his pleasant friendship, his sincerity and integrity as a citizen. We are grateful to the American Society of Civil Engineers for reminding us that Mr. Stevens also is among the foremost in his exacting profession. As a matter of fact, come to think of it, we knew it all the time.

"Oregonian" January 21, 1945

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LUNCHEON NOTES - THURSDAY, JANUARY 4, 1945

As usual, President Bates banged on the table with his historic gavel just as I was swallowing a liberal mouthful of food, and, as usual, I managed, after an anxious moment, to get the food headed down the track to my stomach, past my wind pipe. It might be well if our president would give a gentle warning tap before he bangs the table.

After getting the more or less undivided attention of about twenty members present, President Bates called on Mr. Minar to explain a couple of specimens he had started around. One piece had been doctored by Mr. Minar to fool the experts. Franklin Davis was the only one to see through the plan. The light being poor, the fact that a piece of obsidian had been sandblasted escaped the professionals.

The other specimen Mr. Minar explained as an example of the methods used in sandblasting patterns on marble. It looked easy.

Mr. Davis then read a letter from Dr. Warren D. Smith, giving the subject of his talk scheduled before the society for January 12th.

Mr. Davis introduced Mr. Stanley E. Sporseen of the U.S. Army Engineers, as his guest, explaining that Mr. Sporseen was his boss. This in itself makes him a most talented person, and one wonders of he has ever returned a book to the library for Franklin.

John Robinson had his father, Frank Robinson, with him as his guest, telling us that his father was the greatest booster for the Olympics that that wild and little known playground has. If he beats John, he will have to go some.

Mr. Minar told us of the miraculous escape from death his son had experienced in a bomber crash in the Southwest Pacific theatre. The accident happened on October 17th, and Sgt. Minar is now well on his way to recovery after having been flown 7,000 miles back to this country in forty hours. Both legs were broken, as were three ribs, and complications made necessary drawing fluid from his lungs to prevent internal drowning. Excellent care by the army medical service, much penicillin and numerous transfusions of plasma saved his life, and the whole society joins with Mr. and Mrs. minar in thankfulness over the happy outcome.

Mr. Minar's story prompted Mr. Davis' guest, Mr. Sporseen, who is himself a member of the Gallon Club, to urge all members of the society to visit the Blood Bank and do their part in keeping the supply of life-saving plasma adequate.

Mr. Ruff promised an interesting meeting of the work night group for January 14th in his basement.

Adjournment promptly at 1:00 p.m.

A.D.V.

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NEW MEMBERS

Mr. & Mrs. Stanley E. Sporseen, 1395 N. E. 49th Avenue, LAncaster 1091.

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FROM A FIELD GEOLOGIST'S NOTEBOOK

II

In a time when most of our young men are undergoing great hardships, hazards, and danger, it might seem picayunish to talk about those the field man has to deal with ... but it too is part of the game, so here goes.

Minor hazards are not to be neglected, because time of value may be lost. Take poison oak for example. It is much better to be able to recognize and avoid it, than learn by the sad experience of a week or so time out. It is especially virulent in the spring of the year, or when it is first coming out and even those who are relatively immune will catch it unless they take some such precaution as bathing in water laced with baking soda after coming in to camp in the evening. Nettles are less dangerous, but in swampy woods they can cause a great deal of annoyance! The best protection for both of these (and for blackberry vines, of which more later) is the good old impervious "tin pants", and a light canvas jacket. The blackberry vines, and I mean the nasty crawly ones, are really dangerous, and I have had some of my worst falls by catching a toe in one and tripping myself up, to land in a patch. In country where they are abundant, one cannot run down hill or make much time with any safety. Dense underbrush, such as the bracken, or more serious, the salmon berry of Western Oregon, prevents access to considerable areas, unless one is equipped with a machete or corn knife, with which to cut his way.

Turning to "wild life" we have such pests as yellow-jackets (how many pack trains have been stampeded by a nest accidentally disturbed!); rattlers (always carry a first aid or anti-venom kit in rattler country!); wood ticks (always get tick shots in spotted fever country!); and cattle. I always throw a G-pick at a rattler when I meet him. It's quite involuntary and automatic, and then I always miss, and have to hunt around for another stick or a rock. I once started to leap across a dry gulch about seven feet wide, planning to step on a large boulder which lay in the middle. After I was in mid air, a rattler under the rock buzzed, and I will always maintain that I missed the rock completely and landed running on the other side. I don't like rattlers. As for wood ticks, I don't worry, because I always get the "shots", but it is quite an experience to try to dig one out after he has gotten "well in". They claim that if you singe his tail with a match he'll back out - or that a drop of kerosene will make him do likewise. I always had to take a razor blade and cut. I don't like ticks. Cattle nowadays aren't fierce breeds as they used to be, and will usually run at the weird sight of a man of foot. But beware the cow and calf ... and bulls are not to be sneezed at. I give 'em a wide berth, and keep a weather eye peeled towards the nearest fence. Speaking of fences, they are another bane of the field man. If you are driving in cattle country, there is one every half mile or so, and you spend half your time opening and closing gates (and you always leave the gates as you find them). And the wonderful methods of fastening gates that you find ... guaranteed to snag you on a barb. There are several schools of thought as the best way to get over a barbed wire fence. There is the fence-post school, where you clasp the post to your bosom, and use the wires as rungs of a stile; and there's the "between or under school" which requires a helping hand and is not much use to the solitary field man. I use both, usually the first, but the second where the wires are widely spaced or very loose. And more torn pants have resulted!

Also classified among "wild life" are the land owners, who come charging out with a gleam in their eye, and then are slightly (only slightly) nonplussed to find that you have no gun or fishpole. Their usual reaction is "Another 'blamed' geologist", in country where there has been much prospecting for oil, but in virgin territory, one has sometimes to explain in words of one syllable just what you are doing. "Looking at the rock? ... Oh, you mean a gold mine! No, there ain't never been no gold on this ground." It is best usually to let it go at that. If you are working for any agency, be it University, State, or Federal, identify yourself pronto, and they will usually be most courteous and helpful. But don't try to avoid 'em, and spend a little time chewing the fat with them, it is time well spent.

John Eliot Allen

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LUNCHEON NOTES - THURSDAY, JANUARY 18, 1945.

'Twas ever thus. Bill Reeves, who has long coveted the distinction of being the latest arrival, had no sooner been seated after announcing that this honor was his at last, when along comes Doctor Booth to blast his hopes. "Them as has, gits."....Only one specimen was shown today, a weighty chunk of pearl granite from Ymir, B.C., obtained by Mr. Minar from Spokane during his recent visit there to see his son; the latter he reports is progressing satisfactorily after his injury in the South Pacific.....The only exhibit produced by Franklin Davis was the one he forgot, but hold everything! He promises it as a door prize for the next meeting, a nicely bound copy of "Speleology" - this being the science of caves, as we have recently learned. Speaking of caves, Mr. Stanley tells this one: that while he and Mrs. Stanley were going through a cave in the Dakotas a few years ago the party was requested by the guide to stand back so that the "elderly couple" could be in the lead. Stepping to the wall with the rest and looking about for the elderly couple, they suddenly realized they were the pair referred to.....The chef at the Winter Garden apparently has a single track mind, this being the third time in succession that we have been served with corned beef and cabbage. Fortunately (for some), however, this seems to be the favorite dish of the sterner sex. Ours not to question why, ours but to eat or die - or both.

A.H.

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BIND YOUR BULLETINS

The 1944 index is included with this issue of the News - letter. Prepare your bulletins for binding now. Mr. Baldwin will announce the price soon.

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NOTICE OF PROPOSED BY-LAW AMENDMENT

Members of the G.S.O.C. who move from the Portland area often desire to keep in touch with their old friends and the Society's activities. Likewise, the resident Society members greatly enjoy receiving information concerning their good friends. The result is that we have a small group of non-resident members who continue to pay full membership dues in the Society. For some time there has been a feeling among some of the members that mutual advantages would be derived if non-resident members were permitted to retain full membership in the Society at a reduced annual fee.

The following amendment to the By Laws of the Society was presented to the Executive Committee by a special committee of Mr. R. L. Baldwin and Mr. H.Bruce Schminky -

BE IT RESOLVED THAT the following amendment of Article III, Section I, be made -

> The dues for members of this Society living in counties not adjacent to Multnomah County be $2.50 per annum.

The committee members have unanimously approved the amendment. Society action will be taken at the next annual business meeting in accordance with the provision of the By Laws on amendments.

E. N. Bates, President.

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LUNCHEON NOTES - THURSDAY, JANUARY 11, 1945.

An attendance of 24. Guests included Mr. and Mrs. George Henderson, of Salem, presented by Mrs. Stockwell; Mr. Brim, connected with the construction and maintenance of Coulee Dam and president of the Coulee Dam Mineral Society, introduced by Leo Simon; and Mr. Wagner, field geologist at Baker, the guest of Mr. Libbey, who says Mr. Wagner is a one-man humane society as he befriends and adopts all homeless dogs and cats. This, says Mr. Libbey, goes over big with his two small children, if not with his wife.....Present after a long absence were Dr. and Mrs. Adams, who exhibited some interesting specimens of the work of glass blowers, one of whom had been a recent patient of the Doctor's .....A copy of the Arizona Magazine containing some strikingly beautiful flower pictures in color was shown by Mrs. Stockwell. The magazine supplement of the Oregonian of some weeks past was exhibited by Franklin Davis, who called attention to an article therein on invisible tattooing to hide scars of wounded men, in which Dr. Dake and Jack Dement of Portland were mentioned as being able to do this type of tattooing.

In connection with the meeting of the Academy of Science to be held on Saturday, January 13, Mr. Ruff announced that one of the speakers would be Dr. L. S. Cressman, his subject being "Stratigraphy of Early Man in Oregon." During the recess from 12 to 2 luncheon will be held at the Winter Garden, open to anyone interested. Twelve members of this group signified their intention to attend. The by-laws of the newly formed Oregon Museum Foundation, Inc. were drawn up by a committee of seven - a good piece of work, says Dr. Booth; the board of trustees consists of 30 persons, of whom eight are from organizations like ours. Three of our members are on the board, Dr. Stevens, Dr. Booth, and Mr. Libbey. Four gifts have already been received. Donors of $1000 or over are to be known as Founders; $500 as Benefactors; $100 as Fellows. Donations from

founders are to be used only for building, others for maintenance; donors of $50 annually to be designated as Patrons; $20 annually, as Sustaining Members; $10, Associate members.

Letters in response to Christmas greetings sent to absent ones were read from Mrs. Leslie Bartow, whose husband is in the hospital at De Ridder, La., for observation; and from the Ray Treashers in Sacramento, from which we quote in part; "One of the nicest things that happened to us during this Christmas season was the receipt of greetings from the luncheon group of the G.S.O.C. As we read over the list of names we had some especial memory to attach to each, and they were pleasant.....It was great to hear from all of them in one bunch. As we went down the list we had something to say about each, some little thing that had occurred here and there, and it was the next best thing to being back with you.....As for Franklin Davis and his Fossil Picker-Upper, we preserved it for years and it would still be with us except for an itinerant kitten who got mixed up in the various threads and made a mess of the Picker-Upper and himself.. ...Bess and Ray Mackenzie spent the holidays with us. They were here when your greetings arrived and if your ears burned it was because you were being thought of, and discussed, by quite a group of ex-G.S.O.C.ers.....Claire Holdredge would like to have us send along his greetings with ours. And to the swellest bunch of people in the country Jessie and I send our very best wishes for a most prosperous New Year. (Signed) Jessie and Ray." A.H.

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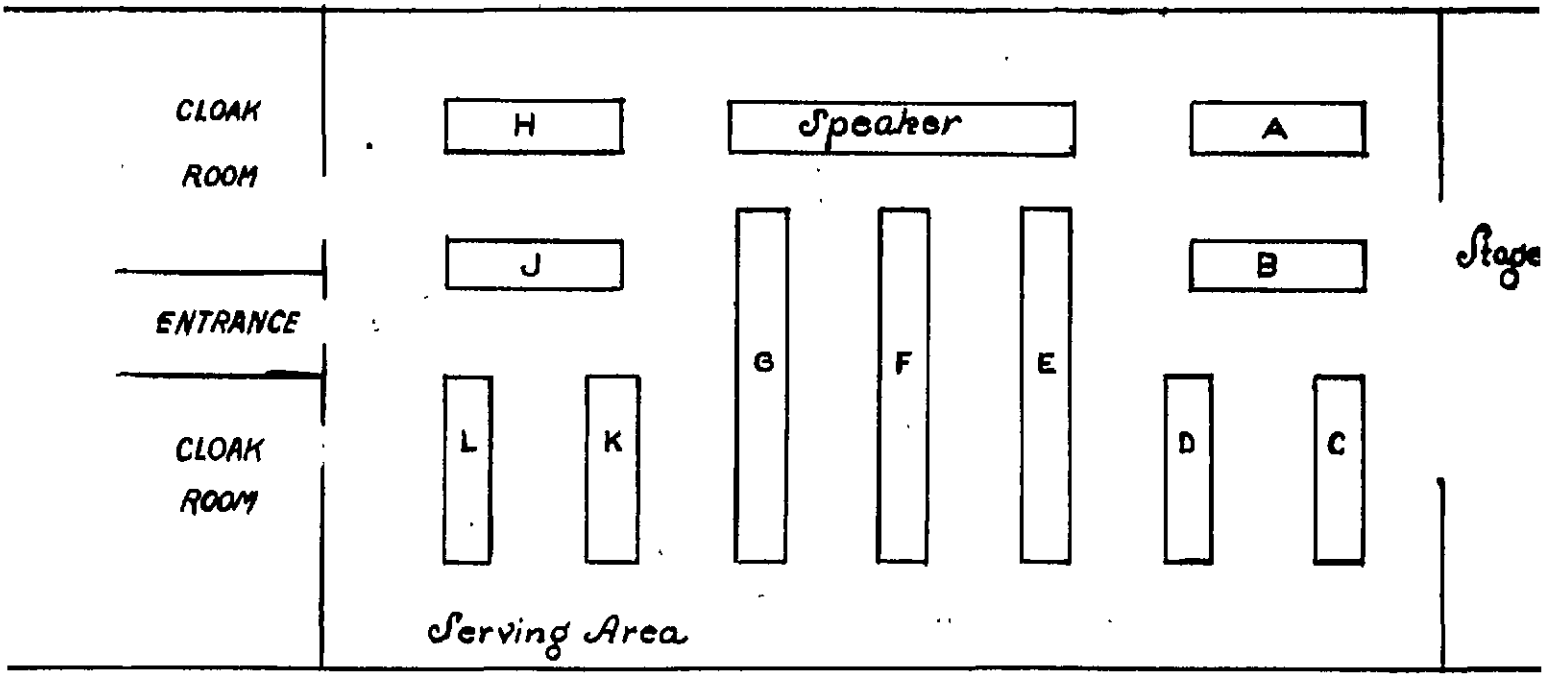
SEATING DIAGRAM FOR BANQUET - MARCH 9, 1945

Tickets are now for sale by Leo Simon, 711 SW. Ankeny Street, Portland 5, Oregon. Phone BEacon 0300, or LAncaster 0549 nights. Mail orders for tickets should give first, second, and third choice of tables.

Tables E, F, and G seat 18; all others seat 10. Seats are numbered clockwise around each table, with number one at the end nearest the speaker's table.



GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 4 February 25, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St. between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 N.E. 45th Avenue. Room open from 5:00 to 9:00 p.m. Round table discussions from 7:00 to 9:00. Open to members, their families, and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Feb. 23 — Annual Business Meeting. In addition the program committee expects to have some kodachrome slides of the Mt. Hood area. Officers and committee chairmen are requested to submit reports which will be published in the NEWS - LETTER.

Friday Mar. 9 — The 10th Annual Banquet will be held in the parish house of the Grace Memorial Protestant Episcopal Church located at 1523 N.E. 17th Avenue (one block south of Broadway). Take Broadway streetcar or Irvington, Beaumont, or 33rd Avenue busses.

TIME: 6:30 P. M.

PRICE: $1.50 per plate.

STUNTS: Yes!

*SPEAKER: Paul Knowles who was geologist with the third Byrd Antarctic Expedition 1939-41. A graduate in geology from the University of Washington, he was at one time head of the Washington State Mineral Survey and is now employed by the Atlas Powder Co. at Eugene, Oregon.

Mr. Knowles was fortunate in being assigned to an area in which rock outcrops were most prevalent, and collected a large amount of data. His experiences in Antarctic travel, and life during the long winter months in subsurface quarters are full of interesting highlights.

He will draw from his large stock of photographs to illustrate the lecture. It may be possible that he will be able to bring a few rock specimens from the antarctic for display at the banquet.

TICKETS: Still available! See Leo F. Simon, 711 S.W. Ankeny St., or call BEacon 0300. Members are urged to make their reservations at once.

* IMPORTANT NOTICE:

Through unforseen circumstances, the above speaker will not be able to appear at the Annual Banquet. See local papers and next NEWS - LETTER for further announcement.

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IGNORANCE OF GEOGRAPHY*

To the Editor:

The recent expose in the Saturday Evening Post of the teaching of history, or rather the lack of it, suggests that a similar airing of the geography situation is in order. Tests over a number of years at the University of Oregon by Professor James C. Stovall have revealed an appalling ignorance of entering students of place-geography of the United States.

The lack of knowledge of the basic facts and principles of physical, economic, and human geography is widespread. To this ignorance a lot of our present world trouble is directly traceable. Because of this we were caught off balance in world affairs. Too many people, many in high places in the councils of the country and in educational circles as well, looked upon this subject as something one finished in the grades and that was that. Geography should be studied not only in the grades, but in high school and college. Today our army and navy have called to Washington hundreds of geographers and geologists to compile, analyze, and interpret geographic and geologic data absolutely vital to the successful carrying on of this war. The tragedy of it is that this work should have been done years ago.

Before we can solve any problems one must have a thorough understanding of it. Of course, geography doesn't provide all the answers. Psychology, history, economics, and anthropology all contribute their share of necessary data, but geography attempts to integrate, correlate, and interpret the data from these fields.

I wish that every citizen, and particularly every legislator, could read "Look to the Frontiers," by Roderick Peattie, professor of geography in Ohio State University.

Time, Life, and Fortune magazines are doing a fine job in helping us all to think globally, which we must learn to do if we are going to keep in gear with a fast-changing world.

Warren D. Smith, University of Oregon.

* Letter to Oregonian, February 7, 1945.

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LUNCHEON NOTES - THURSDAY, JANUARY 25, 1945.

A section of drill core, the top encrusted with crystals of calcite and heulandite, was shown by Lloyd Ruff, who today wielded the gavel as one of the past presidents. This drill core was from the Middle Fork of the Willamette 30 miles southeast of Eugene at the Meridian dam site, most of which is underlaid by flows of andesite between 200 and 300 feet thick.....A picture of the Devil's Tower in South Dakota, 1280 feet above the river, was exhibited by Mr. Vance. This landmark, which was made our first national monument in 1906, has been climbed by 25 persons, but climbing is now forbidden.....Also shown, by this reporter, was a copy of "Frontiers," published by the Academy of Sciences of Philadelphia, containing a photograph of "twenty quartz crystals, some of them the size of a man's head, the whole weighing a quarter of a ton," discovered in a sandstone quarry in West Virginia.....Speaking of the Academy of Sciences, the GSOC has lately come into possession of their 1944 file of "Notulae Naturae" and "Proceedings," containing much scientific information, in exchange for our 1944 volume of the NEWS - LETTER.....A welcome visitor today was Carl Richards, bringing greetings from the Salem Society and a fund of items of scientific interest.

(Cont. on p.22)

A VANADIUM-BEARING BLACK-SAND DEPOSIT OF MIDDLE MESOZOIC AGE, IN CENTRAL CURRY COUNTY, OREGON

By

John Eliot Allen, Oregon Department of Geology and Mineral Industries.*

(ABSTRACT of a paper presented at the second annual meeting of the Oregon Academy of Science, January 15, 1944)

The Pleistocene black-sand deposits lying upon sea-terraces up to 300 feet in elevation along the southern Oregon coast are well known in the literature, and are at the present time being mined on a large scale for their chromite content. A deposit of black sand lying at an elevation of 3,000 feet in central Curry County twenty miles inland, which had previously been called an "impregnation iron deposit" has been found to be a consolidated titaniferous magnetite sandstone containing amounts of vanadium varying from one tenth to one percent.

The elongated deposit, 650 feet long and 100 feet wide, crosses a shallow saddle in an east-west trending ridge composed of "greenstone" (altered lavas and tuffs) and serpentine. Elsewhere along this ridge are down-faulted blocks of conglomerate and sandstone with fossils showing them to be of "Myrtle" (upper Jurassic or lower Cretaceous) age, younger than the Jurassic greenstones and serpentines. Most of the deposit lies south of the saddle, ranging in elevation from 2,650 feet at the lower southern end to 2,900 feet in the saddle. It is a massive greenish-brown sandstone of uniform composition and a specific gravity of 3.2. A few layers of exogenic pebbles were found at one locality. The sandstone is medium grained (averaging 0.25 mm diameter), indurated, and composed of 95% magnetite, about 3% ilmenite, less than 1% horneblende, with minor amounts of zircon, quartz, garnet, tremolite, chrysotile, pyrite, and probably chromite.

Chemical and spectrographic analyses of the original rock, and of magnetic and heavy mineral separates show the composition to be as follows:

Chemical		Spectrographic	
Fe	54.94 %	Cr	2.0 - 5.0 %
TiO_2	2.7	Al	less than 1.0
V	0.37-0.43	Si	about 1.0
P	0.004	Ca	trace
S	0.114	As	trace

The non-magnetic separate showed no vanadium, and no vanadium minerals were identified microscopically. It is thought to be contained in the magnetite molecule, as is much of the titanium.

All the contained minerals are also present in relatively small amounts in the adjacent meta-igneous and serpentine rocks of Jurassic age. The small chromite content, in comparison to the large chromite content (up to 40%) in the Pleistocene black-sand deposits, indicate that the serpentines and peridotites from which the chromite is derived had at the time of formation of this deposit, only begun to be exposed to erosion, and thus be able to contribute their minerals to the deposit.

The deposit is thought to have been deposited along the shore of the Myrtle (late Jurassic or early Cretaceous) sea which covered much of the Klamath province at that time.

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* Published by permission of the director.

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LAND OFFICE REPORT OF 1872

Report of the Commissioner of the General Land Office
to the Secretary of the Interior for the year 1872

(Extracts from the report of the Surveyor-General of Washington Territory)

Minerals

"Washington territory contains almost the entire catalogue of minerals and the more precious metals have been successfully mined in several localities for many years. From the mouth of the Umatilla up and along the Columbia River for several hundred miles there have been large amounts of gold taken out every year for the past 10 years. At present the principal mining is being done by Chinamen, who are experts with the rocker and are willing to work for a lower rate of wages than the Anglo-Saxon race.

"Galena (silver and lead) was discovered several years since on the south and east slopes of Mount Rainier, but as yet the lode is undeveloped, and nothing is known regarding its actual value. --- Large quantities of iron and coal are also found west of the Cascade Range ---. --- the time is not far distant when the iron fields of Washington territory will afford extensive and profitable employment for both capital and labor. --- The number and extent of the vast beds of coal underlying, it is thought, at least one-half of the entire surface of western Washington, can scarcely be overestimated. ---

"---Sandstone of excellent quality is found in various localities. This quality of stone is now being shipped from Bellingham Bay for the custom house and post office now being erected by the Government at Portland, Oregon. As this quarry has been compelled to compete with all the stone quarries on the Pacific coast, and after a critical examination and thorough test the decision was in favor of the Bellingham Bay stone, it is fair to presume the quality is equal, if not superior, to any on the coast. ---"

Editor's note: We are informed by Mr. Minar that soon afterwards the Tenino quarry was opened up and became more widely known than the one at Bellingham.

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Luncheon notes continued from p. 20:

He talked entertainingly about Dr. Kinneman, an archeologist soon to visit Portland. Dr. Kinneman is the only survivor of those who entered the tomb of King Tut. The curse, if such there be, descended on him also but he lived to tell the tale. Speaking of the Egyptian pyramids, it is said they were made earthquake-proof by building them to conform to the curvature of the earth's surface. Dr. Packard's recent talk in Salem on "Cretaceous Times in Oregon" was mentioned as being outstanding....."Ten Years Under the Earth" by Norbert Casteret, the book on speleology promised last week by Franklin Davis as a door prize, was duly exhibited - a most attractive volume in makeup and content. In the drawing it was won, appropriately enough, by our newest member, Mr. Stanley E. Sporseen, of the Army Engineers, who is also Franklin Davis's "boss."

A.H.

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News of members: Captain Don. Lawrence was a recent visitor to the City of Roses.

We have it on good authority that wedding bells will soon ring out for the last of the Three Musketeers - when Florence Iverson becomes the bride of Clyde Woodard. Congratulations to the lucky man.

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LUNCHEON NOTES FOR THURSDAY - FEBRUARY 1, 1945

Past-President, J. C. Stevens who had just arrived from New York where he had been inducted into the office of President of the American Society of Civil Engineers, was chairman of the day. When asked by President Bates to tell something about his trip, Mr. Stevens said that he and Secretary George T. Seabury of the Am. Soc. C. E. had visited local sections of the society in New York, New Haven, Washington, and several other eastern cities and had experienced the discomfort of travelling in a train without heat where the dining car waiters wore their overcoats while serving overcoated diners. He and Mr. Seabury took an afternoon off from their official duties to "go through Yale." We were not informed whether or not the president of the Am. Soc. C. E. is required to be a Yale man. Dr. Stevens also took a look at the Willamette Meteorite while in the Museum of Natural History in New York.

Dr. Booth upheld his record as the busiest man who takes time out to attend the G.S.O.C. luncheons.....Leo Simon told of making a trip to Scio with Dr. Booth and A. W. Hancock to inspect the ornithological collection of Dr. Prill which they hope to save for Oregon if a group of public-spirited citizens can be found to subscribe the comparatively small cost. Mr. Simon had some very lovely specimens of magnesium..... E. W. Miner showed a specimen, identified as jasper, having a mass of crystals on one side of the specimen. He said that Mr. Ruff would identify specimens brought to the bi-weekly work nights. Mr. Minar also had a marble idol from a bombed Burma temple. It had been brought to his shop to have a base fitted to it.....F. W. Libbey had a "One Peso" piece of currency printed by the Japanese to be used in the conquered islands. The waitress refused to accept it in payment for President Bates' lunch, which proves that, as money, it was practically worthless.....A. D. Vance called attention to a picture on the front cover of the magazine "Go" showing a roadside sign in Montana calling attention to "Diamond Gulch, the richest acre in the world." He also mentioned that Robert Fletcher who supervises the placing of these markers in Montana is also the author of the popular song, "Don't Fence Me In." He also had a copy of the Purchasing Agents' News which contained a biographical sketch and portrait of Orrin E. Stanley.....A. W. Hancock read paragraphs from "The New Geology" refuting many of the accepted geological theories..... Ada Henley had a copy of "Proceedings of the Academy of Science of Philadelphia" for the year 1944 and several numbers of "Notalae Naturae" of the same organization.....Dr. Booth had several teeth in a box. Someone had thought that they were rhinocerous teeth, but this conjecture was not verified.....Franklin L. Davis brought copies of a map of "Land Forms of Oregon" compiled by Erwin Raisz which he sold for ten cents each and tested the dimes by biting them.....H. B. Schminky announced the Annual Banquet.

O.E.S.

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COMMUNICATIONS

Again as last year I'll repeat that I am not aware that I am a member, but I appreciate getting the Geological News Letter and having the privilege of "exerting my influence" in your elections. As has occurred several times in the past, if your magazine needs a "space filler," I can always furnish one of my weekly radio articles, which are about three times as long as the newspapers use.

My report on the big meteor of January 7, will be out soon.

/s/ J. Hugh Pruett.

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LUNCHEON NOTES - THURSDAY, FEBRUARY 8, 1945

Jade! Tons of it! Of every color and of priceless quality, picked up on the fields of Wyoming. Such is the theme of an article in the February issue of Popular Science, submitted by Mr. Bates. (Reminds us of those tons of mice. There's nothing small about our president.) Our friend, Mr. J. L. Kraft, was also mentioned, with pictures in color of some of his polished specimens of this rare material, and one very large specimen weighing 2400 pounds which he had donated to a Chicago museum. .....Dr. Booth then told the story of Mr. Kraft's original discovery of Wyoming jade. As a prominent Baptist he was written up in a Baptist magazine, in which he was mentioned as being a rock collector. The magazine fell into the hands of a Wyoming sheepherder who thought Mr. Kraft would be just the person to tell him something about a "funny rock" he had found and sent it on to him. As the rock looked worthless, it was thrown aside on a shelf, but some time later Mr. Kraft decided to cut into it, and then found it to be real jade. He corresponded with the sheepherder, specimens were sent to Tiffany's, and in time thousands of dollars worth of the valuable stuff was disposed of to Tiffany and other jewelers long before it was known to anyone else, to the mutual profit of Mr. Kraft and the sheepherder, as they were able to keep their find quiet.....Two booklets on the Pliocene Flora of California and Oregon, by Ralph W. Chaney, showing many fossil forms, were submitted by Mr. Hancock, to whom they were presented by the author. Mr. Hancock also brought two interesting looking rocks to be identified, but we failed to hear the answer.....Attention was called by Mr. Baldwin to Dr. Smith's letter to the Oregonian on the ignorance of geography prevalent among people in general.....Two specimens of drill cores from the Fall Creek dam site, an andesite and a tuff breccia, were shown by Mr. Ruff.....Mr. Hugh Miller, who is layout man at one of the Kaiser yards, described in technical terms the flux used in welding with a unionmelt machine, and showed a sample..... Franklin Davis, who has been to a book sale, produced a copy of the "Biography of O. C. Marsh,"* who was the pioneer paleontologist of the United States, connected with Yale University, came out to see Dr. Condon after receiving specimens from him. The book speaks of the misunderstanding in regard to a quantity of specimens which Dr. Condon gave him to identify but which were never returned and are still at Yale. In this connection Dr. Booth suggested that some action should be taken to secure the return of this collection, or duplicates, for the Oregon Museum, and mentioned Dr. Adams and Franklin Davis as suitable persons to act as a committee for this purpose.....A member of long standing but seldom seen at the luncheons is Mrs. Fred Reimers, who was with us today.

A.H.

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* Written by Charles Schuchert and Clara Mae Le Vene.

GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 5 March 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W.6th Avenue at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St. between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 N.E. 45th Avenue. Room open from 5:00 to 9:00 p.m. Round table discussions from 7:00 to 9:00. Open to members, their families, and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Mar.10 — TENTH ANNUAL BANQUET at the parish house of the Grace Memorial church, 1525 N.E. 17th Avenue - one block from Broadway. Take Broadway streetcar or Irvington, Beaumont, or 33rd Ave. busses.

TIME: 6:30 p.m. Your cooperation is requested in starting the banquet promptly at the designated time.

SPEAKER: Sheldon L. Glover, Supervisor, Division of Mines and Mining, Washington Department of Conservation and Development, Olympia, whose subject will be "Extracts from a Geologist's Notebook."

Mr. Glover is a graduate of the University of Washington with B.S. and M.S. degrees in geology. Since graduation he served on the University of Washington faculty and the Washington Geological Survey, as well as having engaged in consulting geologic practice for 8 years. Six years were spent as resident manager and geologist for a mining and prospecting organization in British Columbia. From 1934 to 1941 he was assistant supervisor of the State Division of Geology and since that time has served as supervisor of that organization. Mr. Glover's wide experience in the Pacific Northwest and in Alaska make him well qualified to present some interesting topics from his geologic notebook.

STUNTS: These are always good and this promises to be no exception.

TICKETS: All available tickets have been sold but members not having tickets are requested to contact Leo Simon, BEacon 0300 in case there are a few cancellations. Otherwise it is suggested that they come to the meeting place at 7:30 p.m. and hear the program.

Friday Mar.23 — The program will be "Wheels over India" and "Wheels over Africa", two 30-minute 16 mm sound movies taken by Dennis Roosevelt.

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LUNCHEON NOTES - THURSDAY, FEB. 15, 1945

Arthur Piper, fifth president of the Society, presided at the luncheon which was very well attended, in fact extra places were necessary for Dr. and Mrs. Booth who came in a little late. Mr. Piper introduced Mr. and Mrs. C. C. Ralph, new members of the Society. Mr. Ralph, who has long been interested in minerals and the mineral industry, is chief in the Portland Fire Department.....Mr. Vance introduced as his guest, Mr. G. J. Lindstedt, senior engineering clerk in the office of the City Engineer.....Mr. Davis had as his guest, Mr. C. E. Wall of the U.S. Army Engineers.....Mr. Stanley had two very interesting cameras, one of which is a museum piece. It was patented in 1880. The other was a miniature camera which Mr. Stanley used prior to his entrance into the Army at the time of the Spanish American War.....Mr. Libbey circulated a specimen of an oxidized copper ore from a property in Arizona which he had helped to develop several years ago and which is now owned by the Miami Copper Company. It is producing at the rate of about 12,000 tons of ore per day. Another sample which he had was a specimen of gibbsite with some limonite from a deposit of ferruginous bauxite in Columbia County.....Mr. Bates called attention of the members to an article in the last Saturday Evening Post which describes the life of Mr. Kraft who was a guest of the Society a couple of years ago.....Lloyd Ruff exhibited a loose-leaf book containing a list of fossil localities, compiled by the research committee of which Mr. Ruff was chairman, in Ken Phillip's administration. This project is concrete evidence of the valuable work the Society can undertake.....Mr. Calef displayed some interesting Philippine daggers, also a bronze knocker used in Philippine houses at the time Mr. Calef was in the Islands during the Spanish American War. He also showed a long wicked-looking spear of the type probably used by central African tribes.....Mr. Stevens spoke of museum needs and mentioned that Mr. Stanley's cameras would make valuable specimens for the new museum..... Mr. Leo Simon gave a brief history of the development of photographic equipment and mentioned also that over 100 tickets for the Annual Banquet have been sold, which is many more than at the same period in previous years. He stated that no tickets will be left over, and that probably the demand will exceed the supply.

F.W.L.

LUNCHEON NOTES - THURSDAY, Feb. 22, 1945

The attendance was unusually small today - perhaps because of the holiday observed by our more fortunate state and municipal employees - or did they anticipate the corned beef and cabbage. No butter in evidence either. Baldwin says he's short of red points.....Among the more infrequent visiting members were Mrs. A. D. Vance and Mrs. Carl Richards. Two luncheons in a row make Carl a frequent attendant.....It begins to look as though Mr. Minar will lose his amateur standing as a 'rockologist' one of these days. Today he came up with a piece of the much publicized Wyoming jade and a slab of California jade. He also had an outstanding cluster of galena and sphalerite crystals from the Tri-state district in southeastern Kansas. Mrs. Barr had a naturally abraded piece of obsidian from Seneca, Oregon, and Mr. Calef passed around some quartzite from near Satus pass in Washington.....Mrs. Adams was a late caller.....John Robinson announced that the speaker for the annual banquet would be Sheldon L. Glover, supervisor of the Mines and Mining Division of the Washington Department of Conservation and Development.

L.L.R.

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THE APPLICATION OF GEOLOGY TO MINING PROBLEMS AT SOME OF THE KLAMATH PROVINCE CHROMITE MINES *

by

Ralph S. Mason

Abstract

It is realized that a wide gap exists between so called 'pure' geology and the geology practiced by miners engaged in the extraction of ore in small mines. If a geological report is to be of value to a miner, it must contain certain information which will enable him to plan his campaign to the best advantage. Too often this practical information is omitted, apparently through failure to realize its importance.

This paper presents some of the instances where geological reports aided in the ultimate exploitation of a mine, and of some cases where actual mining operations uncovered critical conditions not reported on. Two outstanding instances are described in detail, and general observations on several others are made as well.

At the Sourdough Mine in southern Curry County, Oregon, it was reported by geologists that the bulk of the minable ore would be of milling grade, whereas actually all of the ore mined was some of the best grade of metallurgical ore in the district. Furthermore, it was recommended in the report that the property be prospected by diamond drills, which was done with unsatisfactory results due to the completely shattered ground - a fact omitted in the report.

At the Coggins Mine in Shasta County, northern California, a successful mining campaign was assured by the development of an additional body of ore near the original body, the presence of which was suspected by a geologist and which was then proved to exist by a carefully planned diamond drill program.

* Presented at the second annual meeting of the Oregon Academy of Science, January 15, 1944.

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GEOLOGICAL SOCIETY ELECTS OFFICERS

The annual meeting of the Salem Geological Society was held on Thursday evening, February 15th, in Collins Hall, Willamette University. A change in the by-laws, reports on the activities of the past year, and the election of officers for the ensuing year constituted the main items of business. The new officers are - Carl P. Richards, president; Dr. Geo. E. Lewis, vice-president; Mrs. W. H. Barber, secretary; Clarence Bowes, treasurer; Mrs. Ted Gordon, programs; W. E. Richardson, trips; Prof. Herman Clark, work-night leader; and Orrin A. Chase and Chas. E. Roblin, past-presidents, as directors.

An interesting series of lectures and trips is planned, to the participation of which the public is always invited. Following the business part of the meeting Prof. Clark showed two sound-movies, one on the geology of glaciers and the other on Bryce Canyon and Zion Canyon National Parks.

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NEWS OF DR. A. C. JONES AND FAMILY

400 Throckmorton Avenue
Mill Valley, California
January 16, 1945

Dear Family and Friends,

By this time you are used to getting our "form letters," but it is a case of this or lack of letters, so - you are hereby informed: --

That Arthur leaves Letterman January 18th!. For one week he will be visiting hospitals in this area - Dewitt at Auburn, California; Dibble at Palo Alto, etc., and January 25th will go to Camp Lockett, where Mitchell Convalescent Hospital is located. This is being rapidly developed as the rehabilitation headquarters for the 9th Service Command. Arthur has been busy since December designating equipment for his department and making recommendations for his work at Mitchell Convalescent Hospital.

Since Letterman was made a debarkation hospital last summer, his work has been in orthopedics, which is needed, worthwhile, and interesting, but not the work which he especially has to contribute to the war and to the care of wounded men. At his new station he will especially take care of men with nerve lesions and those in need of joint and muscle rehabilitation. It is exactly what he went into the service to do. He will be in charge of the department and the work.

Ardis, Irving, and I will remain in Mill Valley until further notice - it may be until school is out in June - it may be sooner than that. A move will depend on what Arthur finds for living accommodations and the advisability of changing schools. A school bus takes Camp Lockett students to a Union High School, which we understand is rather a large one, in one of the towns between the hospital and San Diego.

It was our first thought to come to Portland next week. It was our second thought that it would precipitate too many things at once and that it would be better for Arthur to go down, get his work started, find out what is needed for both his work and our living. Then we expect Arthur to get time off so we can both go to Portland, arrange our affairs in both home and office for a long-time stay again, and take with us from Portland whatever seems necessary.

Besides, several members of both families are about to visit us, and we do not care to be in Portland when they are here, though most of them will not see Arthur in Mill Valley. Lester and Olene and Carol will see him here next Sunday.

Kathryn Walker, Arthur's sister, and her two boys, who are now with us, will remain in our Mill Valley home. Col. Walker is on overseas duty. We plan to keep the houses until after the war. And until we make a change, the six of us will be here, minus the fathers.

In the meantime we are not thinking much ahead -- just going along. It is gratifying that Arthur has this recognition as compensation for his going into the service early, with handicaps because of Physical Therapy, and of being in a hospital where advancement was not possible because of a stable staff and "frozen" rank for all M.C. officers there. However, his work in training others at the beginning, and his treatment of men both in Physical Therapy and later orthopedics, has made the time very well spent.

(I received this before Arthur went away - wrote someone I knew there and asked a lot of questions.)

"This is an old Cavalry post that they are converting into a convalescent center - so much converting of buildings and all - it has been slow with labor troubles, investigations, surveys, and then the final GO signal and a new Commanding Officer. Things are humming now but it will be fully six months before it begins to really function as it should. However, patients are now pouring in, ready or not, and they must have additional facilities.

"We are about 60 miles from San Diego, some 2500 feet high in mountains covered with sage brush and greasewood - the little valleys have live oaks, some eucalyptus, and cottonwoods. Lots of rocks and stone, winding and steep roads; typically southwest country. I love it.

"We're 12 miles from highway 80, just one mile from the Mexican border, and on the map it is marked 'Campo'. We're very isolated with a corner store at Cameron Corners, two miles away, no villages, just ranches in the hills and an occasional group of houses at the lake (Morena - 7 miles away), or along the highways.

"Busses (for free), go into San Diego and El Centro (east) on Saturday and Sunday and one can get to town that way for some shopping. Our commissary carries frozen foods and has nice meats and what it doesn't have, the general store at Cameron Corners does have - and we've been able to get things that the folks in town do not have. There are some inconveniences, but no real hardships.

"At the lake there is fishing and hunting, picnic and camping spots - not so super, but it could be made very attractive and we go over for a picnic every now and then and thoroughly enjoy our outing. There is quite a little colony of officer's families in the cottages over there. At Pine Valley, some 15 miles away, there is another group. Though it is rugged the folks seem to be enjoying the life. There are some little houses here on the post -- a housing project in which some of the group live. They look fairly comfortable.

"There is no place to go unless into San Diego or El Centro and so they are developing things on the post. The Officer's Club opened last night and looks like it will be a grand spot. We have a rather loud but noisy band; it is good though. Then we have movies before they get them in town. We have a large field house with Monday evening for men and women to use; Badminton, etc. Then Wednesday night the women have a 'girth control class.' All kinds of sports are being developed and we have teams for everything. With a hundred horses, riding classes have been started and everyone that has gone has enjoyed being stiff the following week. Dr. Jones ought to be able to find some excellent business from that source.

"Then there are two swimming pools (not in use now), that are very popular during the extremely hot days here in the summer. Incidentally it breaks a hundred during the days but you can sleep under three blankets at night. Today we are enjoying snow - it melts as it hits the ground, but it is snow and the mountains are covered. They are skiing over on Laguna Mountain, some 30 miles away.

"The hospital proper is very small, barracks type, several hundred patients, but you see we are a convalescent hospital, with men all over and will be about 3500 strong by summer, so it will require a big staff; think they originally planned on 1500. So with that many people in an area we will be our own little community.

"Laundering is a problem and no maids; help is very scarce, even for post. Houses that are adequate are also hard to find, but can be located eventually. We have a beauty shop and bank on the post, our own library and theatre for drama groups and classes. Occupational Therapy is just getting started; have one building and will have two more converted rand then maybe two more. Education section will have elaborate setup also. There will be tennis, golf, etc., etc."

February 16, 1945

You will also be interested to know that on his way down Arthur went out to the La Brea pits in Los Angeles, with Lester, who was also there at the time, and they were removing some 20-year old posts and putting in new ones, and it was the only time in 20 years that he could have dug around and found some things, which he did. I guess he was born a lucky geologist.

Doris W. Jones.

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CHANGE OF ADDRESS

Mr. and Mrs. Darrell Currier (Helen Iverson), 424 N.E. 92nd Place, Portland 16, Oregon

Mr. and Mrs. H. M. Stiles, 4025 Jackson St., Milwaukie, Oregon.

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NOTE FROM JOHN ALLEN

Here's another chapter of "From a Field Geologist's Notebook" for you. I have another one in mind when you need it.

I'm typing my thesis manuscript now, first draft however.....and it will have to be in by April 9, if I can make it. Wish me luck! The boss hasn't seen it yet.

Had you heard that Jessie Treasher had a "strep" infection and was being treated with sulfa!.....

Best regards,

John

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Note: Several back volumes of the GEOLOGICAL NEWS - LETTER are still available at $2.50 per copy. See R.L.Baldwin.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 6 March 25, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S. W. Taylor St. between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 N.E. 45th Avenue. Room open from 5:00 to 9:00 p.m. Round table discussions from 7:00 to 9:00. Open to members, their families, and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Mar.23 — Two interesting 16 mm sound movies, "Wheels Over India" and "Wheels Over Africa" will be shown. These pictures were taken by Dennis Roosevelt and are reportedly very fine.

* * * * *

Watch for announcements of the April meeting.

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NEWS OF MEMBERS

Thanks to Mr. and Mrs. D. J. Henderson and Dr. and Mrs. Weinzirl for back numbers of the bulletin.

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Leo Simon was scheduled to lead an Audubon Society bird walk in the Eastmoreland section on Sunday, March 18.

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Raymond Baldwin still has a few back volumes of the NEWS - LETTER for sale. Price $2.50.

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Prepare your 1944 NEWS - LETTER for binding. The second 5-year (1940-1944 inc.) index is in preparation and will be available for binding with Volume X.

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Have you paid your 1945 dues?

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REPORT OF THE SECRETARY
For the year ending February 28, 1945

The Society has 112 members in good standing for the year ending February 28, 1945, of whom four are junior members. Twenty-one new members, including one junior member, have been received during the year. Two new subscriptions to the News Letter were received, making a total of five.

The Executive Committee held four meetings during the year.

Respectfully submitted,

/s/ Ada Henley

Secretary

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LUNCHEON NOTES - THURSDAY, MARCH 1, 1945

Thornton T. Munger, principal silviculturist, U.S. Forest Service experiment station, was the guest of President Bates at this meeting at which nineteen members were present.

A. D. Vance had a tiny fossil crab from near the Devils Punch Bowl as a souvenir of his recent trip to Newport.....Dr. Booth passed around a magazine containing an article about Walter Sutter, an early collector of fluorescent materials, who was recently honored by a ceremonial of the Alfi Temple, Mystic Shrine, Tacoma.....E. W. Minar spoke about a cement which holds broken specimens of rock together while being cut and polished, and showed a sample of such a joint.....Franklin L. Davis mentioned a method of removing fossils from rock by putting burlap strips soaked with plaster of paris grout on them. He did not demonstrate.....John Robinson exhibited a bottle of water from a 562-ft. well near Bremerton, Washington, that has a temperature of 52° at the well..... Lloyd Ruff brought two thin sections of drill cores, cut by A. W. Hancock. He mentioned a Mr. Schmidt of the University of Washington who had ground core sections thin enough to use as lantern slides.....President Bates gave a brief review of the articles in the past year's issues of the NEWS - LETTER..... Lloyd Ruff had a note from John Allen with the news that he had met Claire Holdredge in San Francisco, and that Mrs. Treasher was suffering from a "strep" infection..... Mrs. Oberson said that two of her father's sisters wrote from Belgium that coal costs 5000 francs a ton and butter 500 francs a kilogram (2.2 lbs.)..... H. B. Schminky, Leo Simon, Lloyd Ruff and Dr. Booth spoke about banquet arrangements.....A. D. Vance announced the subject of the next lecture.....H.B.Schminky said that the next meeting of the Agate and Mineral Society will be addressed by Lloyd Ruff, and mentioned a display of photographs by Orrin E. Stanley in the City Hall.....Leo Simon said that the Men's Garden Club had tried to get the Hoyt Arboretum named for Thornton Munger.....J. C. Stevens expressed his surprise at learning, every time he heard Leo talk, that Leo belonged to still another club.

O.E.S.

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RECONNAISSANCE GEOLOGY OF THE SNAKE RIVER CANYON, OREGON-IDAHO*

by

Lloyd L. Ruff

Abstract

Three trips into the Snake River Canyon and reconaissance work in neighboring portions of Idaho prompted the compilation of existing geological maps and the attempt to outline further some of the more apparent geologic formations of the canyon. Difficulties of access, lack of adequate topographic maps, and, with one or two exceptions, lack of promising mineralized localities preclude early detailed geologic mapping of the area.

For areal mapping purposes, the formations may be readily divided into three groups. The first group consists of recent alluvium, talus, fanglomerates, and landslide, along with Pleistocene bars and terraces. These cover a relatively small area. Included in the second group is the Columbia River basalt and its associated volcanic deposits, all probably of Miocene age. Both of the above groups contain easily mappable units which may be recognized both on the ground and with the aid of aerial photographs.

The third group covers a much smaller area than the second. It is confined mainly to the canyon area, and contains many units, some of which are difficult to recognize and to segregate without detailed, painstaking, on-the-ground field work. Meta-volcanics are probably predominant, although two and possibly three areas of meta-sediments are present. Both Paleozoic and Mesozoic fossils are reported from the limestones of the area. "Greenstones" very similar to the Permian meta-volcanics of the Wallowa Mountains are found in the area opposite the Seven Devils. Between Hat Point and Pittsburg Landing the close-bedded formation resembles the Carboniferous rocks of the lower Salmon River country to the east.

Several granitic intrusions are exposed, and at least one area of serpentine has been mapped. The 'granites' are presumed to be the same age as the Idaho and Wallowa Batholiths.

Extensive faulting, possibly even overthrusting, is indicated, although only a few faults have been mapped. Structural trends appear to be in the main NE-SW. One structural high is indicated at the mouth of the Imnaha River and another on the flank of the Seven Devils Mountains. Tight folding and high dips are present between Temperance Creek and Pittsburg Landing.

Considerable relief in the pre-Tertiary land surface is indicated in part by the variation of elevation of the basalt-metamorphic contact.

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* Presented at the second annual meeting of the Oregon Academy of Science, January 15, 1944.

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CORRECTION

Apparently the editor shouldn't keep such late hours or else get a better light. In the March 10th issue the announcement of the banquet should have read Friday, March 9. The fourth sentence of the paragraph outlining Mr. Glover's past activities should have read as follows: "From 1934 to 1941 he was assistant supervisor of the State Division of Geology and since that time he has been supervisor of the Division of Mines and Mining."

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ELUSIVE MERCURY AGAIN VISIBLE

By

J. Hugh Pruett, Astronomer
General Extension, University of Oregon

Mercury, that elusive little planet which many star-students have never positively identified, will during the next 10 days be in the best position of the year for evening observation. The story is told that even the great Copernicus, whose writings in the 16th century revolutionized astronomical thought, never was sure that he had seen this small world of the solar system.

Later we shall give definite directions for locating Mercury during the next few evenings whenever the sky is clear. Anyone who is in the least sky-minded should find it of interest to attempt to see and recognize this little planet at least once in a lifetime.

Three times this year Mercury may be seen in the western twilight for a few days each time. Aside from the present appearance, two others will occur, one in July and one in November. But only during this month will the little planet be far enough above the horizon at sunset to make observation easy.

The sponsors of a certain 15-minute radio program in Boston have the custom of offering a prize to the first one called by telephone who can answer the "question of the day." If the first one called answers correctly, $5.00 is paid; if a second one has to be contacted to obtain the answer, the prize is $10.00; and is increased $5.00 for each call. One minute is given the person called in which to obtain the answer in any way he finds possible in his own home.

One day last January the question was, "Which planet is nearest the sun?" Although the question was given out over the radio, only those fortunate enough to be called by telephone were in on the contest. Since no one could answer the first day, the questioning was continued for several days. By Saturday the prize had reached $100 and multitudes in Boston were aware of it. That morning a mother of several school children was called and was told she could ask any of her children. But she said she always allowed them to sleep until 9:15 on Saturdays and she would not disturb them on the slim chance that any might know the answer.

At the next house called the girl who answered the telephone turned to her mother and asked, "Which planet is nearest the sun?" "Mercury," the mother correctly replied.

Perhaps a cash award from the sponsors of the program to which you might be listening would stimulate attempts to view and report on the planet Mercury. But unlike the Boston station, we are placing this suggested astronomical effort purely on a voluntary basis and hope that many will be interested in viewing the classical little object.

Mercury, like the earth, is one of the worlds of our solar system. Its diameter is 3000 miles as compared with the earth's 8000. Its orbit around the sun is so much smaller than ours that the planet completes a round trip in only 88 days. Since the earth's path is almost three times as far out - Venus is between Mercury and us - we always have to look in the general direction of the sun to see Mercury. Most of the time it is so nearly lined up with the sun that it is apparently lost in the solar rays or sets before the sky is dark enough for it to be seen.

To speculate regarding conditions on the surface of Mercury is always interesting. It seems fairly well established that the planet keeps one side constantly turned toward the sun. Since it is so near the sun - thirty-six million miles on an average - this lighted side is so intensely hot that all water would boil away and any existing lead would melt. Jeans, the English astronomer, has said that if there are rivers on Mercury, they are rivers of lead.

On the other side, which the solar rays never reach, intense frigidity and eternal night prevail. As Mercury has no moon and very little, if any, atmosphere, what marvelous views of the stars and planets the mythical Mercurian inhabitants have! The brilliancy and splendor of the celestial bodies are beyond anything earth-bound creatures have ever seen! From that distant world our earth-moon system would appear as twin planets; the earth bluish in color and the moon yellow, the apparent separation between them varying as the moon encircles the earth.

On Mercury, night and day are therefore not times but places. Perhaps in the "twilight zone" between the light and dark sides an agreeable temperature exists.

In Greek and Roman mythology Mercury was one of the Olympic deities and served in many capacities. The Roman merchants considered him their patron and for him built little chapels in the market places.

But we read more of him as the messenger of the gods, dashing through twilight skies on winged sandals as he carries communications from the greater deities on lofty Mount Olympus to the dreams of earth's sleeping children. He is pictured as an agile, thinly clad youth, exalting in the delight of swift motion through the skies. The poet Longfellow has him exclaim, "I fly, I float, I soar.....O joy of motion! O delight to cleve the infinite realms of space..... through warm sunshine and the cooling cloud."

But we moderns have stripped this fleet little deity of almost all the personality accorded him by the ancients. "Simply a planet," we say, "encircling the sun once in three months, and the nearest to this central luminary of any of the solar family."

Now let us consider where we may find the planet Mercury during the next few days, and the appearance it will have. Good views should be obtained whenever the western evening sky is clear any time from the present until near the end of March. Mercury will be highest in the sky at sunset on March 25, when it will set one and three-quarters hours after the sun. But it will be considerably brighter the earlier in the week it is observed.

At its twilight appearance this month, Mercury may be spotted most easily by referring the location to that of Venus, the brilliant object which has been in the west for the past several months. Mercury, although far inferior to Venus in brilliance, may nevertheless be classed with the very bright stars. During all the time Mercury is in the evening twilight, it will be almost under Venus. The separation of the two planets will be less in a week from now than at present.

There are no other bright sky-objects below Venus so there will be no mistaking Mercury when you see it. Repeating, here are the directions: As soon as the sky is sufficiently darkened - perhaps 30 or 40 minutes after sunset - note the brilliant planet Venus almost directly west. Trace down from Venus toward the horizon and Mercury will soon be found. If the sky is very clear, Mercury will appear quite bright and may even twinkle slightly. Look for this little messenger of the gods on the first good eve
ing, for it will soon again be lost from our sight.

REPORT OF THE SECRETARY ON LETTER BALLOT FOR OFFICES OF THE SOCIETY For the year beginning March 1, 1945

As provided in Article VIII, Section 1, of the Constitution of the Society, there was sent to each member in good standing a letter ballot containing the names of the regular ticket of nominees for offices in the Society for the year beginning March 1, 1945.

Prior to this annual meeting, 62 marked ballots were returned to the Secretary. As no other names were submitted, according to our by-laws the vote was unanimous in favor of the regular ticket of nominees as follows:

President	Mr. A. W. Hancock
Vice-President	Mr. F. W. Libbey
Secretary	Miss Ada Henley
Treasurer	Mrs. H. Mildred Stockwell
Director	Dr. Courtland L. Booth

Respectfully submitted,

/s/ Ada Henley

Secretary

REPORT OF THE TRIP COMMITTEE FOR 1944-1945

To the Members:

Due to the gasoline and tire situation, only three field trips were scheduled for the Society during the past fiscal year.

The first and best attended trip was that of June 25th to the mouth of the Clackamas River.

The trip of July 30th to the Willamette Stone offered the greatest opportunity for the members to learn the background of the early land surveys in Oregon. It should have had a greater attendance.

The trip of August 27th to the gravel pits in the vicinity of N. E. Cully Road and N. E. Lombard Street drew the smallest group, yet it offered a most interesting study in the work of running water.

Respectfully submitted by

/s/ H. B. Schminky

Trip Chairman

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Dues are due and payable.

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THE OREGON COUNTRY

1935 1945

Oh, the Oregon Country ain't what she used to be,
Ain't what she used to be, ain't what she used to be,
The Oregon Country ain't what she used to be,
Ten long years ago!
Ten long years ago! Ten long years ago!
Oh, the Oregon Country ain't what she used to be,
Ain't what she used to be, ain't what she used to be,
The Oregon Country ain't what she used to be,
Ten long years ago.

So we take our books and study geology,
Study volcanology, geomorphology,
To learn this country's geochronology
Of many long years ago.

And we take our picks and dig in the Eocene,
And the Oligocene, into the Miocene.
We look for fossils in the Pliocene
Of many long years ago.

Now when Dr. Hodge from the state institution
Speaks of the Laramide Revolution
It helps to remove our mental confusion
Of ten long years ago.

- -

Now when we sing of the ichthyosaurus,
Or Rex tyrannosaurus, who lived long before us,
We want everyone to join in the chorus
Of many long years ago! (AUDIENCE SING)

Now if you're a person of slight notoriety,
And sing this song with complete sobriety,
You ought to be a member of our Society,
With many long years to go.

For the Oregon Country ain't what she used to be,
Ain't what she used to be, ain't what she used to be!
The Oregon Country ain't what she used to be,
Many long years ago!
Many long years ago! Many long years ago!
Oh, the Oregon Country ain't what she used to be,
Many long years ago.

OFFICERS

	1945	1944
PRESIDENT	A. W. Hancock	E. N. Bates
VICE-PRESIDENT	F. W. Libbey	Mrs. Mildred James
SECRETARY	Miss Ada Henley	Miss Ada Henley
TREASURER	Mrs. Mildred Stockwell	Mrs. Mildred Stockwell
DIRECTORS	Dr. Courtland L. Booth	Leo Simon
	Leo Simon	Dr. Courtland L. Booth
	E. N. Bates	Raymond L. Baldwin
	Lloyd L. Ruff	H. Bruce Schminky
	Raymond L. Baldwin	Lloyd L. Ruff

* * * * * * * *

M E N U

Eciuj otamot — Dalas

Yekrut

Gnisserd — Ecuas yrrebnarc

Seotatop dehsam — Saep neerg

Yrelec - Storrac - Sevilo

Sllor toh

Eip elppa — Eeffoc

* * * * * *

P R O G R A M

GREETINGS — President E. N. Bates

MASTER OF CEREMONIES
Kenneth N. Phillips — Member No. 1

HUNDRED MILLION
(by group)
Song led by Mrs. Clarence Ogren — Accompanied by Mrs. A. W. Hancock

PASSING PARADE
1944 - 1945
E. N. Bates — A. W. Hancock

EXTRACTS FROM A GEOLOGIST'S NOTEBOOK
Sheldon L. Glover — Olympia, Washington
Supervisor, Division of Mines and Mining

RECESS

"I WAS THERE"

JUNIPER JOE AND GINGER

GOD BLESS AMERICA
Group

GOD BLESS AMERICA

God Bless America, land that I love
Stand beside her and guide her
Through the night with a light from above
From the mountains, to the prairies
To the ocean white with foam
God Bless America, my home sweet home.

* * * * * * * *

ANNUAL BANQUET COMMITTEE

H. Bruce Schminky, Chairman

John W. Robinson

Miss Agness B. Jones

Mrs. Louis Oberson

Mrs. Hugh Miller

Mrs. Courtland L. Booth

Mrs. John Allen

Mr. and Mrs. Leo Simon

Albert D. Vance

Mr. and Mrs. Earl Minar

Miss Dorothea Minar

Mr. and Mrs. Lloyd L. Ruff

Mrs. Amza Barr

Mr. and Mrs. A. W. Hancock

Kenneth N. Phillips

Franklin L. Davis

Mrs. L. E. Kurtichanof

Mrs. R. R. Poppleton

E. N. Bates (ex officio)

* * * * * * * * * *

Tenth Annual Banquet

March 9, 1945.

G.S.O.C.

GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 7 April 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S. W. 6th Avenue at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St. between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 N.E. 45th Avenue. Room open from 5 to 9 p.m. Round table discussions from 7 to 9. Open to members, their families and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Apr.13 "Geographic Highlights of Western North America."

Mr. W. A. Rockie, Chief of Planning, Pacific Coast Area, Soil Conservation Service, U.S. Department of Agriculture, will illustrate the above talk with Kodachrome slides. Come and enjoy an armchair cruise of Western United States and Alaska. Geologic specimens will be on display at the meeting.

Friday Apr.27 To be announced.

* * * * *

Plans for work night will be announced at the April 13 meeting.

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NEW MEMBERS

Mr. and Mrs. Harold M. Smith, 3945 - 1st Avenue, N.E., Seattle 5, Washington.

CHANGE OF ADDRESS

Mrs. Florence E. Sunderland, 4125 S.E. Oak Street.

****

Portland, Oregon
February 23, 1945

Mr. E. N. Bates, President
Geological Society of the Oregon Country

Dear Sir:

The activities of the Historical Committee for the past year have been largely, if not entirely photographic, and consisted in part of business held over from the previous year; so this report will cover the collection of photographs and mounting them in the Society's album.

During the two years, 102 photographs were collected. Of these, six were made and presented by Mrs. Priestaf, showing the trip to the gravel pits; four were by Ellen James, and these have to do with a visit to the Hancock home; sixteen by the chairman of this committee covering the picnic of August 13, 1943; two large prints by Tom Carney showing the crowd headed for the Dry Ice Mines; and one by Geary Kimbrell showing his idea of a dinosaur in pursuit of a geological professor. This was a table decoration at the 1944 banquet. Fourteen flashlight shots of the 1944 banquet and fifty-seven miscellaneous pictures of the 1944 picnic, a portrait of Mr. Christenson's clay model of a mountain sheep, and one of our secretary, Ada Henley, by the committee chairman, completes the number in the album.

The committee feels quite sure that other pictures of these two years' activities of the Society must be in existence and will be glad to insert them in the album with proper credit lines, if they will be turned in by the makers. This work will, of course, be done without further cost to the Society, in penance for former neglect of duty.

/s/ Orrin E. Stanley, Chairman
Historical Committee, G.S.O.C.

REPORT OF THE PUBLICITY COMMITTEE
For the Year Ending February 28, 1945

Notices of semi-monthly lecture meeting, the annual picnic, the annual business meetings, the annual banquet, and one field trip have been published in the Oregonian and the Oregon Journal during the past year.

The notices have been very brief but considering the times, both newspapers have rendered a fine service to the Society, for which we are duly grateful.

Respectfully submitted,

/s/ Geary Kimbrell

Chairman, Publicity Committee

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FROM A FIELD GEOLOGIST'S NOTEBOOK

III

One of the hardest things to do, when working regularly in the field, is to remember every morning to take along all the varied equipment which are the tools of the field geologist. Every field man has sometime in his experience started to reach for his Brunton, only to find, at the end of a 1000 foot climb, that he left it in camp. The classic example of this is the time on the Wallowa Mountain survey in 1937, when one of the boys climbed the Matterhorn (10,003 feet) from a camp at the base (4000 feet), made his geological observations, laid down his Brunton to record them in his notebook, and climbed down the chimneys and precipices to the camp below, only to discover, after he had reached the bottom, that he had left the $35 instrument sitting peacefully on a limestone boulder over one vertical mile above him. (Yes, he climbed back up that same afternoon, returning a sadder and wiser man. He since has turned to ranching for a living.)

The standard minimum kit for any type of field work can be listed very easily. I usually write down this list on the inside cover of my notebook at the beginning of the season, and then check it when I start out each morning:

Hammer (the easiest thing of all to forget in the field.)
Brunton Compass
Notebook
Hard pencils (spares for when you lose one)
Colored pencils (for map work)
Protractor (the translucent kind is hard to find if you drop it!)
Ruler or scale (small, 6")
Maps
Sample tags
Sample bags, cloth or paper
Tape or steel rule
Magnet (for testing black sands, etc.)
Lunch (very necessary along about 12:30 p.m. or even earlier)
Canteen (in dry country. Not much good if empty)

Supplemental and personal equipment is just as important. If you are a smoker, it is most disconcerting to run out of cigarettes, tobacco, or matches, or to lose your pipe. I always (well, nearly always) try to have an extra box of matches and an extra pipe in my knapsack. A watch is valuable to keep you from forgetting how late it is getting, when you get too interested in the fine map you are making. Pocket knife and small whetstone are necessary, to keep your pencils sharp (and to clean out that pipe). Salt tablets are extremely valuable in dry country. They make the canteen of water go twice as far. A pace counter is handy in scaling off distances.

If you are a camera fan, the old knapsack immediately takes on another ten pounds of weight (it was getting pretty heavy already). A real fan must have a tripod of some sort, as good landscape photography necessitates time exposures with the diaphragm stopped way down. He must have a light meter, and an extra pack of film. The smaller the camera, I've noticed, the greater the amount of supplemental equipment is to be carried along. Check me on that, Mr. Stanley. Extra lenses, range finders, filters, shades, film all pile up the weight.

Returning to that elusive G-pick. It has the slyest way of merging with the brush and making itself most inconspicuous when you start out again after a stop to take notes. It is SO easy to forget to pick it up. Painting the handle a brilliant yellow or red helps . . . some geologists paint the handle like a coral snake, in alternating bands of red and white (if they are one inch wide, they make handy rulers as well). Some bore a hole in the end and put a thong through, but that never seemed to help me. I'd hate to count up the number of picks I've left behind me. Right now I can think of three . . . I know exactly where they are and could go back and get them . . . if I cared to drive 50 to 1500 miles and hike 10 to 20 miles. You notice that a geologist rarely carries his pick in his belt or in a holder . . . he always carries it in his hand. The reason is that after a while he feels undressed without the weight of that pick in his hand. Then when he has left it somewhere, he immediately, or at least within a few hundred feet, feels something is wrong, and suddenly realizes he has left that durn pick behind again.

The U.S. Geological Survey furnishes their field men with a leather case about 1½ inches thick, 6 inches wide, and 9 inches long. It hangs on the belt, and contains compartments for maps and notebook. On the outside are slots for six or eight pencils and for the small scales. This enables one to "get at" his working equipment easily and quickly, without having to take off a heavy knapsack and untie it at every stop. A World War I gas-mask bag is an acceptable substitute, and several other types of small side-bag can be used. The heavier camera equipment, lunch, canteen, AND the rocks you collect, must go in the back pack however, as they weigh too much for a single shoulder to carry. I made a case like this out of the leather from an old pair of field boots, had it sewed and riveted at a shoemaker's, and have used it in the field for 13 years.

John Eliot Allen

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GENEALOGY OF A THEORY

SUGGESTION, an eager boy, met
CREDULITY, a winsome maid, and begat
PLAUSIBILITY, an enchantress.

PLAUSIBILITY mated with a chance acquaintance,
COINCIDENCE, and bore him
BELIEF, a stalwart youth, who set out to conquer the World.

But across his shield was the bar sinister, for
REASON had not consecrated the union of any of his progenitors.

Bailey Willis

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PRELIMINARY REPORT OF THE TREASURER
February 23, 1945

March 1, 1944 Balance on hand			$ 486.22
Income, Mar. 1, 1944 to Feb. 23, 1945			
Memberships			
101 @ $3.50	$ 353.50		
4 Junior @ $1.50	6.00		
1 Reduced @	2.00		
5 Prepaid 1945-46 @ $3.50	17.50	$ 379.00	
News Letter subscriptions and sales		27.10	
1944 banquet receipts		125.60	
Miscellaneous		.30	532.00
			$ 1018.22

EXPENSES

News Letter	$ 229.95	
Stat'y.-Prtg. & Postage	20.77	
1944 Banquet Expense	269.15	
Lecture Expense	35.50	
Miscellaneous Expense	62.94	618.31
Balance on hand February 23, 1945		$ 399.91

March 1, 1944 Checkbook balance		$ 486.22
Deposits Mar. 1, 1944 to Feb.23,'45		531.25
		$ 1017.47
Less checks Mar.1,1944 to Feb.23,"		617.56
Feb. 23, 1945 Checkbook balance		$ 399.91

Respectfully submitted,

/s/ H. Mildred Stockwell

Treasurer

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HAVE YOU PAID YOUR 1945 DUES?

ANNUAL REPORT - GEOLOGICAL NEWS - LETTER

Volume 10 of the Geological NEWS - LETTER appeared in the usual 24 numbers averaging six pages each. This policy was adopted previously as a wartime conservation measure. Most publication deadlines were met chiefly because of the wonderful cooperation of Mrs. Lillian F. Owen of the State Department of Geology and Mineral Industries where the bulletin is printed. Some delays of mail delivery were noted during the Christmas rush and these will be taken into consideration in the future.

The most outstanding article of the year was the "Visit to Paricutin Volcano" by Captain Donald B. Lawrence in the May 10th issue.

The editor wishes to take this opportunity to thank the many contributors and the associate editors for their cooperation during the past year. A greater participation by society members should be encouraged.

Lloyd L. Ruff
Editor.

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LUNCHEON NOTES - THURSDAY, MARCH 8, 1945

The attendance was up again today. A group of 21 celebrated (?) the end of President Bates reign. Several specimens were in evidence. Mr. Vance brought along the Burns nodule furnished by the State Department of Geology and Mineral Industries which had been cut and polished for presentation to the guest speaker at the annual banquet. President-elect Hancock also had some nodules from central Oregon including a lovely plume from Friday's which we understand fell into Mr. Bates hands (or pocket) later. Mr. Sandoz showed some garnet schist from Wyoming and some malachite from an unknown locality. Your editor passed around some chabazite, a zeolite in andesite, from near Quartz Creek on the McKenzie River.....Franklin Davis' guest was Geo. Linton from the U.S.E.D. and Dr. J. C. Stevens presented writer Ernest Haycox who is also vice-president of the newly organized Oregon Museum Foundation..... Mr. Davis distributed publications just received from the Colorado Museum and Mr. Vance read a letter from Captain Arthur C. Jones after which the Vance-Davis banter of words was resumed.....Mr. Bates expressed his appreciation of the fine support of the luncheon group during the past year.

L.L.R.

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STONE CUTTING TOLD

Brides in 1945 will have a special color treat in their engagement diamond if it's the new multi-facet cut. Multi-facet is the new process which makes a diamond blaze with unbelievable brilliance. Its 40 extra facets or light-reflecting surfaces around the edge (or girdle) of the stone intensify the color so greatly that only pure white or blue-white diamonds may be used.

(The Oregonian, February 27, 1945)

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 8 April 25, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St. between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

WORK NIGHT: On Sunday evenings following the regular Friday meetings at 3105 N.E. 45th Avenue. Room open from 5:00 to 9:00 p.m. Round table discussions from 7:00 to 9:00. Open to members, their families, and invited guests. A ten cent contribution is customary for lights and miscellaneous expenses.

TRIPS: Will be arranged when feasible.

MEETING ANNOUNCEMENTS

Friday Apr. 27 — Lloyd L. Ruff will give us another of his interesting illustrated Snake River talks. This time he will cover some of the headwaters of the Snake including the Jackson Hole country and the Grand Teton Range. Come out and enjoy this informative lecture by an extremely busy member who still can find time to give for the good of the Society.

IMPORTANT NOTICE

It has been proposed that the Geological Society, at least for the duration of the war, hold one lecture meeting and issue one Geological News-Letter each month instead of the customary two. It is possible that some other type of meeting, perhaps quite informal, can be held on the alternate Friday. The Board of Directors has tentatively approved the above plan, subject of course to the approval of the majority of the membership. The subject will be discussed at the April 27th meeting with the object of taking appropriate action. Plan to attend.

ANNUAL BANQUET NUMBER

This issue of the NEWS - LETTER is devoted to the subject of the Tenth Annual Banquet. Unfortunately the banquet programs have already been mailed so file your copy with this number to make it complete. The banquet speaker, Mr. Sheldon L. Glover, has kindly furnished a transcript of his address and the first installment appears in this issue. Many thanks.

NEW MEMBERS

Mr. and Mrs. Thomas E. Eakin, 603 Postoffice Bldg., Phone At. 6171 - Ext. 316.
Audrey V. Zaworski, 8030 S.E. 30th Avenue, Portland 2, TA. 3520.

The society wishes to extend its sympathy to Ruby Zimmer in the recent death of her father and also to Capt. Donald B. Lawrence in the loss of his father.

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EXTRACTS FROM A GEOLOGIST'S NOTEBOOK

by

Sheldon L. Glover*

I.

A friend of mine once said that life is not made up of years but of experiences. This, I believe, is particularly true of a geologist's life. He picks up a wealth of information and useful data as he follows his profession, but this accretion is seldom spectacular and, without conscious effort, becomes merely a part of his practical training. He also goes to out-of-the-way places, meets unusual people, and gets into odd situations. These incidental circumstances of his work are the experiences that stand out in memory.

At one period, I spent considerable time examining and reporting on limestone deposits in various parts of Washington. The work was interesting enough - geologic peculiarities of different deposits are always intriguing - but there was no particularly outstanding by-product of unusual incidents. A little later the investigations shifted to the coast of British Columbia and southeastern Alaska, with a marked increase in those incidental happenings that high-light a geologist's routine work.

Texada Island Limestone Investigation

One day our party landed at a village on the coast of Texada Island. There was no hotel, but we found that the widow of a British army major could be induced to supply meals and also to let us occupy an unfurnished cottage which was lost in the brush that mostly hid the straggling community. The widow proved to be an exceptional cook, one thing that is rare enough and always to be remembered with pleasure. After dinner we set up cots, and, following the usual discussions and arguments, went to bed. I was more than merely awakened in the middle of the night. I was brought up all standing and thoroughly alarmed by a stamping, banging, and swearing on the porch just outside my room, followed immediately by someone jamming his way through the window and then making a grab for me in my sleeping bag. When I recovered my senses, I found that my caller was a former schoolmate who was engineer for a mining company on the island. While he was celebrating someone's birthday, or merely drowning lonesomeness in a bottle of Scotch, he decided it would be a lovely idea to drive ten miles over a nearly impassible road and pay us a visit. He apparently thought that my window was a particularly obdurate door.

There are some excellent deposits of low-magnesia limestone on that island, also some that are exasperatingly intermixed with high-magnesia stone. One of the better deposits had long been in production, and employed Hindoo workers; these men in their turbans, scampering around the large pit, gave a peculiarly foreign aspect to the operation.

(to be continued)

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* Supervisor, Washington State Division of Mines and Mining.

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THE TENTH ANNUAL BANQUET

On March ninth, 125 members and friends of the Geological Society of the Oregon Country assembled at the parish house of the Grace Memorial Protestant Episcopal Church, 1523 N.E. 17th Avenue, to celebrate the completion of the Society's tenth year. Tin was the motif of the table decorations. From "Eciuj otamot" to "Eeffoc" most of us had to guess what we were eating. It finally occurred to us that the whole mixup was probably due to Schminky's effort to economize by setting up the type himself.

After a brief greeting the president introduced Kenneth N. Phillips as master of ceremonies. Ken we are told is the number one charter member of the society as his name heads that first list of members. Under his expert guidance including an abundant flow of wit, wisdom , and humor, the program was delightfully under way. To the piano accompaniment of Mrs. A. W. Hancock and the able leadership of Clarence Ogren, the group sang "Hundred Million."

Under the program title "Passing Parade" the retiring president, E.N. Bates, briefly summarized the past ten years of the society's history by mentioning each of the past presidents of the society. Namely, 1935, Dr. Edwin T. Hodge; 1936, Mr. Clarence D. Phillips; 1937, Mr. A. D. Vance; 1938, Mr. Ray C. Treasher; 1939, Mr. Arthur M. Piper; 1940, Dr. J. C. Stevens; 1941, Mr. Kenneth N. Phillips; 1942, Mr. H. Bruce Schminky; 1943, Mr. Lloyd L. Ruff; 1944, Mr. E. N. Bates; and the new president for 1945, Mr. A. W. Hancock.

Mr. Charles R. Meyers, one of our loyal members, was taken by death from our friendly circle.

During the past year a number of our members have been especially honored. Dr. J. C. Stevens was elected to the Presidency of the American Society of Civil Engineers. Mr. F. W. Libbey was made Director of the Oregon State Department of Geology and Mineral Industries. Mr. Carl P. Richards was elected president of the Salem Geological Society. Mrs. A. W. Hancock was president of the Oregon Agate Mineral Society during 1944. Mr. R. L. Baldwin was made a member of the Pacific Coast Board of Grain Supervisors of the U.S. Grain Products Branch. Mr. Lloyd L. Ruff was elected chairman of the Oregon section, American Institute of Mining and Metallurgical Engineers. Dr. Warren D. Smith was called to Washington D.C. by the War Department as consultant in the Geology and Geography of the Pacific. The following three members of the society are members of the Board of Directors of the Oregon Museum Foundation: Dr. J. C. Stevens, the society's representative, has been chosen President of the Foundation; Dr. Courtland L. Booth represents the Oregon Agate Mineral Society; and Mr. F.W. Libbey was appointed by Governor Snell.

At this time the retiring president passed the gavel to the new president and the "Passing Parade" changed from the past to the future. President Hancock in a few well chosen words and with his characteristic humor accepted his new responsibility and outlined his plan for the new year.

The master of ceremonies then introduced our special guests, Mr. and Mrs. Sheldon L. Glover of Olympia Washington. Mr. Glover is Supervisor, Division of Mines and Mining of the State of Washington. Mr. Glover's talk entitled "Extracts from a Geologist's Notebook" was intensely interesting to both the geologists and the rest of us. The material was ideally adapted to the audience and everyone thoroughly enjoyed the thrilling and amusing adventures of Mr. Glover, the geologist. (Publication of the address begins with this issue)

Mr. and Mrs. Glover are fine folks, the kind we should like to see often. We sincerely hope they will visit us whenever possible. The master of ceremonies presented Mr. Glover with a beautiful plume agate paperweight. The retiring president was presented with a book entitled "Getting Acquainted with Minerals" by George L. English.

At this point a large cake was brought in and placed on the head table. After the cake had been duly admired the new president extinguished all ten of the candles in two mighty puffs. By unaminous consent the cake was given to the George White Center.

After a brief recess Dr. Hodge conducted a session of the famous geology class from which the G.S.O.C. had its beginning. The chalk-talk technique was the pedagogical magic used by the good doctor. The results on his pupils were startling beyond belief. The gems of profound geological knowledge that fairly bubbled from the great minds assembled before us should have been preserved for posterity. After witnessing the performance of this remarkable class it is easy to understand how the conjunction of so many brilliant intellects foreshadowed the birth of an organization like the Geological Society of the Oregon Country. Long may it live!

An old time prospector "Juniper Joe" was persuaded to entertain us with some of his harrowing experiences in the wilds of the Oregon country. Joe, in his wanderings, had encountered a surprising number of the members of the society and related to us startling things about our fellow-members not previously suspected. Joe's donkey, "Ginger", was an animal of phenomenal intelligence. The Old Testament tells us that Balaam's ass spoke to him. As a Sunday School boy, we could never quite accept this tale of Holy Writ but after seeing Ginger, we do believe that such an accomplishment as speech or even a duet by such a donkey is humanly possible.

The tenth annual banquet was closed by singing God Bless America.

Bruce Schminky, Chairman, and his banquet committee deserve our sincerest thanks for planning and producing such an enjoyable occasion.

E.N.B.

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REPORT OF TENTH ANNUAL BANQUET COMMITTEE

To the President and Members of the
Geological Society of the Oregon Country:

The tenth annual banquet of our society is now a thing of the past. That it was a big success is known to all who were fortunate enough to be able to attend. This success was due entirely to the members who composed the committee, and this report is submitted to you in order that the part played by each in working out the many details may be known and credited.

John W. Robinson took the important task of finding the guest speaker, and in this he was guided by suggestions from all of our professional members. His task was finished to the satisfaction of all the members of the committee, when a telegram was received two weeks before the date set for the banquet saying that due to conditions beyond the speaker's control, he could not be with us. The telephone bills in our expense account will show how John worked

against fleeting time to secure another speaker. All must admit that in Sheldon L. Glover, supervisor of the Division of Mines and Mining for the state of Washington, he found a most excellent substitute.

Finding a place to meet and picking a suitable menu for an anniversary banquet in the face of rationing and high prices, was no simple undertaking. But Miss Agness B. Jones and her able assistants, Mrs. Louis Oberson, Mrs. Hugh Miller, Mrs. John E. Allen, and Mrs. Courtland L. Booth, soon had this situation well in hand. Our only regret regarding our choice lies in the fact that the room proved to be too small for our final needs.

Mrs. Oberson was given a free hand in working out the lighter side of the program, and proved herself a most capable producer and director. Franklin Davis and Kenneth Phillips assisted her in writing the script for "I Was There". A.W. Hancock was his own producer in Juniper Joe and Ginger. Pansy Yokum was absent from the program due to the illness of Mrs. Earl Minar.

Mrs. Lloyd Ruff, with Mrs. A. W. Hancock, Mrs. Amza Barr, Mrs. Clarence Ogren, and Mrs. R. R. Poppleton as her assistants, decorated the tables and arranged for corsages for the ladies at the speakers' table. This being the tin anniversary, that motif was carried out in the decoration.

Miss Dorothea Minar designed the cover for our attractive program. Lloyd Ruff arranged the contents and jumbled the menu.

Mr. and Mrs. Leo Simon handled the sale of tickets in their usual efficient way.

Albert D. Vance and Earl Minar secured the gifts for the speaker and the retiring president. Mr. F. W. Libbey donated the nodule which was made into a paperweight for the speaker. "Getting Acquainted With Minerals" by English was purchased for Mr. Bates.

E. N. Bates, Amza Barr, Miss Kathryn Brown, Miss Ada Henley, Miss Lucile Jordan, Mrs. Charles R. Mayer, Mrs. Kenneth Phillips, Mrs. H. Bruce Schminky, and Mrs. H. Mildred Stockwell assisted in the organization of the foregoing acting subcommittees.

Due to the rapid sellout of tickets, only one writeup about the banquet was furnished the papers.

In behalf of the Society, the chairman wishes to express his thanks to each and every one who served on the Tenth Annual Banquet Committee or took part in carrying out the program that was prepared for the occasion. All credit is due to those whose names appear above, and not to the one who signs below as chairman.

Respectfully

/s/ H. Bruce Schminky

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OFFICERS AND COMMITTEE CHAIRMEN
1945

Officers:	Telephone
President - A.W. Hancock	SU. 5285
Vice-President - F.W. Libbey	BR. 2276
Secretary - Miss Ada Henley	EA. 1475
Treasurer - Mrs. Mildred Stockwell	EA. 4281

Board of Directors:
President, Vice-President, Secretary, Treasurer.
Mr. Leo Simon, Mr. Lloyd L. Ruff, Mr. R.L. Baldwin, Dr. Courtland L. Booth, Mr. E.N. Bates

News-Letter:	
Editor - Lloyd L. Ruff	TR. 6980
Business Manager - Raymond L. Baldwin	CH. 1452

Committee Chairmen:	
Program - A.D. Vance	MU. 5204
Membership - Leo Simon	LA. 0459
Librarian - Miss Margaret A. Hughes	AT. 7066
Historian - O.E. Stanley	TA. 1250
Auditor - Hugh Miller	AT. 0704
Research - E.M. Baldwin	BR. 2276
Social - Mrs. Johanna Simon	LA. 0459
Work Night - Earl Minar	SU. 4046
Publicity - Geary Kimbrell	GA. 9995
Service - F.L. Davis	BE. 2975

****

MAZAMA OUTING

March 15, 1945

Geological Society of the Oregon Country
Portland, Oregon

Gentlemen:

The Mazamas of Portland, Oregon, are planning to spend their annual outing, July 15 to 29, at Lake O'Hara in the YoHo National Park in British Columbia. This is the region near famous Lake Louise and Banff and offers all the opportunities to be expected of an outing in the Canadian Rockies.

If any of your members or friends are interested in such an outing, we should be happy to have them send for our prospectus which we expect to have ready about May 1.

Sincerely yours,

MAZAMAS
The Outing Committee

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TENTH ANNUAL BANQUET GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 9 May 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Building, 920 S.W. 6th Ave. at 8:00 p.m.

TRIPS: On the Sunday following the second meeting of each month for the balance of the summer - see special announcements.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St., between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday May 11

Something new and different in Friday night programs. This will be a tryout for similar, more or less informal, audience-participating programs proposed for the coming months.

Each Geological Society member attending the May 11th meeting is requested to submit a question on geology or geography, preferably concerning the Oregon Country. These questions will be answered by a committee of experts as the time allows. Questions which cannot be satisfactorily answered on the spur of the moment will be deferred until a future program.

Broad general subjects should be avoided and more or less specific subjects such as "What is channeled scabland?" "Where is the nearest exposure of the John Day beds?" etc.

Pliocene horse and other fossil remains from South-central Idaho will be on display.

****

PROPOSED MEETING CHANGE

The general conclusions to be drawn from the April 27th discussion of the proposed meeting change appear to indicate a majority opinion in favor of retaining the meeting hall for two meetings a month. Considerable interest was shown in a proposed social, educational, and entertainment night on the second meeting night each month. Such a program will have its beginning as announced above. Not much is drawn from the discussion of the NEWS - LETTER change. The editor suggests that if such a change is voted that the monthly bulletin begin either on July 10 or on January 10 next year.

****

NEW MEMBER

Leo W. Haven, Route 4, Box 1255, Portland, Oregon.

CHANGE OF ADDRESS

Jeanne Pruett, to 3203 S.E. Gladstone, Zone 2.
Agnes B. Jones, to 612 S.W. 20th Avenue, Zone 9, Phone ATwater 4672.

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LUNCHEON NOTES FOR THURSDAY, APRIL 12, 1945

Seventeen members and two guests enjoyed a social hour at the Winter Garden restaurant and inspected interesting exhibits besides being entertained by the weekly "sparring match" between A.D. Vance and F.L. Davis..... The guests, who had both attended previous luncheons, were Mrs. King, Dr. Booth's daughter "who has only one baby," as the doctor explained, and Hayden Kimbrell who was in the city on a brief furlough..... Specimens were "cold quartz" brought by H.B. Schminky; spun glass in two forms exhibited by Earl Minar who also had a rock which we heard President Hancock refer to as hornblende; a new magazine named "Chemistry," the property of Mr. Schminky; a copy of Gill's Chinook dictionary brought by Leo Simon; and a typed brief history of the U.S.S. South Dakota..... Mr. Davis very modestly acknowledged having given a thirty minute talk to the Producer's Club. ..... There was a general discussion of the desirability of changing the location of quarters for work nights, and of eliminating one general meeting and one issue of the NEWS - LETTER each month. Mr. Simon mentioned the experience of the Audobon Society with a "Round Table" evening and said that these meetings soon drew larger numbers than the regular lecture meetings. Can this be due to the general desire to talk rather than to listen? ..... Mr. Minar suggested that Work Night might be substituted for one lecture meeting..... Mrs. Stockwell said that the elimination of one lecture a month would give members an opportunity to indulge in other activities..... The matter of meetings and the NEWS - LETTER will be further discussed at a future meeting before the Executive Committee takes final action.

O.E.S.

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REPORT OF THE AUDITING COMMITTEE

I have examined the records and accounts of the treasurer of the Geological Society of the Oregon Country for the year March 1, 1944, to February 28, 1945, and find them correct in every respect.

/s/ Hugh Miller
Auditing Committee

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RAISING THE ROOF

Yes, many times we've heard that time-worn expression applied to the neighbors or the tenants upstairs but the other day we saw it literally happen. On east Broadway and Forty-second Avenue the house roof was being raised intact for the specific purpose of adding an additional story to the existing structure. Which reminds us of one of the stories in our grade-school geography about some Oriental people who reportedly construct the roof of the house first and then raise it on bamboo poles.

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STREETS OF GOLD

Did you read Tom Henry's "Quiz 'Em" column in the April 22nd issue of This Week magazine? It seems that some enterprising allied military engineers in New Guinea spotted a stock pile of likely looking rock nicely crushed to specifications for road building. A 2-mile section of road was surfaced with the material before it was discovered that the 'rock' was gold ore worth $1,000,000. Perhaps this will precipitate a gold rush after hostilities cease in the Pacific.

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PLUTO, THE DIM AND DISTANT PLANET

by

J. Hugh Pruett*

A request for information regarding Pluto, the most distant from the sun of all in the retinue of planets, comes from Ruth Ingram, a grade-school pupil. She is especially anxious to learn about the length of the day on this far-away world and concludes with this question: "Is much known about the type of land, so to speak - I mean does it have air, water, or what?"

Ruth's question suggests the topic for today. It might be fitting to state that questions are always welcome. Answers will be given by mail, or if of general interest, will be discussed later.

By way of introduction, let us state that up to 165 years ago, only six planets were known. These were never "discovered" in the sense we now speak of astronomical discovery, for they have been known since ancient man first turned his eyes toward the starry heavens.

These six, in order of distance from the sun, are Mercury, Venus, earth, Mars, Jupiter, and Saturn. Saturn is approximately 10 times farther from the sun than is the earth.

In 1781 A.D., Sir William Herschel in England found Uranus, the next planet beyond Saturn. Uranus is considerably smaller than Saturn, although many times larger than the earth. But it is twice as far from the sun as Saturn so can seldom be seen without telescopic aid.

In 1846, Neptune, three times farther from the sun than Saturn, was found far out in the dark spaces by the combined efforts of English and French mathematicians and German telescope operators. Because of some irregularities in Uranus' motion, the mathematicians calculated where a more distant planet must exist. A telescope in Germany was turned to the place in the sky from which the gravitational disturbance seemed to come, and almost at once located Neptune.

After the discovery of Neptune, some slight disturbance still seemed to be in evidence. It was suspected that an even more distant planet remained undiscovered. During the early part of the present century, Professor Lowell at the Lowell observatory in Arizona spent 10 years of difficult mathematical work figuring where the new planet might be. A great deal of photography of the sky was carried out in the hope of locating the distant object.

Professor Lowell died in 1916, a year after he published his calculations and predictions, and 14 years before any discovery was made, but his successors continued the search.

In 1929 a new photographic telescope, especially fitted for detecting faint objects, was installed at the Lowell observatory and was put in charge of Clyde Tombaugh, a young and recently employed assistant. Tombaugh was previously a hard-working farm lad who had a great love for astronomy. In spare moments he studied the subject and built telescopes, then finally applied for a position at the Lowell observatory and, for some reason not generally known, was accepted.

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* Astronomer, General Extension Division, University of Oregon.

Along the region of the sky where the planets were known to travel, Tombaugh made long-exposed photographs. Two or three nights later the same regions were again photographed. Fixed stars would remain unchanged in position from one time to the next, but any planet in the region would show slight movement during this interval.

After weeks of this work, success came. On a picture taken January 25, 1930, a very faint dot was found which later photographs showed was moving. This might be a comet or one of the hundreds of asteroids, but the longer it was studied, the more certain it became that this faint dot was a very distant planet. Excitement reigned at the observatory, but no public announcement was made until seven weeks had passed and many observations and calculations had been made.

Then on March 13, the 75th anniversary of the birth of Percival Lowell, and also the date in 1781 of the discovery of Uranus, the news was flashed to the world that a new planet more distant than Neptune had definitely been discovered. The announcement stated that the object was found in the general location predicted by Professor Lowell before his death in 1916.

The news electrified the general public, even those who knew very little about the starry skies. The idea that the mind and eyes of man could reach far out into the black night of space and lay hold on an object that had eluded earth dwellers since the far-away beginning of man, had an overwhelming and popular appeal. Newspapers and magazines gave considerable space to the thrilling news release.

After the discovery, search through the picture plates at various observatories revealed that Pluto had been photographed in 1927, 1921, 1919, and 1914, but the significance of the image had been overlooked.

Almost immediately mathematical astronomers started calculations based on the positions of the planet at various observations, to determine its distance, the shape of its path, or orbit, and the time required for a complete circuit around the sun. Soon a mild controversy arose among astronomers as to whether the new planet was near enough the position predicted many years earlier by Professor Lowell to be the actual object sought. This question has not yet been settled.

For several months after the discovery, the new body was referred to as the trans-Neptunian planet, or more commonly as "Planet X". Several persons suggested that it should be named "Lowell". Finally a cablegram to the Lowell observatory from a noted English astronomer stated that an 11-year old girl of Oxford, England, Venetia Burney, had suggested to him that Pluto would be a fitting name. This name was at once adopted. Later it was found that the French astronomer, Reynaud, in 1919 had suggested "Pluto" for the name of any trans-Neptunian planet that might be discovered.

The name "Pluto" is fitting in two respects. In Greek mythology Pluto was the god of the underworld, that dim and shadowy region inhabited by the souls of the dead. The newly discovered planet certainly is in a "dim and shadowy" region of the solar system, for at its great distance from the sun, the light reaching this far-away world is only one sixteen hundredth (1/1600) as bright as that received by the earth. Then the first two letters of the word Pluto, P and L, are the initials of the name of Percival Lowell, the noted founder of Lowell observatory and ardent advocate of the future discovery of a planet beyond Neptune. These two letters so placed that the vertical parts of each are fused together is now the astronomical symbol for the planet Pluto. (P)

Certain facts about Pluto are now well established. The planet moves in a path that is slightly oval in shape and has an average distance from the sun of nearly four billion miles, or about 40 times the earth's distance from the sun. The time required for one complete trip around the sun is 248 years. Pluto is so small that it shows no appreciable width as do the nearer planets but is starlike even in the largest telescopes. The surface temperature is approximately 350 degrees below zero Fahrenheit, so any water there is frozen.

It now seems fairly certain that Pluto is about 4/5 as massive as the earth, likely has no air, and seems to reflect light like our darkest rocks. The length of Pluto's day is absolutely unknown.

The suggestion has been made that Neptune once had two moons which at some time bumped into each other, and one flew away and became Pluto.

Pluto, the most distant planet known, is so far away that its light requires five hours to reach us. But in comparison with the "fixed stars", those distant, immense suns, this planet is actually nearby. The nearest star is 7000 times farther from us than is Pluto.

Whipple of Harvard observatory has remarked that "Pluto is undoubtedly an arid, friged, and dark world, similar to the earth in size and mass, but inhospitable beyond comprehension."

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LUNCHEON NOTES - THURSDAY, MARCH 15, 1945

Thursday again with a good crowd to mark President Hancock's first luncheon meeting..... Attendance, 20 after Rose Jennings dropped in late. Mr. and Mrs. Clarence Ogren, two of our newer members, were welcomed. Mr. Ogren showed some of the minerals which he had acquired in his recent travels and which included a beautiful specimen of sphalerite and galena from Park City, Utah, and some carnelian, the locality of which escaped your reporter..... Mr. Vance passed around a box of bones from the LaBrea pits in Los Angeles which Dr. Arthur Jones had sent - it was a help-yourself collection. The Doctor also had sent a piece of feldspar and some rocks, one of which resembled jade from near Campo, California, where he is stationed. Mr. Minar had a specimen of cyanite from Nevada and President Hancock came up with a large piece of obsidian from near Wagontire, Oregon, which he had worked over with a hammer and had produced some unusual conchoidal fracture patterns. Hancock had also acquired a 'garden specimen' which looked like a cement cast of the inside of an egg..... The only visitor was introduced by Mr. Bates, Professor L.J. Smith of Washington State College..... Leo Simon gave a dissertation on oaks and then the conversation rapidly deviated until the subject was cock fights..... President Hancock closed the meeting with the announcement that Dr. Falkenbalk of the National Museum believes, from his studies of the oredon, that the middle and upper John Day beds are of Miocene age and only the lower red beds of the John Day may be Oligocene. Dr. Falkenbalk had recently studied Hancock's collection along with others on the Pacific Coast.

L.L.R.

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EXTRACTS FROM A GEOLOGIST'S NOTEBOOK

By
Sheldon L. Glover*

II.

Alaskan Investigations

The Alaska limestone deposits are just as variable and still more complex in part. We spent quite a time exploring a deposit on one of the deep narrow inlets near Ketchikan. The place had a dream-like quality, with its still, dark water and timbered mountains rising abruptly from the shore. Unfortunately the deposit, though large, was virtually that rare thing, a marble schist - a snowy white coarsely crystalline stone having a marked schistose cleavage due to an abundance of oriented plates of sericite or muscovite.

We finally found a deposit on Dall Island that satisfied all requirements, but not before elements of drama with comedy relief were interjected in the search. A southwest storm caused the trouble. We had chartered the "E. Nielson", a 50-foot diesel-powered fishing boat, for an exploratory trip around Prince of Wales Island. We were ready to go but were storm-bound. The fish-hold had been cleaned, and a ton or two of cracked ice had been shipped. Around the mound of ice were steaks, chops, lettuce, celery, grapefruit, and other provisions for the trip. Also, we had a cook. But the high wind and mountainous waves kept all craft in the harbor. Apparently the trip was off for a time, so we resumed the tiresome job in our hotel room, of grinding limestone samples and running preliminary quantitatives for magnesia.

The next morning the wind played a trick on us by moderating. The chief of the engineer's group immediately concluded that the storm was over, so he rounded up the Skipper and informed him that we would start at once. The ensuing argument was one for the book, but the Skipper lost the decision. Also, he had lost the cook. His temper was not improved when he had to go up town to find him; but he must have known where to go, for it was not long before he stalked back across the dock, dragging the coatless, bareheaded man by an arm. And was that cook mad! He told all and sundry what he thought of a Skipper who would go out in this weather. Just when he had been comfortably settling down for a couple days visit with a girl friend whose husband would be away for a week with the fishing fleet.....two bottles of wild cherry hair tonic bought purposely for the occasion, and he had not had time to even sample it.

By the time we were out into the open, the wind was back to gale force, but the Skipper had his neck bowed and fought the storm. For 13 hours we headed into the wind, now in a trough where waves towered 20 feet above us, now on a crest where we could see for miles across the tumbling waters of Dixon Entrance, then endlessly repeat. I chewed on dried raw halibut and laughed at the first one or two who became seasick; then I, too, was down, and it was no laughing matter..... hanging onto a stay on the wildly pitching deck, thinking I would die, and too sick to care.

In the evening we rounded Cape Chacon, the south promontory of Prince of Wales Island, and into the lee of Long Island, finally reaching an anchorage for the night. It was then the Skipper admitted that he could not have turned back if he had wanted to, and that the survival of the boat had depended on the continued functioning of our diesel engine.

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* Supervisor, Washington State Division of Mines and Mining.

The several bodies of limestone that had been reported as occurring in that region were interesting enough from a geologist's standpoint, but they had very little economic value. An examination had to be made, however, to determine that fact. This, again, was routine work, but I cannot recommend preliminary investigations which involve sampling an outcrop that forms the backdrop of a waterfall. Such work is all wet!

To be continued.

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LUNCHEON NOTES - THURSDAY, MARCH 23, 1945

President Hancock tapped his gavel for the opening of the second luncheon under his reign. Mr. Bates took a back seat and proposed, upon invitation to the head table, that ex-presidents be excused from service for a period of five years! Being seated next to Mr. Bates was a pleasure as his enjoyment of seeing the other fellow work spilled over - but not for long, as Mr. Hancock soon had a pencil in my hand and Mr. Bates saw to it that I had enough paper to get down all the "notes". Oops! sorry, the pencil slipped - that gavel really made a report that time. Loud noise! Claps for Ada Henley's return after several weeks' absence due to illness. No specimens in evidence today - but wait, they'll inevitably appear.

'Susie' Stockwell came forth with the latest issue of "Arizona Highways" especially so Leo could see the beautiful colored pictures of the native birds. That hummingbird perched over the thistle was a delight to behold - but, of course, Leo wasn't there to see it.

Two copies of the March 24 "Post" started around the tables. Al Vance said the man in the picture of the article, "The Army's Pet Prophets" - geologists, of course - looked more like Lloyd Ruff than he did himself. We wonder if Lloyd could have pulled an Aladdin's trip to Washington, D.C., for that picture since the last luncheon. The proof that Lloyd has remained in town all the time is that Mr. Bates discovered a little more hair on the top of Lloyd's head than appears on the man's in the picture. Now, you'll just have to read the article, as both Mr. Vance and Mr. Bates reviewed it for us and each gave his own version - both entirely different. Topography, terrain, and beating the deadline for MacArthur are some of the highlights.

Tap, tap, there goes that gavel - the guests; Mrs. Trevor Kincaid, guest of Mrs. Louis Oberson; Mr. and Mrs. Smith, guests of Dr. and Mrs. C.L. Booth; and Dr. Johnson, returned from spending forty years as an M.D. in Scotland, guest of Miss Hughes. Miss Steers is a member but this is the first luncheon date she has had with us. Lloyd explained that he was always happy to look at the three dimensional pictures she calls to his attention. (It seems she works upstairs in the Engineer's topographic department.)

Mr. Bates said he drooled so over the beautiful rejected nodule Mr. Hancock had offered to appropriate as a gift to the banquet speaker that finally Mr. Hancock said if he could carry it home in his pocket he could have it. Mr. Bates' recovery was rapid enough so that no ambulance was necessary. (Ada Henley asked Mr. Bates for lessons in that particular type of drooling, as she would like to have the plume agate lockets Mr. Hancock was dangling before her eyes.) By way of reciprocity Mr. Bates contributed a rare specimen of Saal wood (identified at Yale) which he contends came from the Beeswax Ship, to Mr. Hancock's collection. It was very gratefully received.

Well, well, here is our latest comer, Jack Stevens, and no meeting would be complete with him. The food is all gone, but wait - yes, Jack has an excuse for being late, and wants to put in his two cents worth. No, it's a twenty-cent library fine and a dollar traffic fine - all over a book he could have bought for fifty cents if he had cared to read it, which someone who was too lazy to get back to the library and left on his desk! Nuts! No, this isn't a nut convention. Now, why isn't Leo here? Mrs. Oberson brought a nut encased in its husk which came from Boston and asked for identification. Everyone shouted at once "Hickory." Dr. Booth began an extempore speech on the delights of little boys shaking nut trees - beech nut trees, butter nut trees, hickory nut trees, etc. Oh, to be a boy again! Everybody began talking about nuts! - even to the extent that you could buy butter nuts at the Basket Grocery - nothing better than hickory nut cake - you have to lay them on their sides to crack them - you can raise butter nuts in Portland - hickory nuts are my favorite nuts - ad infinitim.

Dr. Booth concluded that perhaps fifty years from now someone would bring in a picture of a horse to be identified! What progress we bi-peds do make!

Tap, tap, there goes that gavel again. "Dismissed." Reluctantly we go.

V.L.O.

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LUNCHEON NOTES - THURSDAY, APRIL 5, 1945

About twenty faithful members showed up at the Winter Garden for food (?) and fun. President Hancock called for specimens, etc., which produced a very colorful issue of the Arizona Highways, exhibited by Mrs. Stockwell. Franklin Davis recommended the reading of a book on the far North entitled "Within the Circle" by Evelyn Stefansson. Incidentally the copy was not yet due at the library so no one was delegated to take it. Mr. Hancock passed around a beautiful sample of chalcedony from Antelope, Oregon. The chalcedony had taken the shape of some earlier substance, probably calcite, now removed. Only the encrusted shape of the calcite remained..... Leo Simon invited all to a Camellia show and not to be outdone, Mr. Stanley mentioned a photo display by leading amateur photographers that was worthy of our attention..... Mr. Libbey described the feelings of the residents of Curry County who advocated secession from the State of Oregon. They feel that they are isolated from Oregon in general and much closer to the residents of northern California in common interests. Mr. Libbey also mentioned the flourishing bulb industry that has sprung up during the last few years. This was augmented by Leo Simon with some interesting sidelights on the problems encountered in raising bulbs.

E.M.B.

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Note: Miss Jennie Gorter and Miss Emily Moltzner have very kindly furnished back numbers of the NEWS - LETTER. Incidentally Ray Baldwin can still furnish back volumes for $2.50 per copy.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 10 May 25, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

TRIPS: Will be arranged when feasible.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St., between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday May 25 — Geology of the Area East of Monterey Bay, California, by Dr. John Eliot Allen. The San Juan Bautista quadrangle is transected by the San Andreas rift and the northern portion is occupied by the Santa Cruz Range while the southern portion is occupied by the northern end of the Gabilan Range. The San Joaquin Valley formerly drained through the area and the mountains are the result of repeated faulting and uplift which commenced in Eocene time and is still going on. Dr. Allen has just returned from Berkeley where he received his doctor's degree in geology. His thesis work was done in the above quadrangle, and he is prepared to present some interesting geologic highlights of the area.

NEWS OF MEMBERS

Sgt. and Mrs. Robert Priestaf are the proud parents of a six and one-half pound boy born May 8th in Detroit, Michigan. Sgt. Priestaf was able to secure a furlough for a flying trip east.

Miss Margaret Steere has left the photogrammetry section of the U.S.Engineers to return to her home in Michigan.

Dr. J.C.Stevens spoke before the City Club at a luncheon meeting on Friday, May 11th. The talk "Problems for Peace" consisted of two parts, the first half being devoted to postwar construction plans for Portland and the second dealing with the technological and industrial control of Germany as outlined by the state department and the five national engineering societies.

Change of Address

Dr. and Mrs. E.M. Baldwin, 4123 S.W. Garden Home Road, Multnomah, Oregon, CHerry 1778.
Miss May Dale, 4538 N.E. Going Street, Zone 13.
Miss Margaret Steere, 1954 Independence Avenue, Ann Arbor, Michigan.
Sgt. and Mrs. Robert Priestaf, 13409 Hartwell Avenue, Detroit 27, Michigan.

NEW MEMBERS

Mr. and Mrs. Willard McClure, 2154 N.E. Weidler Street, Zone 2, TRinity 6887.

Note: The editor expects to be away for about two weeks so send NEWS - LETTER contributions to Dr. E.M. Baldwin, 702 Woodlark Building, Portland 5, Oregon.

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LUNCHEON NOTES - THURSDAY, APRIL 19, 1945

Dr. Booth and A.D. Vance were studying fossils at the window when the reporter arrived so when, about fifteen minutes later and after the tables were well filled, Bill Reeves walked in, he was awarded the trophy for being the latest arrival, but he held the honor only until Lloyd Ruff took the last available seat. Mr. Ruff had been doing some exploring on a bombing field, and besides bringing a very interesting drill core with a layer of cement grout adhering to one side, he had two fifty-calibre shells, one of which had not been shot. He did not claim to have caught the other bullet bare handed, so the rest of his story was believed..... Owing to the severe illness of President Hancock, his place at the head of the table was taken by Vice-President Fay Libbey, who had as his guest Dr. Victor Allen. Other guests were: Roy P. Full, R.E. Stewart, Robert L. Nichols, Mrs. Warner, and Mrs. Allen. ..... Dr Booth circulated some crinoid shells from limestones of Florida, and Earl Minar had a very pretty specimen of malachite..... Mrs. Stockwell reported having received a copy of the third edition of "The Art of Gem Cutting" by Dr. Dake and Mr. Pearl..... Mrs. Warner said that in college she had been a student of Prof. LeConte which of itself is quite a distinction.....Dr. Baldwin told a little about his studies of the area near Keasey and Pittsburg, Oregon. ..... F.L. Davis circulated a copy of "Ancient Men in North America" (not an autobiography) for which he was taking orders accompanied by cash..... Dr. Booth mentioned an article in a recent issue of Life magazine telling about the use of ultra violet in the study of astronomy..... Mr. Ruff's experience in taking the powder out of his fifty-calibre shell brought out some reminiscences of other experiences with high explosives..... An attendance of two dozen may be an indication of what may be expected now that warm weather has arrived.

O.E.S.

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PROGRAM - MAY 11, 1945

Considerable interest was shown in the quiz program on May 11th when the board of experts answered a series of questions on various phases of geology. Dr. J.C. Stevens acted as quiz-master and the board consisted of Dr. E.M. Baldwin, Dr. John Eliot Allen, F.W. Libbey, John Robinson, and Lloyd Ruff. It may be expected that another program with variations is in immediate prospect. Start saving up your questions. Very likely a review of general geology wouldn't come amiss - you may be asked the "64-dollar question."

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INDEX READY

This number of the NEWS - LETTER must of necessity be brief to accommodate the five-year index which begins on the following page. The NEWS - LETTER staff appreciates very much the assistance of the several members in compiling the material. Your 1944 bulletin is now ready for binding, Remove staples from your bulletins and append the 1944 index plus the attached 1940-1944 index and turn them over to Ray Baldwin. Price of binding is 50 cents.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 11 June 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Building, 920 S.W. 6th Ave. at 8:00 p.m.

TRIPS: Will be arranged when feasible

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W.Taylor St., between S.W.4th & S.W.5th Aves. Luncheon 60¢

MEETING ANNOUNCEMENTS

Friday June 10 — Forum on the Geology of the Oregon Country. Bring your questions and stump the "experts." A panel of professional geologists and mining engineers will endeavor to answer any questions pertaining to the geology of the Oregon Country. If this cannot be done extemporaneously, it will be possible to obtain advice as to the best probable source of such information.

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LIBRARY NOTES

702 Woodlark Building, 813 S. W. Alder St.
Portland 5, Oregon

The society expresses its thanks for the following gifts - August 1944 - May 1945:

From

Geological Society of the Oregon Country:

Oregon Geographic Names, by Lewis A. McArthur, 1944. Published by Binfords & Mort for the Oregon Historical Society.

U.S. Geological Survey, Washington D.C.:

Bull. 937, Bibliography of North American Geology 1929-1939, by Emma Mertins Thom. Pt. 1 Bibliography; Pt. 2 Index, 1944.

Oregon Dept. of Geology and Mineral Industries:

Oregon Metal Mines Handbook, Bull. 14-C Vol. II, Sec. 2, Jackson County, by the staff. 1943.

Oregon Metal Mines Handbook, Bull. 14-B, Grant, Morrow, and Umatilla Counties, by the staff. 1941.

Fourth Biennial Report, Bull. 28. 1942-1944.

High-alumina Iron Ore in Washington County, Oregon, G.M.I. Short Paper No. 12, by F.W.Libbey, W.D.Lowry, and R.S.Mason. 1944.

Antimony in Oregon, G.M.I. Short Paper No. 13, by Norman S. Wagner. 1944.

THE ORE.-BIN, August 25, 1944 to May 1, 1945.

Academy of Natural Sciences of Philadelphia:

Proceedings of Philadelphia Academy of Natural Sciences, Vol. XCVI. 1944.

Notulae Naturae, Bulletin of The Academy of Natural Sciences of Philadelphia, nos. 130-147. 1944.

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LUNCHEON NOTES - THURSDAY, APRIL 26, 1945

A good attendance, interesting visitors, and many specimens highlighted today's luncheon, presided over by Mr. Libbey in the absence of Mr. Hancock. Mrs. Stockwell, being the "early bird", got the"worm" in the form of a healthy looking Cathedral Bells plant brought by Mr. Calef, with the intention of presenting it to the first lady who arrived. Mr. Miller was accompanied by his son, Lt. John S. Miller, on furlough from the Pacific area, and his wife. The lieutenant spoke of the unusual types of plant life seen in his travels, and says he expects to spend more time in the future studying rocks and plants and less time wishing he were home..... Specimens included a mastodon bone found on the Canyon Road some 30 years ago by Mr. Stanley; a piece of petrified wood picked up near Hill Villa by a surveyor, shown by Mr. Schminky; a bit of walrus tusk and some walrus teeth, brought by Dr. Adams, also a rock specimen from Arizona which was identified as gypsum; an attractive looking rock found by Mr. Calef at Gold Beach..... Handled with care was the Jap machine gun bullet from Saipan brought by Mr. Ruff, so no casualties resulted. Of special interest also were the photographs of fossils taken by one of his friends in a region prolific with these relics of antiquity. Mr. Ruff promises to lead us on a trip to this area when conditions permit..... Carl Richards, who was with us today, recommends Jack Dement as a worth while lecturer on fluorescence, both from a mineral and a medical point of view. He reports Mr. Hancock to be decidedly improved in health, according to Mrs. Hancock..... Mrs. Oberson read a letter from a friend in psychological work with aviation cadets in England, in which he described the appearance of bomb-stricken London..... Trees were the theme of Franklin Davis' contribution today, including a magazine known as "American Forests", showing the largest tree located in the Northwest; also a pamphlet on "Famous Trees", a Government publication describing notable trees all over the United States, including one on which Daniel Boone killed a "b'ar". This little booklet, which sells for 20¢, was ordered by a number of members present.

A.H.

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LUNCHEON NOTES - THURSDAY, MAY 3, 1945

That busy little man, Mr. Davis, distributed the bulletins which several members had purchased from the Colorado Museum..... Oh, yes, Mr. Libbey presided again and presented Mr. Richard Anderson, geologist for the Alcoa Mining Company, as his guest. Mr. Anderson later contributed to the discussion of fossil dinosaur tracks from the Triassic of New England. Leo Simon prompted the dissertation by inquiring about slabs of rock containing footprints which were advertised in a flower magazine. With his many interests, possibly Leo might be called omnivorous.....Mr. Minar passed around two nozzles, one metal and one composition, and told of their relative wearing quality in sand blasting - forty minutes vs four hours. Mr. Libbey showed some molybdenite from Climax, Colorado, and Mr. Bates had some pearls (rice) in a purloined box (ladies compact).

L.R.

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EXTRACTS FROM A GEOLOGIST'S NOTEBOOK

by

Sheldon L. Glover*

III

Dall Island Limestone Deposit

In fact, the explorations would have produced no useful results if I had not been using binoculars. We were through, discouraged, and heading for the north end of Prince of Wales Island when the glasses revealed the characteristic yellowish color and erosional form of limestone, on a promontory forming the north side of View Bay on Dall Island. A bed had not previously been reported here, but, of course, we turned in to look it over. That shore was interesting. For long stretches a limestone bedrock sloped down without a beach, from the high-tide line into deep water. It had been eroded into bowl-like depressions a few feet across and a few feet deep, separated by knife-sharp edges or rims. Each pothole contained seawater and supported the usual assemblage of anemones, starfish, fern-like marine plants, and other life. Small fish were entrapped in some, and one contained a rare transparent bluish-gray sea slug, swimming, like a wisp of smoke, with its antler-like appendages streaming back. I did not see any live abalone, but found several of their shells, smaller than the California variety but just as beautiful.

The limestone, here, proved to be the last word in deposits. Most of the promontory ending in Reef Point, about 2½ miles long and a mile wide, was essentially high-quality limestone. A few narrow basic dikes were the only foreign rock to be seen except far to the northwest. A scant soil, supporting brush and scrub timber, was the only overburden, and smooth limestone outcrops, like blue and white tombstones, projected everywhere through the soil. Three claims were staked for a start, having 19½ million tons of available stone above a prospective quarry floor set tentatively at 50 feet above tide, and room was available for an additional 20 claims or more. Later, after a camp and docks were built, this rock was quarried, coarsely crushed, and shipped to Seattle in towed hulks. It was laid down there at a total cost of not more than $1.50 per ton, probably less, and used in the manufacture of portland cement.

Other limestone deposits were investigated on Prince of Wales and adjacent islands in the course of this particular trip, but none was of interest after we had seen the Dall Island occurrence. That did not prevent the rest of the 400-mile trip from being enjoyable. Fortunately, the weather became perfect after the first two days. At times we were on the open ocean with an unlimited view to the west, at others we were in wide sounds and channels, or in narrow inlets where the timbered mountains rose precipitously from the shore. Shoals and submerged reefs had to be avoided. It was always exciting to watch the Skipper threading his way through such dangerous spots, guided by the streaming kelp and floating weed. However, when we came to the Potato Patch - a great expanse of seaweed - he steered straight through with the utmost confidence. That kind of assurance bespeaks long familiarity with those waters - an ability not gained from books.

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* Supervisor, Washington State Division of Mines and Mining.

One had a peculiar sensation of extreme isolation and distance for humanity. The rare cannery, with its huddle of buildings perched at the water's edge, only accentuated the impression. Sea gulls, of course, were always present, soaring overhead or lighting on the boat. Two or three times whales broached water and then sounded; and porpoises were usually with us. They are the original jitterbugs, and watching them makes one dizzy. They swim eternally round and round the boat, apparently chasing each other in endless looping duck-dives that has them half out of the water most of the time. Don't tell the A.S.P.C.A., but I became curious to see if they could swim straight like a self-respecting animal should, and jabbed a few with a pike-pole. They immediately straightened out their six- or eight-foot lengths and streaked off into the distance at miles per hour.

The cook had a harrowing experience in those waters at one time. I had been feeling sorry for him, as he had no coat, hat, blankets, or anything for comfort or convenience - he was virtually hijacked into this expedition - and so I had been showing him some attention. Usually those chaps are reticent, but he told me of being wrecked on little rock of an island, losing his troller and all gear. The island had a little brush and timber, as most of even the rockiest do, but no water. He knew he would starve before being picked up, so he immediately went to work on a method of escape. He was fortunate in finding two halibut boxes that had been washed up. The best one he calked with moss and strips torn from his clothes, and from a board of the other box, fashioned a paddle. By using the box as a canoe he paddled 11 miles to a cannery. He could never have made it if the sea had been rough, and he could not have even gotten into the box if he had been a larger man.

To be continued.

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FROM CAPT. ARTHUR C. JONES

Mitchell Convalescent Hospital
Camp Lockett, California
4 March, 1945

Mr. A. D. Vance
City Hall
Portland, Oregon

Dear Al,

Tomorrow I am mailing you a box of specimens, which I hope will be of interest to you, and perhaps to some of the other members of the G.S.O.C. On the bottom there are some layers of bones which I picked up at the La Brea tar pits when I was there last month with my brother, Comdr. Lester Jones. The city was in the process of erecting high wire fences around all the pits, and the workmen had dug up these bits of bones in digging the post holes. So we kicked about among the tarry clods and found the rather dilapidated specimens which you will find. However, I thought that you would get some pleasure in having a few bits of real La Brea bones, and perhaps some of the members who attend the luncheons might like some door prizes.

The two pieces of dry bone, partly fossilized, which are in the layer with the piece of pecten shell are from the San Diego Pleistocene sand which lines both sides of the road in Balboa Park. I have a new publication on the San Diego Pliocene, published by the Museum there, but have loaned it to our chief conductor of tours, a Mrs. Wilson here at camp, so can't quote you the reference correctly. It is nicely illustrated, and gives quite a bit of information about the entire tertiary history of San Diego County, plus a good series of Pliocene and Pleistocene marine forms, and some short lists of Eocene marines, together with good maps. These specimens were in a pebbly layer between soft gray sandy strata, and I just reached over and picked them out as I was walking down the drive one evening. I haven't been to the big city since then, but hope to get to Oceanside and Lajolla to pick out some better specimens. There is one place on the beach at Oceanside where there are contacts between Eocene, Pliocene, and Pleistocene, all within a block, and all fossiliferous. So these bits are just teasers for you.

There are a few pieces of apatite (?) and quartz from vein fillings among the granite which is the country rock all around Campo. I haven't identified the black specimen, which I thought you might find interesting, and am wondering if the pieces with the oblique cleavage are possibly feldspar, rather than apatite. Anyway, the natives here all call the mineral feldspar, and there is a big mill a mile or so east on the railroad track where they grind this material for glazes for plumbing fixtures. They also pulverize a great deal of the really fine quality quartz from this vicinity there, too. The mill has not operated since last summer.

There is a mine upon a little hill just across the ravine from the Camp Lockett gate which they say is a molybdenum mine. I had expected to get some specimens from it for you, but have been so busy since I got here that I have not had time to clamber up there yet. That is another subject for investigation before I send you more specimens. This end of San Diego County, is quite famous for semi-precious stones, and I hope to get my hands on some of those when the sign comes right. But I didn't promise to send many of those, did I? A 'gemologist', J.S. Ware of San Diego, gave a talk Friday about these native gems, and showed a really fine collection of faceted stones from this county. He lists tourmaline, of course, and topaz, kunzite, beryl, hessonite garnet, pink quartz, also yellow, smoky and milky quartz, jasper, chalcedony, and moonstone. The black tourmaline is all over this country, of course, I will keep my eyes open for green and pink specimens.

The granite or grano-diorite which is the main mass of these mountains is quite an old batholith, and in some places one can dig it out with shovels down to a depth of thirty or forty feet. The soil here at Camp Lockett is all rotten granite, and one can go about in the rain without getting his feet wet or muddy. The washes in each little draw are filled with this material, of varied fineness, but in spite of the seeming sterility of the soil, giant live oaks seem to thrive. By summer time we shall be glad of the shade of the big trees that dot the area round the hospital. One big oak down by the customs house is called the 'Hanging tree', as they did use it for years to hang renegade Indians, white and Mexican cattle rustlers and border runners. The custom house is just a small frame house down near the main gate. (Mexico is less than a mile from my office)

On the top in the box you will find some specimens which my chief Physical Therapy aide brought me from the Colorado Desert, just down the grade from Jacumba, near the Painted Gorge. They show the scouring effect of the desert wind and sand, which I thought the GSOCers would be interested to see.

There is a large area where these rocks lie all over the surface, typical of many desert areas. I am anxious to get down there to see some of these interesting rocks for myself before it gets too hot there. They say it will be plenty warm by the end of another month. There are some bits of schist from the Coyote Hills, unusual for their color, and there are more volcanics there, as well as not far over the border, but right here there is no volcanic rock to be seen.

You will guess from the foregoing that all I have to do is to wander around and just hunt for specimens. The fact is that I am just getting my job as chief of physical and occupational therapy into shape, and that Mitchell Convalescent Hospital has been filling up rapidly. This assignment is in my line, and I feel it is a good opportunity to do a real piece of work for these wounded men. My family will come down by June, and they plan a visit here during Easter vacation.

My very best regards to all of you,

Cordially

/s/ Arthur Jones

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LUNCHEON NOTES - THURSDAY, MAY 10, 1945

After the arrival of Dr. Courtland L. Booth and his guest, Wade Lewis, the attendance totalled seventeen. Mr. Lewis is the son of John M. Lewis, for many years the treasurer of Multnomah County. He is a mining engineer in Montana in a district between Butte and Helena. He brought with him a specimen of the rare ore, gold telluride, which we understand was later presented to Dr. Booth. The doctor says that he doesn't enjoy being late, and the fact that he comes as regularly as he does is a compliment to the luncheon group..... Raymond L. Baldwin, business manager of the NEWS - LETTER, had as his guest J. Foster Martin, a sergeant in the Army Air Corps, who had made a trip around the world in line of duty. Sgt. Martin was formerly with the division of cereals in the grain inspection service, and was located in the Pendleton office..... John Eliot Allen brought his smile and pipe to the meeting. He has been in California surveying and mapping the San Juan Bautista quadrangle just east on Monterey Bay, as part of the work for his doctor's degree..... Dr. J.C.Stevens, recently returned from the east, told of having visited the Pittsburg Plate Glass works, the research laboratory of the Aluminum Company of America, and the testing laboratories of Purdue, and University of Illinois. He had attended a meeting of the Board of Directors of the American Society of Civil Engineers, of which he is the president, and had visited local sections of the Society in several cities in the central and eastern states..... Franklin L. Davis called attention to two books that he had gotten from the Central Library. The books were taken by others who either wanted to increase their knowledge or to find out what Mr. Davis considers good reading. Mr. Davis said that he had recently seen Ray McKenzie who brought greetings from Ray Treasher to the G.S.O.C..... Mrs. Stockwell brought her autographed copy of "The Art of Gem Cutting" by Dr. Dake and Mr. Pearl. A glance through the pages stirs up a great longing to embark upon another hobby ride, but a study of present schedules shows the impossibility of doing so..... E.N. Bates told about the specimen of pearl rice that he had brought to a previous meeting. This was formerly called Japanese rice, but following the Pearl Harbor incident, the Government had re-named it "Pearl Rice."

O.E.S.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 12 June 25, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

TRIPS: Watch for special announcements.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor Street, between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday June 22 — Pan American Highway. Come and enjoy another armchair vacation trip. Pan American Highway is a 16 mm color movie with sound track and reportedly is very fine.

August 1945 — Annual Picnic! Watch for announcements.

MEMBERSHIP LIST

There are still a few names missing from the paid membership list - check up now and be included when this list is published in the July issue.

CHANGE OF ADDRESS

Mr. and Mrs. Harold M. Smith, Greenville Road, Woonsocket, R.I.

LUNCHEONS

Due to the temporary (?) closing of the Winter Garden restaurant no luncheon meetings were held on June 14th and 21st. Unless special arrangements are made there will be no luncheon meeting on June 28th. The Winter Garden is tentatively scheduled to reopen July 3rd. Watch for announcements or call the executive committee.

NOTICE

Beginning with the next issue (July 1945) the Geological NEWS - LETTER will be published once a month. Watch the newspapers for meeting announcements not carried in the bulletin.

BULLETINS

Raymond Baldwin is still receiving bulletins for binding. He also has a few back numbers available.

SYMPATHY

The Society wishes to express its sympathy to Mrs. Darrell Currier (Helen Iverson) and Miss Florence Iverson in the recent passing of their father.

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LUNCHEON NOTES - THURSDAY, MAY 17, 1945

Eleven inches of rain in one day! But not in Oregon - yet. Down under, near Australia as reported by Lawrence Supove, Chief Petty Officer with the Seabees, who was Mr. Bates' guest today. Mr. Supove, a Yale man and former Portland boy, has recently returned from duty in Australia, New Guinea and way points, where he worked on water supply and refrigeration projects. He talked most interestingly of his experiences and brought many photographs of native life - as many as were left to him by the censors at Pearl Harbor. But even in the hardest rains he says the boys will sit through movies they have already seen perhaps four or five times - such is the dearth of entertainment. .....Three drill cores were exhibited by Lloyd Ruff, one taken recently from The Dalles, another from the Boise River, representing some of the older rocks, and one from the Boise River canyon, similar to our Boring lavas. He also showed an aerial photographic map of the section above The Dalles from Big Eddy to Celilo..... Dr. Stevens reported having stopped at Purdue University in Indiana on his last eastern trip, where they have done a great deal of mapping by means of aerial photography, having made a complete aerial map of the whole state of Indiana, and they have also spent several months in the Marianas teaching the interpretation of aerial photographs. Surprisingly complete information, says Dr. Stevens, can be obtained from such photographs..... A specimen of high-grade bauxite (aluminum oxide) from the Salem area was shown by Mr. Libbey. It occurs as flat tabular pieces on the old basalt surface, also as large nodules mixed with overburden below the surface.

A.H.

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LUNCHEON NOTES - THURSDAY, MAY 24, 1945

The best news heard at the luncheon was that Lon Hancock was much improved - had in fact reached the "two-pillow" stage, and was able to receive visitors, in moderation. News not so good was that the Harold N. Smiths were leaving for Rhode Island soon. We hope that they do keep in touch with us and write the News - Letter occasionally. Also maybe they can take advantage of the "shipping charges for samples will be gladly paid" offer for samples - which Dr. Booth unwisely underwrote and which is hereby recorded. Apparently it is worth it to him, since he gets "first crack at them."

Specimens consisted of lead-zinc ore from the Bunker Hill and Sullivan Mine at Kellogg, Idaho, brought by Miss Hughes; a large nodule with a fluorescent coating of hyalite from the Mutton Mountains, reported to contain uranium but yielding none under the most sensitive tests made by the State Department of Geology and Mineral Industries, brought, together with a lamp, by Dr. Booth. Miss Pruett, a new member, was introduced to the group, as was Miss Bagnall, a guest. Miss Pruett brought a sample of copper ore from the Holden Mine at Howe Sound, and a sample which was called flint but which may be basaltic obsidian from a creek near Stevenson, Washington. Membership committee take note.

J.E.A.

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EXTRACTS FROM A GEOLOGIST'S NOTEBOOK

by

Sheldon L. Glover*

IV

In the Coast Range of British Columbia

Stories of lost mines and rich forgotten prospects are always intriguing, but only a few that have come to my attention have stood up under a critical analysis of all factors involved. One of these was the cause of an unforgettable trip that nearly ended disastrously.

This was during a six-year period when I was engaged in mining and prospect development in a part of British Columbia that is about 600 miles northwest of Seattle. The work centered in a very scenic region in the heart of the Coast Range, 100 miles up the Skeena River from Prince Rupert. The river has cut a narrow winding valley through the mountains, and although the elevation along the river is only 250-300 feet, the mountains rise on all sides in ridges and peaks to altitudes of 5,000 to 6,000 feet. The region is very well mineralized, as it is an area of Mesozoic sedimentary and volcanic rocks that have been intruded by the granitic Coast Range batholith. Veins and replacement deposits carrying free gold and minerals of silver, copper, lead, zinc, and even molybdenum and tungsten, are sufficiently abundant to make a prospector's Paradise. Unfortunately, the deposits that have been explored are mostly small, or, because of faulting and erratic distribution of values, have proved to be of marginal economic importance. Naturally, however, stories of remarkable discoveries are commonplace.

One day my blacksmith, an Italian having the euphonious name of Caesaro Venenzio, told me a yarn about a copper deposit that he had seen long years before. He had been one of a party that was trying to get to the famous Caribou gold district. They had taken a powerboat up Douglas Channel and Kitimat Arm, intending to go overland from the mouth of the Kitimat River. They had camped one night on the shore of the Arm, and had been nearly asphyxiated by sulphur fumes from the rock under their camp fire. Of course, they investigated in the morning and found that the fire had been built on a vein of copper sulphide. The party was not interested in anything as low-valued as copper, but years later Caesaro had recalled the incident and had returned to investigate the occurrence. He found the vein to be 50 feet wide but only exposed as it was crossed by the beach, disappearing at one end under the water and at the other under the soil and brush-covered bank. He was enthusiastic enough over the deposit until he received the assay return on a channel sample that he had cut. It only ran $19.00 to the ton at the price of copper at that time. Rather apologetically he asked me if I thought the current price, after a lapse of 10 years, would make the deposit worth considering.

Now, a 50-foot copper lead cropping out on tidewater is worth anyone's consideration, but I would have discounted and disregarded the whole yarn except for that mention of $19.00 per ton. It was such a modest value and so in keeping with what could be expected of a chalcopyrite deposit that I fell for the story. I wished later that he had quoted a $200.00 or even a $50.00 value, then I would have classed the yarn with the usual prospector's dream and passed it by.

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* Supervisor, Washington State Division of Mines and Mining.

There were two ways of getting to the place. One was to go by train 100 miles southwest to Prince Rupert, then by steamer 120 miles or so down the coast, then by power-boat (if one could be obtained), 70 miles northeast, up Douglas Channel to the deposit. This would be similar to going from Olympia to Portland by taking a train to Aberdeen and thence by ship down the coast and up the Columbia River. On the other hand, the head of Kitmat Arm was almost due south of Terrace, a town on the Skeena River not far from the mine, so it appeared that we could easily go overland, and this was what we finally decided to do.

On the Way to Kitimat

Eventually, I found that this overland route was through a low region between the mountains. The physiography indicated that formerly, probably prior to Glacial time, the Skeena River flowed through here and emptied into Kitimat Arm. Later, owing to some interruption of drainage during the Glacial period, and possibly because of the added results of stream piracy, the river had been diverted from this part of its old channel and made to flow more westerly into the ocean near Prince Rupert. Doubtless, ice action had modified the old valley, and was responsible for the present Lake Lakelse to the south of Terrace. Incidentally, this five-mile lake has remarkable examples of ice ramparts along a part of its shore - a narrow irregular dike-like ridge as much as 5 feet high formed by the age-long thrust of winter ice.

I was able to obtain a small-scale map of the region, and this showed a trail that we could follow from Lake Lakelse to the settlement of Kitimat, at the end of Kitimat Arm. We could drive the seven miles south from Terrace to the lake, and probably get horses for the rest of the 35 or 40-mile trip. The local representative of the omniscient Provincial Police said the trail was all right, and that we could get any supplies that we might need at Kitimat, and hire a boat there to take us down the bay to our destination. Even without horses the trip should only take a day and a half. It was all very simple.

The next day we drove to the lake to see about the horses. It was beautiful weather, something rather rare in that country. I had my usual geology equipment and a sleeping bag on a packboard. Caesaro carried blankets and a three-pound axe on his packboard. He also had the provisions for the necessary three or four meals - a one-pound tin of corned beef, six pieces of pilot bread, a pound of raisins, and a couple of lemons. We would travel light as far as Kitimat.

At the lake we discovered that no horses were to be had, but that a Mr. Johnstone, operator of a hotel at the Lakelse hot springs, might run us up the lake in his launch. Johnstone was most cooperative; he could not only take us up the lake but could put us on the trail. So we spent the night with him and planned an early morning start for the following full day. I remarked that we should probably stay the next night at a trapper's cabin, shown on the map, midway between the lake and Kitimat, but Johnstone laughed at that. He said that, although the cabin was the only one on the way, we would pass it too early in the afternoon to warrant stopping.

We made a quick run up the lake the next morning, and then the grief began. The trail started about half a mile up a sluggish creek that ran into the head of the lake, and Johnstone had a skiff to take us up this creek to the trail. Willows and alders arched entirely over the creek, so we poled through a tunnel in the brush. Shortly we reached a beaver dam and, by getting good and wet,

lifted the boat over; thereafter the heightened water level put us in the interlaced tree tops without benefit of tunnel. A succession of these dams kept us fighting the brush for the whole distance. The trail, however, when finally reached, was excellent. We said "Goodbye" to Mr. Johnstone and started out with the intention of making up the time lost in ascending the creek. In half an hour we came to natural meadow, and there was a deserted trapper's cabin, despite the fact that the "only" cabin was still 15 miles away! And there the trail ended.

Trails are commonly difficult to find immediately beyond a cabin, but this one did not exist. After we had searched along two concentric circles around the meadow, we gave up and returned to the creek for a new start. This time we found the old trail where it dimly angled away from the trapper's well-used portion, and were able to follow it by keeping constantly on the alert. It took us by Onion Lake, a forest-clasped gem that deserved a better name, and through several miles of old slash where the Grand Trunk Pacific Railway (later the Canadian National) had started building to Kitimat, only to abandon this route in favor of Prince Rupert. By nightfall we were at Lost Creek, only ten miles from Lake Lakelse, and beginning to be disgusted with this "excellent" trail. Appreciation did not come until the next day.

We were up at dawn and broke camp immediately, eating as we cast around for the continuation of the trail. We never did find it. So far as we could tell it ended at the creek. I later was vaguely told by trappers that it followed the creek bed for some indefinite distance, eventually re-entering the woods.

As we circled in search, we finally found a line of blazes leading in approximately the correct direction. For all we knew at the time, the trail had ended: its place being taken by blazes - a normal enough happening in wild country. So we followed that blaze line - old cuts, ten feet above the ground, made when the snow stood deep. This was slow work through the jungle-like growth of vine maple, red "dogwood," salmonberry, huckleberry, and devil's club that filled the space between spruce, cedar, and balsam trees.

It became apparent after several hours that our blazed line was a snare and delusion. It was curving to the north and getting into higher country - doubtless a trap line and of no use to us. We could fight our way back and start over, or we could set a compass course through the bush and trust to luck. The latter alternative was decided on, and we followed the compass through almost impenetrable country for the rest of that day and for the succeeding two days.

On one of those days I estimated we made only four miles from dawn to dark. When we could not force our way through, we would try going over or under. Crawling with a pack is not exactly fun, but I crawled, it seemed, endlessly. Our food, of course, was gone after the second day and no one can live off that country. No fruits, nuts, berries, or game. An occasional small bird and one or two small squirrels were all that we saw on the whole trip. Once we crossed a deer's old track, and bear signs were common, but no animals were seen.

On the third day it was necessary to cross Big Wedene River. We had done it before on a log jam, but this time we could find no such bridge. So we picked a place where the channel divided around a small island. The first channel was narrow but deep and very swift. To fall a 10-inch hemlock for a bridge appeared easy. The tree was amply long, but when the current caught the branches,

the tree was snapped off and swept away in an instant. We crossed by falling a larger tree and scampering over like squirrels almost before it hit the far bank. The curling white water of the other channel just looked bad; it was only waist-deep, and we managed to keep our footing among the rolling stones of the bottom by carrying a long pole to use as a support.

From Bad to Worse

It was about this stage of the trip that Caesaro began to go off the beam. He was not used to hiking and was not equipped for it or for the brush. He was wearing ordinary woolen coat and trousers of an old business suit and common shoes. The devil's club and other brush had been taking toll from his trouser legs, and they were becoming shorter inch by inch. His shoes were giving out. I knew he was hungry - so was I. As he became more jittery, he became obsessed with the idea that he would never get out alive, and so carrying a pack was useless. It did not add anything to my enjoyment of the trip to have to keep him from discarding everything and tearing off blindly without reason or object.

Late in the evening of the third day we finally reached the Kitimat River. I knew we could not be far up stream from the settlement, but hungry as we were, there was no possibility of further travel that night.

We were up at the break of dawn, and again the hours passed. The distance was not great, but the brush was awful. To make matters worse we had to negotiate backwater sloughs where at times I thought the soft mud was bottomless. When the going became utterly impossible, we lost more time by cutting back, away from the river. This was a gain in the end, for we stumbled on an overgrown but wonderfully welcome road that took us directly to the settlement. All worry and fatigue were forgotten as we rushed along that old road toward food.

We were there in only a few minutes, but what a settlement! A few collapsed frame structures with alders growing through them, and the foundation logs of some cabins. Otherwise nothing but moss, rotting vegetation, brush, and trees. We stood and looked, too disappointed to talk, then walked slowly on, down the old road to where, a short distance farther, it ended at the river. At some period a little logging had been done here, and presumably the road ended at a dock. Long since, the river had taken the dock and the forest had taken the settlement.

I do not know what Caesaro thought as he stood there, but I was completely discouraged. A deep swift river and eight miles of bay separated us from the nearest community, Kitimat Indian Mission. We could not go forward and I doubted very much if we could go back.

It was then that the Providence that looks out for drunks, fools, and geologists took a hand. Around the bend of the river came two Indians in a dugout canoe. We whooped and yelled, and they steered in to where we stood. We all talked at once. The Indians were as excited as they ever become, which is very little, and, of course, wanted to know how we got there. They informed us that they had left a net up the river a month or two before and had just happened to go up there that day to get it; that no one had been in that vicinity for a month and that no one would be there again until the following year; and that the owner of the canoe was named Willie Star.

From then on we got all the breaks. The Indians paddled us across the bay to the mission, telling us we could get anything we needed there. It certainly looked good to us, with its line of rather pretentious houses fronting the beach

and its backdrop of forest. Later we found that the houses were chiefly for display, each lacking something - a porch, front steps, windows, or paint. Mostly the Indians lived in shacks in the rear of the "window dressing," but that was the way they liked it.

At the Kitimat Indian Village

The village store was our first stop, and Caesaro bought a pair of khaki pants. This was essential, for the moment we landed a crowd gathered, and the klutchmen were pointing and giggling at his legs, encased in torn underwear, black with mud and ballooning around his ankles. Not more than two inches of cloth remained of the top of his trouser legs.

Willie then escorted us to the mission school, where we were already expected for dinner. I did not learn how word of our arrival reached there so promptly. The two missionary teachers, elderly ladies, were most gracious, serving boiled eggs, wafer-thin slices of bread and butter, and tea. We hated to leave but did not want to abuse their hospitality. So as soon as it was courteously possible, we thanked them and returned liesurely - only hurrying the last part of the way - and bought canned beans and meat, eating until the sharp edge was off our appetite.

That night we stayed with the Anglican minister, the only white person other than the missionary ladies in the village. He was a fine old gentleman who had been there for years, living alone in one or two rooms of an eight- or ten-room house. He told us to help ourselves to any rooms we wanted. They had bedsteads in them but nothing else; it did not matter. All we wanted was to clean up and relax. Later we attended the Indian church at the minister's invitation. He was a good conversationalist and most affable. Before the meeting, he told me of his work with the Indians and the excellent results attained by the Mission. The tribe is definitely superior to many on the coast, in large part due to its isolation and extremely rare contacts with the Whites. A mail boat once a month is nearly the only link with the outside world and the only source of information about that world except what is taught at the Mission. His one sorrow was the fact that he had been unable to stop the practice of the tribe of leaving the mission village for a month or two each spring and going "primitive" at some up-river camp that no whites were allowed to visit.

Before the meeting, he assured me of his tolerance of a geologist's concept of evolution and asked my opinion of controversial matters involving science and religion. I was relieved to find that he did not care what I thought, and had no intention of listening anyway. His questions were merely the formal opening of a monologue, directed against modern scientific ideas, that lasted until meeting-time and then was continued from the pulpit. The Indians must have wondered what it was all about. I thoroughly enjoyed that man.

Our good fortune continued the next day. I found that our friend Willie Star, owned a gas boat and was planning on a trip to Butedale, out on the steamer lane. It was a trip of some 80 miles down Kitimat Arm, Douglas Channel, McKay Reach, and Frazier Reach. For a moderate charge he would be glad to take us with him and stop as long as we wished at the copper occurrence. Few preparations were necessary, so we made an early start. Surprisingly enough, Caesaro remembered his landmarks and we had no trouble finding his old camping place. And there was the deposit as he had described it, but with certain differences.

Chalcopyrite occurred, as I had presumed, but the deposit was mainly magnetite and pyrite. It cropped out over a 50-foot area on the beach, but this was not width. Actually a five-foot mineralized zone of quartz stringers and sheared rock had been intricately folded and squeezed into a series of complex loops within a country rock of garnet, amphibolite, and mica schists. The beach pebbles were principally garnets. The metamorphism post-dated the mineralization. The outcrop looked like a crumpled length of ribbon dropped on the beach. It began and ended right there and had no continuity unless it were down, below the tide-level.

The geology of the area was interesting even though the occurrence had no economic value. After all the trouble of getting there, I was in no hurry to leave, and spent a day and a half investigating the vicinity. Other mineralized zones, later in age than the metamorphism, also were present, but there was nothing of importance.

The remainder of the trip to Butedale was delightful. Those narrow channels where the sea reaches far back into the Coast Range have a lonely grandeur that is breathtaking. We did, however, have one incident on the way that was something of an anticlimax. The gas pipeline broke, and considerable gasoline was lost before the supply could be shut off. I asked Willie how he was going to repair it, and was momentarily chilled by his reply that it could not be repaired. He was philosophical about the accident and totally undisturbed. We would paddle ashore and anchor, expecting in one week, two weeks, to hail a passing boat. Then Caesaro rose to the emergency. From someplace in his tatters he produced a nubbin of friction tape; in a moment the ends of the broken pipe were joined and tape-wrapped, to last at least until we were through with the boat.

Maybe the lost gasoline had something to do with our running out of fuel a half mile from Butedale, forcing us to paddle that final distance. That was of small moment, for a Union Line freighter was at the dock, discharging cargo, and we knew that that meant a quick overnight run up the coast 110 miles to Port Essington, where another hundred miles by train would take us home.

* * * * * *

Many other stories could come from those old notebooks. Some are too long to be told or require too much background, other incidents are of interest only to me, and still others are best suited to a stag party. They are not peculiar to my wanderings; their counterparts are in the notes of every geologist, which only goes to prove my contention, that the geologist's profession is eminently satisfactory, if my friend is correct and life means, not years, but experiences.

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Editor's note:

If you missed the last geological quiz session of the society some of the answers will be found in the June issue of the ORE.-BIN, published by the Oregon Department of Geology and Mineral Industries.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 13 July 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Ave., at 8:00 p.m.

TRIPS: Watch for special announcements.

LUNCHEONS: Will be resumed as soon as possible.

MEETING ANNOUNCEMENTS

Friday July 13 — Geological quiz night for the amateur. Come out and join in the fun and knowledge. See how well you remember your general geology. Meeting starts at 8:00 p.m.

Friday July 27 — Watch local papers for announcement.

Friday Aug. 10 — Annual Picnic! Mt. Tabor Park. You won't want to miss this one. Viola Oberson is chairman of the picnic committee and will be glad to hear from volunteers.

NEWS NOTES

Mr. Vance received a card from the Booths from Sag Harbor, L.I. "Having a wonderful time," says the Doctor. Perhaps he will tell the Society about the trip at our July 27th meeting.

* * *

Dr. Ira S. Allison is scheduled to leave shortly for Europe where he will teach for several months in one of the army schools. One school will be located in the British Isles and one on the continent. They will further the Army Educational Program.

* * *

Three strikes and out - so it is with our Three Musketeers. With the marriage of Miss Florence Iverson on June 3rd to Mr. Clyde Woodward, the ranks of the musketeers are depleted. The Society extends its best wishes to Mr. and Mrs. Woodward and hopes to see them often.

* * *

Ten Years Ago

In the bulletin of July 12, 1935, we find the following announcement: "The Geological Society of the Oregon Country will hear Claire P. Holdredge discuss the oil possibilities of Oregon and Washington on Thursday, July 11, at 8:00 p.m."

July 14th was the date of the Pandemonium Creek-Ariel Dam field trip. Claire Holdredge was leader. H.B.Schminky led the July 27-28th trip to the Columbia River South Jetty and the northern Oregon Beaches.

(Con't. p.82)

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LIBRARY NOTES

List of gifts - continued

From - O. E. Stanley
Things seen in the Dolomites. By L. M. Davidson. Pub. E. P. Dutton & Co., New York.

From - American Museum of Natural History, New York.
Bulletins:

Vol. 82. Art. 1; Paleontology of Harrar Province, Ethiopia.
Part 1, The Dudley Expedition. By Barnum Brown, 1943.
Part 2, Echinoidea. By Ethel D. Currie, 1943.
Vol. 82. Art. 2, Paleontology of Harrar Province, Ethiopia.
Part 3, Jurassic Anthozoa and Hydrozoa. By John W. Wells, 1943.
Vol. 82. Art. 3, Paleontology of Harrar Province, Ethiopia.
Part 4, Jurassic Cephalopodia and a Cretaceous Nautilis. By Gayle Scott, 1943.
Vol. 82. Art. 5, Study of the Troodont Dinosaurs. Description of a New Genus and four new species. By Barnum Brown and Erick M. Schlaiker, 1943.
Vol. 83. Art. 1, The Haplolepidae, A New Family of Late Bony Fishes - A study in taxonomy and evolution. By T. Stanley Westoll, 1944.
Vol. 83, Art. 3, New fossil whale from Miocene of Peru. By Edwin H. Colbert, 1944.
Vol. 81, Art. 4, 7,30,43. Fossil Lizards of Mongolia. By Charles W. Gilmore.
Vol. 81, Art. 2, 6,11.43. Osteology of Luvarus Imperialis, a scombroid fish: a study in adaptive evolution. By William K. Gregory and G. Miles Conrad.

From - The Mazamas.
Vol. XXVI, No. 12, December 1944. Mazama.

From - California Federation of Mineralogical Societies, Bakersfield, Calif.
Mineral Notes and News - Bulletins - No. 84 Sept. 1944 - No. 92 May 1945.

From - Ward's Natural Science Establishment, Rochester, New York.
Natural Science Bulletins, August 1944 - May 1945.
Trade Catalog No. 433.
Mineral bargain list, 1945.

From - V. D. Hill Gem and Mineral Establishment, Route 7, Box 188, Salem, Oregon.
Trade Catalog No. 18.

Margaret Hughes

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ONCE-IN-A-BLUE-MOON

by
J. Hugh Pruett
General Extension Division, University of Oregon

"Once in a blue moon" used to mean "never", now it means "hardly ever". Such is the gist of the brief discussion given this mysterious expression by G. W. Stimpson in his book, "Nuggets of Knowledge". But nothing in this particular nugget even remotely hints at a scientific explanation.

Has anyone ever actually seen jolly-faced Luna turn blue with anxiety? Literature on the subject is practically nonexistent. This was clearly evidenced by my recent search for such at the University of Oregon Library. All the Monthly Weather Reviews published by the U.S. Weather Bureau from 1898 to 1942 and all the many books on astronomy and meteorology were given a careful indexical inspection for the words "blue" and "moon". Not a single reference to "blue moon" was found in any of these. Thompson's Meteorology, published 95 years ago, mentioned a blue sun once seen in India, and stated that "it appears to depend upon the presence of vesicular vapor in the atmosphere, the different media of which produce upon light in its passage effects similar to those of mixed plates."

Also searched were Poole's Index to Periodical Literature (1802-1906), International Index to Periodicals (1920-1944) and Reader's Guide to Periodical Literature from 1890 to 1944. Every one of these big books had numerous references to scientific articles on the moon in a wide variety of magazines. One lone reference to "blue moon" was encountered: Science, Dec. 28, 1934, p. 617. This proved to be a description of an observation of this disputed phenomenon Sept. 15, 1934, by Perez Simmons at Santa Barbara, California. Although not found in these indices, short discussions on the subject were published in SKY, November 1939, pp. 17-18, and in SKY AND TELESCOPE, July 1943, p. 17, and October 1943, p. 9.

Some scientists who have never witnessed the phenomenon of blue moon take for granted that no one ever has. A quotation from the SKY reference above runs as follows: ".....We sometimes hear of 'once in a blue moon'. This must be a most unusual occurrence. So far as I know it has yet to happen."

But in this same issue of SKY, Dr. Clyde Fisher offered a letter received by him in which a definite observation was described. In his quiz column in the first SKY AND TELESCOPE reference above, L. J. Lafleur quotes an explanation found in the Maine Farmers' Almanac for 1937. This in effect is that at one time the various full moons of the year were given names according to the order in which they occurred - providing there was only one per month. These names were as follows: Moon after Yule, Wolf Moon, Lenten Moon, Egg Moon, Milk Moon, Flower Moon, Hay Moon, Grain Moon, Fruit Moon, Harvest Moon, Hunter's Moon, and Moon before Yule. But seven times in nineteen years there were - and still are - thirteen full moons in a year. This gives eleven months with one full moon each and one with two. This second in a month - so I interpret it - was called Blue Moon, and was considered unlucky and a real nuisance as it occurred at various times of the year and upset scheduling of church festivals.

A hasty glance through the Canadian Observers' Handbooks from 1936 to 1945 shows us that 1945 has no blue moon, but that four times during these ten years our lunar neighbor was at the full phase thirteen times per year for observers in the Eastern Time zone. Two per month occurred Sept. 1 and 30, 1936, July 1

and 31, 1939, April 1 and 30, 1942, and Oct. 1 and 31, 1944. The second one in each pair was then a blue moon. According to this, "Once in a blue moon" means about once in two and one-half or three years, not an extremely rare occurrence.

But if the expression refers to a moon which actually appears blue in color, then for most of us this probably means once in a lifetime - or even longer. That such phenomena are sometimes - although rarely - observed, seems fully established by an abundance of witnesses. I had always been rather skeptical until the evening of July 28, 1944, when before my astonished eyes, there in the southern sky hung a decidedly blue moon. Was I suffering from some constitutional upset? If so, the disorder must have been immediately contagious for three others in the neighborhood seemed equally amazed by the very unusual sight.

The moon, at the first quarter phase that day, was first noticed shortly after sunset. At that time it was thinly veiled by a small patch of high cirrus clouds which were tinted a beautiful orange-red by the sun just below the horizon. The thought occurred at once that the lunar blue might be the effect of the contrast with the red of the clouds. But while we looked and wondered we were not required to wait long, for our lunar neighbor soon floated out into clear sky - and was just as blue as ever!

The blue was not uncertain and elusive, requiring close attention to discern the coloration. Not the least imagination was required. Normal eyes were impressed immediately with the very distinct blue so unnatural to the moon. There in the sky before us was a real blue moon! Were we seeing a sight of a lifetime?

Now our readers must not picture old Luna grieving behind a dense veil of indigo blue. Nothing of the sort. All the features usually seen on the half disk were clearly visible, but the characteristic white of an early twilight moon seemed to have been painted over with a very thin, transparent blue lacquer.

This blue was discernible for fully 15 minutes, but as the sky became darker the weird coloration gradually was lost in the yellow radiance of the night moon. In the Science article referred to above, Mr. Simmons states that the blue effect on the first quarter moon was first noted eight minutes after sunset through a thin bank of cirrocumulus, begonia-rose in color. The sky was spectrum blue and the moon sky-blue. The colors were determined from a technical color chart.

Our observation was discussed shortly afterwards in my weekly astronomical column used by newspapers and radio stations in several far western states. Accounts of previous observations by others were requested. Within two or three weeks a large number of "testimonials" had been received. Some of these are given in part below.

> "When I read Harold Bell Wright's Winning of Barbara Worth, I thought his description of the blue moon was likely fiction. But later I too saw the same phenomenon in approximately the same place and probably under the same circumstances. One day there was a high wind which filled the air with clouds of dust and sand. We could see the distant hills over the Mexican border with difficulty. About an hour before sunset, the moon, having risen less than half way to her zenith, quickly took on a bright, clear blue tinge and the air was filled with the same blue light. This lasted for only a few minutes." (Lester Ellis, Spokane, Washington)

"Aug. 4, 1944, the sky became hazy and the moon had a distinct bluish tinge. This was the second time I had seen a blue moon." (F. O. Grams, Madison, Wis.)

"I have twice seen a blue moon: In Venezuela in 1919 and in British Columbia in 1939. On both occasions it was mid-summer and the blue appearance was as the light blue side of the blue band of the spectrum." (John Hawthorne, Vancouver, B.C.)

"Several months ago in the Aleutian Islands I observed a blue moon. It was a clear night in October or November, not late in the evening and the moon was about full. I wondered if it wasn't from volcanic action, blue dust in the sky. Several active volcanoes in the vicinity, but I can't recall any disturbance at that time." (Pvt. Tadenoz Chumura, U.S. Army)

"Last night I saw a strange sight. You know that saying, 'Once in a blue moon'. Well, last night the moon was a pure greenish-blue and the sunset sky was green in places. It was sure a pretty sight." (Pvt. W. G. Smith in Italy, in a letter to his mother)

"I hit this place at the best season of the year when it hardly ever rains. The nights are clear with a million stars and a moon that is actually blue. You've heard of blue moons. We have them here. The nights are so beautiful they seem impossible. The stars, the moon, the water, the cocoanut trees - no words could ever describe them." (Madeline Cookerly, in New Guinea, in a letter to her mother)

"I observed a blue moon about ten years ago. The moon was rising from behind the Cascade Mountains in front of which is a large mountain lake. It was very definitely blue. I figured it might be caused by the vapor over the lake." (Dr. H.L. Van Brodslin, Monroe, Washington)

"I have three times since 1936 seen blue moons. My sight is perfect and I am definitely very color-normal as the army physical examinations show." (Cpl. Armand Renaud, U. S. Army)

"It so happened that I was in the country July 17, 1929, and saw the greenest blue moon. I could hardly believe my eyes. It was a beautiful clear night." (E. M. Pokorny, Portland, Oregon)

"I noticed a blue moon once on a clear evening. I don't mean pink - nor was I bilious as some disbeliever might suggest. It was a real blue. My wife also saw it. I had never seen such a condition and it was quite an oddity." (D. R. Potter, Spokane, Wash.)

"In 1928 some friends and I sailed the yacht Red Riding Hood from Falmouth, England, to Belize, British Honduras. When we were five days out of Bridgetown, Barbados, we saw a green moon. It was early April. Being interested in painting (and consequently color) I paid considerable attention in an effort to account for what I thought surely was an illusion in the physical sense but definitely a fact from the artist's point of view. I still sharply remember the following: The moon was a clear pastel green. The sun had just dipped below the horizon. The sky was cloudless and the

the atmosphere was extremely clear. The deepening blues of night were showing in the east but were not yet apparent in the vicinity of the moon.

"The only explanation I could think of was that since the moon and the sky 'appeared' to be of equal values in terms of color (and consequently light), it might be possible to achieve under this condition some form of blending of the two colors resulting in green - which is no doubt physically impossible. I'll leave the explanation to your good self." (Hugh Clifford, Hollyburn, B.C.)

"The occurrence was some ten or twelve years ago when I was in charge of the U.S. Weather Bureau work in Yellowstone National Park. I cannot remember what time of year it was. There was a good-sized moon. I would like to say it was full but I am not sure. My impression is that when the blue effect was first noted, the moon was about 45° high. There was at first a thin sheet of cloud over the sky, possibly cirro-stratus. Later the clouds cleared away from the face of the moon and I had a clear-cut view. The sky carried a strong suggestion of blue, a pale, weird, steely blue. The time during which I was sure I was seeing a blue moon was probably around 45 minutes.

"If I were going to try to dope it out now, I think that before going into any study of diffraction or diffusion, I would run over the possibilities of its having been a polarization phenomenon. I never did figure out any explanation at the time - nor since. There was some discussion of this blue moon with friends - but just as little as I could manage. The 'why' of the unusual is always asked, you know, entailing a response that in this case I was unprepared to give. I never did like to have to create a fog around something about which I was expected to know." (W.T.Lathrop, Meteorologist, U.S.W.B., Retired)

Jeanette Townsley of Seattle wrote she did not believe 'once in a blue moon' referred to the moon at all. "I have understood it has some reference to the mating season of some kind of deer in the Rocky Mountains. Once a year they take on a blue sheen and that is called (first by the Indians) the blue moon."

R. C. Stroud of Seattle offered this: "Psychology reveals the after-image to be the complementary color of any color which has strongly exercised the color perception center of the eye. The cones seem to reverse their process, and after staring at an orange sky for awhile, the eyes would seem to see a blue cloud if they were turned on a white screen. The silvery moon acts as the white screen. The redder the sky, the more green would the after-image be in complement. This accounts for the chap whose moon was more green than blue."

No explanation is offered here for blue moon, green moon - or any other moon. The evidence that such moons are sometimes seen is too strong to be treated lightly. Definitely it is not an astronomical phenomenon but purely meteorological. Shouldn't the weather men go to work on this and give the rest of us a logical explanation to offer our interrogators so that we - and they - shall no longer have to "create a fog" around the subject? It hardly seems likely any suggestion toward the solution can be found in the popular song, "When my Blue Moon Turns to Gold again."

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PORTRAIT - Orrin E. Stanley

Few employees of the city of Portland have served its citizens through as many years with such courtesy and rare tact as Orrin E. Stanley, and among Portland engineers there are few, indeed, better known and liked, due to his extreme affability and constant readiness to serve. He has always taken front rank in all movements toward the organization of Oregon engineers and the advancement of the profession and many a local engineer has profited by his counsel and friendly cooperation.

Born in Muscatine County, Ia., July 28, 1872, he attended grade schools at Shelby, Ia., and Roscoe, Dakota territory. Graduated from Cornell college in 1896 (BSCE) in 1901 he obtained his civil engineer's degree from the same college. Prior to his arrival in Portland in 1910, he was city engineer, Mason City, Ia., did a hitch with the U.S. Army as private and acting hospital steward in 1898, then was draftsman and instrumentman and assistant engineer for various railroads until 1907, city engineer, Pierre, S.D., 1907-09, and assistant engineer O.R.&N. railway, 1909-10.

Following two years of private practice in Portland beginning in 1910, he entered the employment of the city of Portland in the city engineer's office. After a short period of drafting he was made chief computer on sewers, serving until 1916 when he was made sewer engineer and served in this capacity until 1923. Under a reorganization of the department of public works at this period he was made chief of the bureau of maintenance with work covering both streets and sewers. In 1933 under a further reorganization he was made chief of the bureau of surveys and drafting. In 1944 he was appointed to the position of principal civil engineer.

Stanley's main hobby since he acquired a half interest in a box camera in 1896 has been photography and besides nearly 20,000 negatives of people and scenes that have interested him, taken on numerous trips, including two to Mexico and one to Alaska, he has an unusually fine collection of kodachrome slides which he and Mrs. Stanley have generously shared with many of their friends and various groups on numerous evenings.

Orrin is somewhat of an author, is a member of the Portland Manuscript club. Some of his work has been published but what and where is a mystery which your reporter will pry into at a later date.

A life member and past president (1939) of the Professional Engineers of Oregon, he is a charter member of the society and one of five men who promoted its organization in 1929.

He was a member of the pioneer Oregon Society of Engineers from its inception and until its amalgamation with the Oregon chapter of the American Association of Engineers in 1919 and served both groups as secretary and as president. He also edited and produced monthly publications for each of these organizations, and is a life member of the ASCE, having joined as an associate member in 1908.

The Stanleys were married in Mason City in 1901, Mrs. Stanley's maiden name was Minnie E. Tucker, the daughter of Mr. and Mrs. Will "Ed" Tucker of that city. They have two married sons and one granddaughter. Robert, the elder, has been with the state highway department in Salem for a number of years and is now a bridge designer. Howard is connected with the public roads administration of the U. S. government with offices in Portland, but is serving as first lieutenant with the army air corps in Vermont at the present time.

("Oregon Purchasing News", January, 1945.)

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LUNCHEON NOTES - THURSDAY, MAY 31, 1945

By virtue of Earl Minar's good luck and generosity, the eighteen members of the G.S.O.C. who met at the Winter Garden restaurant on the last day of May had genuine butter for their rolls..... Dr. Booth arrived in time to comment upon an illustrated article in "Desert" magazine which he brought with him, and to urge everyone who might be able to do so to visit the "Crystal Jewel Box in the Utah Desert" which was described by Charles Kelly..... Mrs. Reimers brought a specimen from a mine in Cripple Creek, Colorado..... Miss Henley had a specimen of anorthite (lime feldspar) from Grass Valley, California, and another of copper in serpentine from the Cowboy mine in the Siskiyous..... Raymond Baldwin was absent on account of having to conduct Hay Schools in which farmers are instructed in the advisability of having their hay graded by the Seed and Grain division of the Department of Agriculture in order to obtain the best prices for their product..... Franklin L. Davis, emulating Herbert Hoover, when oppered an opportunity to speak, replied to Vice President Libbey, "I have nothing to say"..... Dr. Booth commented upon the pseudo-scientists who gain publicity by writing "half-baked" scientific articles for the press..... E.N. Bates continued his remarks on "pearl rice" from a previous meeting, enlightening those who, up to this date, had thought that rice was just rice.

O.E.S.

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LUNCHEON NOTES - THURSDAY, June 7, 1945

The record meeting of the year brought out 31 members and guests, necessitating the addition of another table to the U. Dr. Bob Nichols brought Messrs. Iverson and Anhausen of the U.S. Bureau of Mines, and Mr. Hutchinson of the U.S. Geological Survey. Mr. Bates brought Mr. B.D.Dustin, an associate of his in the Department of Agriculture office. Miss White introduced Mesdames Suomola and Kyler, and the Schminkys turned out in full force with Carol Anne and Alice both in evidence. We were glad to see the teachers contingent swelling the meetings again, now that school is about over. Jim Weber brought three samples, a piece of lavalike slag, a pyramid-shaped piece of travertine from Egypt, and a small piece of marble encrusted with sphalerite crystals. Miss Henley showed a beautiful polished sample of crysolite, with crystals of brown siderite and pyrite, and a polished pebble which was similar to the Clover Creek greenstone of northeastern Oregon, containing large phenocrysts of plagioclase feldspar. Miss Stevens passed around a box with numerous ore samples which were identified as they passed around, and a piece of granite of which the Mormon Temple in Salt Lake City is built. Dr. Booth recently collected from the zeolite locality in the railroad cut south of Oregon City, and turned up with a beautiful sample of zeolite encrusted with aragonite and calcite. Mr. Libbey passed around a sample of the high-grade bauxite recently discovered east of Salem, and 30 pounds of similar material were handed out for collectors in the group. John Allen announced the publication of the Coos Bay coal bulletin, and Franklin Davis promised that IF members ordered through the Davis Book Club, they would get both a 20 percent discount AND an autographed copy. A letter from A.W.Hancock was read, and members were glad to hear that he is progressing as rapidly as possible. Lloyd Ruff gave a short travelogue of his recent trip to southern Malheur County and southeastern Idaho.

J.E.A.

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FROM A FIELD GEOLOGIST'S NOTEBOOK

IV

No field work can be enjoyable or even efficient without the proper personal equipment, and the most important equipment to a geologist, or to any other hiker for that matter, is his footwear. Blisters and swollen feet result from inadequate or wrong type of footwear, and the time and care taken by the Army in the present conflict is evidence of their appreciation of the importance of proper boots. Conditions vary, and with them the type of boot, but in the Northwest where steep slopes and talus and mud are common, the lumberjack's boots, with heavy soles and laces to the toe, are by far the best for most conditions. They are completely waterproof for at least a year, if properly and constantly oiled or greased, and are heavy enough to prevent bruising by rocks, and they will hold the nails that are usually necessary for good footing. Boots with 8 or 10 inch tops are high enough to prevent sand or pebbles getting in, and are low enough so that they do not constrict the calf. Higher boots, if laced tightly enough to support the ankle, do bind the calf and tire it.

There are many schools of thought concerning the type of nails or sole best suited for different localities. Under most conditions, a thick composition sole seems to be very satisfactory. It does not slip on wet rocks, it does not ball up as badly as nails do when going through gumbo, and it wears well. Nails cannot be worn indoors and some types have a tendency to wear smooth and be slippery. The best type, in my experience, is the rectangular flat-bottomed hob sliver. It is of hardened steel and wears very slowly, all the time retaining the sharp corners which bite in on rocks and prevent slipping, even on wet, rounded boulders. The flat bottom permits its wearing indoors, if care is used not to stamp too hard. It does not add too much to the weight of the boot, as do some of the heavy triconi and edging nails used by mountaineers.

Socks must be chosen with as great care as the boots themselves. Boots must be fitted to accomodate <u>at least</u> one heavy and one light pair of wool socks, and some prefer to wear two heavy pairs of socks, which both add their cushioning effect and absorb excess moisture. People with extra tender skin can wear a pair of silk or fine cotton socks beneath the wool, but the heavy arctic wool type is almost a must for the outer layer.

In very wet weather, or for inspecting in mines, or hiking through snow, some type of rubber is necessary. Some prefer a pair of galoshes which fit over the regular boots, some use the light-weight "irrigation boot", which has an elastic instep and is very comfortable, but probably the best is the combination rubber pac with leather upper, which keeps out water and supports the ankle as well.

For driving and for general camp wear or short hikes, the comfortable laceless artillery boot with ankle strap cannot be excelled. It is high enough to keep out debris, it is as easy as an old slipper to wear, and slips on and off with great ease. Unfortunately, they are now almost impossible to get.

Pants can be of any type, as long as they come down <u>over</u> the boot top and prevent gravel and twigs from getting inside, which is the big drawback of the "choke-bore" type of britches. "Levis" are ideal in dry weather, but the loggers' choice of "tin-pants" is the only thing for wet weather and brush-whacking. I have even used them in desert country to prevent the vicious

"Spanish bayonet" needles from puncturing my legs with every step. If they are "stagged" about two inches below the boot top, they bind only a little on the knee and are quite comfortable. And you never need worry about getting them washed!

The wool shirt is just as valuable in summer to absorb excess perspiration and prevent sudden chilling as it is in winter to keep warm. A light-weight wool shirt is just as warm and twice as comfortable as a sweater, and two wool shirts are as warm as the heaviest jacket. Many people go a step further and wear light-weight woolen underwear for similar comfort and protection, both summer and winter.

Hats are pretty much a matter of personal choice, and the old felt usually fills the bill. However, it is too hot for desert wear, where the new inexpensive canvas and pressed fiber toupee keeps your neck from getting sunburned and gives plenty of ventilation. Really rainy weather takes a waterproof canvas "fatigue hat" to keep the water from running down your neck. The light-weight duraluminum shipyard helmets are necessary for work underground, and I have found that they are very cool in hot weather, as they are also well-ventilated and reflect most of the sun's heat.

The equipment you carry in your car may make a lot of difference in whether you get to where you are going. I have had urgent use at one time or another for all the extras I always carry along. I have two jacks (one of them an axle, not a bumper jack) to help out of mud holes; a light Monkey-Ward block and tackle, which several times has pulled me back in the road, or helped me turn the car around on a narrow road where there is no room to turn otherwise than by pulling one end around; a good double-bitted axe to cut out logs across the road; and a 5-foot crosscut saw to use when the log is too big to handle with an axe. These are basic equipment to anyone using mountain roads, and getting very far off the beaten path.

Camping equipment taken along depends on how comfortable you like to be and how much you want to carry. Only a tenderfoot wants to sleep on the bare ground with one blanket. A good sleeping bag (not kapok, which wears out rapidly and smells to high heaven if it gets wet) and an air mattress is a good compromise. A large canvas is usually just as good as a small tent, and a lot more adaptable to various uses. If it has been waterproofed, so much the better, as you don't have to be so careful about touching it when it is wet. If any heavy pack-work is contemplated, a packboard beats any knapsack yet devised, as it will take any shape or size of awkward load with comfort. For quick meals, a small gasoline stove or even a Primus stove is very handy, especially in country where firewood is scanty.

John Eliot Allen

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Five Years Ago - July 1940

Remember the luncheons at the Orange Lantern - Professionals complained of the light?

H.B. Wood led a trip to the Oak Grove cinnabar mines and F.L. Davis led the trip to Salem and the Eola Hills.

A.W. Hancock's mastodon skull and museum-den were the highlights of the July 26th evening meeting.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11 , No. 14 August 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the Auditorium (3rd floor) of the Public Service Building, 920 S.W. 6th Ave., at 8:00 p.m.

TRIPS: Watch for special announcements.

LUNCHEONS: Bring your lunch and meet the gang in the park at S.W. Park and Salmon Sts. Outdoor luncheons will be held as long as the weather permits or until further notice.

MEETING ANNOUNCEMENTS

Friday Aug.10 — ANNUAL PICNIC IN MT. TABOR PARK. Fill up the old lunch basket and join the festivities at 6:30 p.m. Coffee and cream will be furnished - bring your own sugar. The program will be short and snappy and entirely new. Viola Oberson is program chairman.

Friday Aug.24 — This is a regular lecture meeting-night. Details will be announced in the local papers and at the Thursday luncheons.

NEW MEMBERS

Mr. and Mrs. Roy S. Hamburg, 1215 N.W. 18th Ave., Portland 9, Oregon. BRoadway 4189.

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TEN YEARS AGO

Dr. Hodge lectured on the "Geology of the Oregon and Washington Shore Line."

On August 10th the trip register showed 66 signatures of members who attended the Roads End-Newport trip led by A.D. Vance. Those were the days!

FIVE YEARS AGO - August 1940

A.W. Hancock led a field trip along the Evergreen Highway to Kalama and beyond. Water agates and glacial erratics were among the finds.

August 30 to September 2 was the big caravan to southern Oregon with the A.I.M.E.

Max Demorest gave an illustrated lecture on ice and snow.

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Editor's note: Material for the September NEWS - LETTER is scarce, due in part to the temporary suspension of the luncheons. Contributions are welcome.

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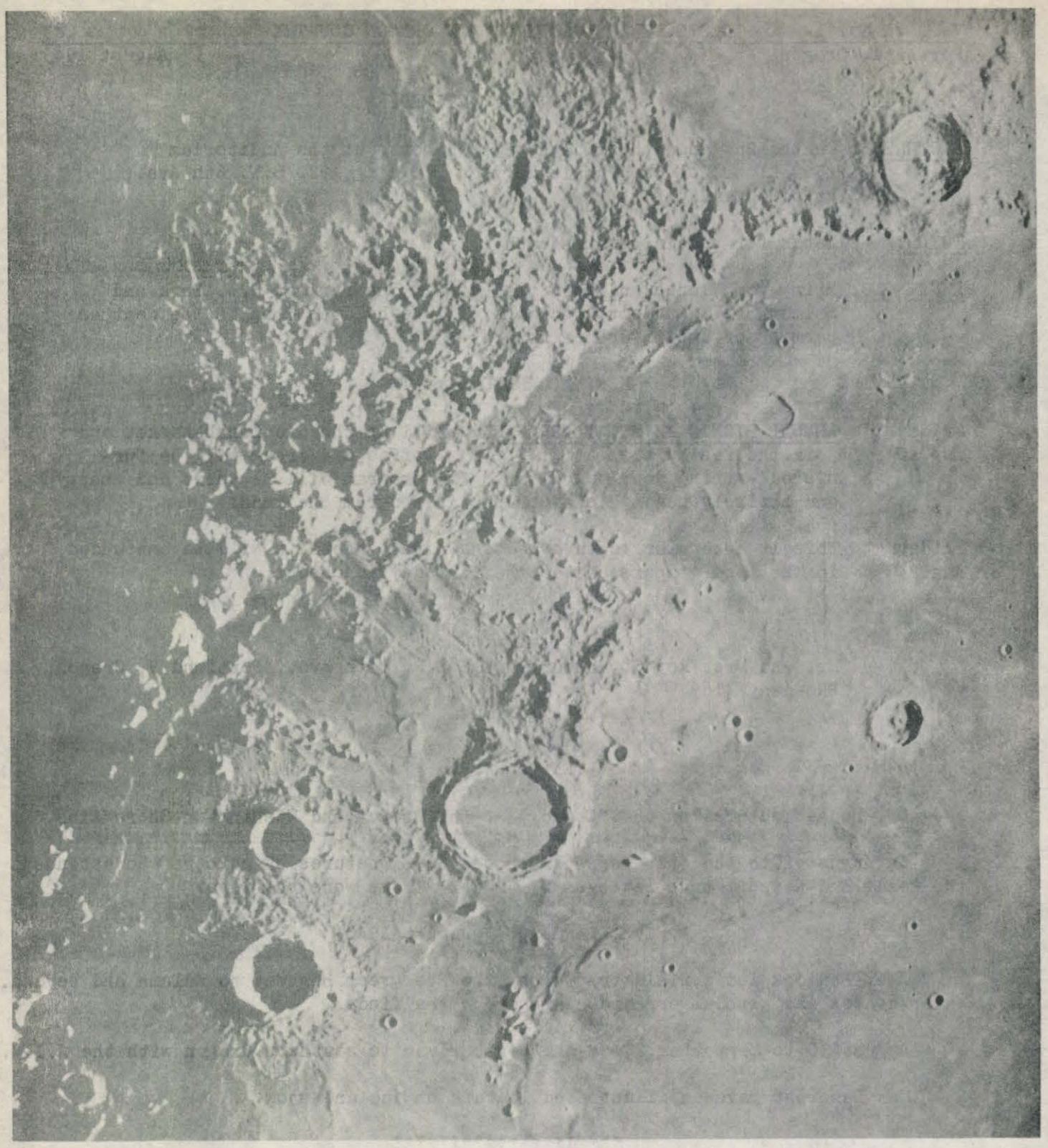

Photograph of a small section of the moon. The extended mountain range is the Apennines. The largest crater is Archimedes, 50 miles across. To the left of this, Autolycus (the smaller) and Aristillus are so deep that their floors are in darkness. Note the shadows of the solitary peaks below Archimedes. Some craters (c.g. Eratosthenes at upper right) have little craters inside of them. The many tiny craters on the level plain are interesting.

Lick Observatory Photo.

LUNAR FEATURES

by

J. Hugh Pruett

The early twilight sky was crystal clear. Although it was still too light for the stars to show, yet the half moon, high in the south, was already changing from its daytime white to the rich yellow of early evening. At the observatory we were getting the telescopes ready for the use of the university astronomy class; but it was still over half an hour before the students were due to arrive.

On the street down the hill from the observatory, five small boys rattled by on their bicycles. Five minutes later they were returning. The little lads seemingly had lost their way and almost below the observatory they dismounted to get their bearings.

A spontaneous invitation was given them. "Boys, won't you come up and see the moon? It's fine tonight." All were silent for a moment. "Why?" queried one puzzled voice. "Come up and find out," was the reply. A few early guests would not interfere with the evening's work of the class.

Still dubious, but curious, five little boys clattered their bicycle handlebars on the pavement and stumbled hurriedly up the steep stairs. The first to reach the top stepped onto the floor inside. "Say, this is a swell place!" Then another, "Look at all the lighted pictures on the wall." Then all were talking at once. "Oh, there's a big picture of the moon." "What's that over there?" "Gee, he's got a telescope on that post." "Oh mister, do we get to see the moon through it?"

To see the moon was exactly the intent of the invitation. Even small lads with no astronomical background always thoroughly enjoy telescopic views of our lunar neighbor.

A minute or so was given to an explanation of the instrumental mounting and machinery. Then we started the little motor which kept the telescope turning noiselessly and imperceptibly, but just fast enough to keep it pointing constantly at the moon as the latter moved westward across the blue sky. The observing seat was adjusted so the little guests could comfortably look into the eye-piece.

With hushed expectancy the first boy seated himself. He cautiously peered into the telescope. He was shown how to turn the focusing screw so adjustment would be made for his individual eye and the moon would show surface details clearly like the picture on the wall. Breathless silence ensued while he peeped into the eye-piece and turned the adjustment. Then -

"O-o-o-oh sa-a-ay! That's keen!" "What yuh see, what yuh see?" hurriedly broke from four quivering bystanders, all eager to have looks for themselves. "Oh, it's just as clear! There's big holes on it and smooth places with little holes in 'em! Yes, there's mountains. I see shadows on one side of some of them. The moon seems right here, like I could reach out and touch it!"

After all had been duly initiated into the mysteries of telescopic adjustment and had taken a general view of the moon, the photograph on the wall was discussed and special objects pointed out. The moon was 24 hours past the first-quarter phase, so presented some of its finest surface features. Soon all the boys, now with a better understanding of what to look for, had a second turn at the telescope.

They viewed carefully the "man-in-the-moon", that mysterious creature of which we often hear but of whose personal appearance many are rather uninformed. The general shape of the "man" was well outlined by darker places on the moon's yellow surface. His legs, his body, head, nose, and hat were quite distinct; also the basketball he was bouncing out near the left edge of the moon. Careful inspection clearly showed that these dark places were a group of wide, level plains. These are called "seas" by moon map makers, although it is now well known there is no water in them.

Huge craters are conspicuous over most of the moon's surface. They look like volcanoes from which the tops have been removed, leaving only medium elevations near the bases. Some have depth; others, only slightly depressed flat floors. Some of the craters are most interesting. We especially noted Plato. The interior is a very level floor 60 miles across. The rim surrounding it is quite jagged. We were able to see the long fingers of shadow of a few of the higher peaks of this border as they extended - like ghostly black spears - halfway across the level interior.

Stretching away from Plato, the wide plain outside seemed to offer excellent automobiling possibilities. Rising abruptly at two places from this level desert, there are sharp solitary peaks, Pico and Piton, each an almost perpendicular pillar 8000 feet high. The long javelin of shade each cast the evening the boys were observing was truly the "shadow of a rock in a weary land". Farther on they viewed Archimedes, the 50-mile crater around which the ground has a noticeably wrinkled effect.

The splendid long range of the Appennine mountains, extremely steep on the side next to the plain and sloping gently on the other, attracted considerable attention from our little guests. The most charming, however, was the Great Alpine valley, cut straight across the Alps mountains, so narrow and regular that it seemed artificial. It looked as though a sharp razor blade might have cut out this depression. It is 80 miles long, about five wide, and almost two deep.

Although the craters on the moon are named mostly for noted men of the past, the lunar mountain ranges in general take the names of similar ranges on the earth.

The boys had observed and discussed the moon for nearly half an hour, and the university students were beginning to arrive. The little visitors, only well started on their journey over the most interesting lunar landscape, suddenly found themselves 240,000 miles nearer home, for that was the distance of the moon from them. One commanded, "We gotta git out - his folks are comin'". Down the steps they tumbled, each as he ran expressing profound gratitude for the privilege of spending a short time at the telescope. Then as they finally reached their tangled bicycles on the paved street below, one cheery voice called up through the moonlit night, "Thanks a lot, mister!"

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BIG BEN AND THE LATE EDITOR

by

Orrin E. Stanley

It happened on a particularly unlucky "morning after the night before"; this particular "night before" being the one on which the G.S.O.C. tried the experiment of having a quiz program. A former News-Letter editor whose habit is to linger in the auditorium until nearly all others have gone was rather later than usual on this occasion and being a kindly soul who does not like to disturb his wife's slumbers he entered his house and crept upstairs and into bed as quietly as was possible for one in his condition. He tested the alarm clock to make sure it was wound, for he relies on it to tell him the latest minute that he can get up to arrive at the office on time. It was wound, so he set it on its shelf by the bed and soon was dreaming that he saw Dr. Stevens riding a dinosaur over the hot and smoking lavas in McKenzie Pass. He slept long and soundly until awakened by the clanging of the alarm and his wife's voice asking him if he knew what that meant.

Grunting a reply he struggled out of bed and tottered into the bath room where he turned on the radio to get the news of the day while removing the hirsute growth of the previous twenty-four hours. The program happened to be one that he had never heard before, but strange things had been coming over the radio, and the programs had been badly scrambled by the necessity for reporting the involved condition of world affairs, so he was not unduly worried.

A glance at the kitchen clock when the late editor got down stairs confirmed his feeling that he would have to eat hastily if he were to meet his passengers at the appointed corner. When he backed his car into the street and did not nearly collide with John, the barber, who ordinarily chose the regular backing-out time to whizz through the narrow street in time to barely escape disaster, he simply thought that he was unusually lucky.

"Lucky again" he thought when he stopped at the normally busy intersection of Fiftieth and Division and no car was coming from any of the four directions. Even when, between Fiftieth and Fifty-second Avenues, he failed to meet the little old Ford that had been made over into a shipyard bus, he was not particularly annoyed, for he had never derived any special pleasure from meeting this bus except for the reassurance that he was within a minute of his schedule.

When the late editor got to the corner where he was supposed to meet his three passengers and found the corner vacant, he looked at his watch and drew comfort from the knowledge that at least he was on time even if the others had not arrived. It did seem strange to him, however, that none of them came during the five minutes that he waited, since it was usually they who had waited for him. At the end of the five minutes of grace, he decided that if he were to get to the Hawthorne Bridge before it was closed to automobile traffic at eight o'clock he must hurry, and started on his way with a final glance backward to see if any of the boys had appeared.

The strange scarcity of traffic on Hawthorne Boulevard was considered rather fortunate since it was necessary to make a little better time than usual following the long wait for tardy passengers. One or another of the group usually glanced at a street clock which they were due to pass at seven forty-seven, but being alone, he had to do his own glancing this fateful morning. He saw that he was three minutes late, and his wrist watch confirmed this observation, but a second

inspection of both time-pieces gave the late editor a distinct shock, for although they were in closer accord than the delegates at the world peace conference in San Francisco, they both indicated eight fifty instead of seven fifty as he had read them at first.

Speeding down the boulevard this erstwhile editor thought deeply on the subject of time, and came to the conclusion that each of the hands on a watch has its own mission and that it is unwise to depend solely upon what one of them alone has to say.

Naturally all of the good parking spaces near the office were filled with the cars of earlier risers, so by the time that our "hero" had driven around over the Morrison Bridge and out into the vacant part of the all-day parking district, then walked back to the office he was not feeling at all heroic. There is no back door by which he can enter his office and make believe that he has been there for hours doing the work that has been slighted by others, so donning his most sheepish grin he faced the gibes and questions of his assistants.

When he reached his desk he dialled his home number and asked his somewhat horrified wife for an explanation.

It appears that the clock in question had stopped before the wife had retired after deciding that she could not wait any longer for her scientifically minded spouse. She had gotten the "correct time" from the telephone operator and had set and wound the clock. She regretted, of course, as much as one can regret such a thing, that she had set the hour hand sixty minutes slow, and that was that.

As a result of this unfortunate occurrence, the family now is double checking that particular Big Ben as a nightly rite.

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A MODEL GEOLOGIC REPORT

Professor Berkey of Columbia University and dean of American geologists gave to the Grand Coulee dam site on the Columbia River what, to the non-geologic mind, seems a fairly clean bill of health. It follows:

> "There are no insurmountable, or particularly obscure, or prospectively difficult, or suspiciously treacherous conditions represented by this formation. Therefore, from the geologic point of view, no serious doubt can be cast on the safety of the project."

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NEWS NOTE

Dr. Lawrence McKinley Gould, professor of geology and geography at Carleton College, Northfield, Minnesota, for the past 13 years, has been elected president of the college. Dr. Gould, a graduate of the University of Michigan, is widely known as a scientist, explorer, author, lecturer, and teacher. He is Acting Director of the Arctic Institute of North America.

Engineering and Mining Journal, July 1945.

****

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QUIZ PROGRAM

Many comments (mostly favorable, some even enthusiastic) have been heard concerning the quiz program meeting on Friday evening July 13th. Two contestants, Bruce Schminky and O.E.Stanley, made perfect scores. Mr. Stanley attributes his phenomenal success entirely to the date, Friday the 13th. Bruce, we suspect, borders somewhat on the professional side. For those who missed the program we are printing some of the questions so that the readers may test themselves.

A. One word in each of questions 1 to 10 is not associated with the phase of geology given at the beginning of the question. In other words pick out the foreigner.

1. Mountain glaciation - a. col, b. cirque, c. crumpet, d. alp, e. tarn.
2. Stream erosion and deposition - a. stack, b. meander, c. levee, d. delta, e. oxbow.
3. Continental glaciation - a. drumlin, b. esker, c. kame, d. tureen, e. kettle.
4. Volcanism - a. bomb, b. brazier, c. pillow, d. caldera, e. aa.
5. Rocks - a. deweylite, b. diorite, c. diabase, d. dacite, e. dunite.
6. Minerals - a. hancockite, b. allanite, c. leolite, d. fayalite, e. franklinite.
7. Physiographic features - a. spine, b. elbow, c. neck, d. heel, e. dome.
8. Structural geology - a. joint, b. anticline, c. incline, d. monocline, e. horst.
9. Shorelines - a. fiord, b. tombolo, c. spit, d. sombrero, e. lagoon.
10. Wind - a. barchane, b. ripple, c. amygdule, d. dreikanter, f. dune ridge.

B. Statements in questions 11 to 20 are either true or false. What do you say?

11. The direction of dip is always 90° from the direction of strike.
12. The Sea Lion Caves on the Oregon coast are an old lava tunnel.
13. All rocks are made up of several minerals.
14. Pleistocene continental glaciers once covered all the state of Wisconsin.
15. Paricutin volcano emits both cinders and basaltic lava.
16. The oldest exposed rocks in North America are granites.
17. If a stream moving 4 miles per hour will move a rock weighing 1 pound, the same stream flowing 8 miles per hour will move a rock weighing 50 pounds.
18. Mountain glaciers may move as fast as 40 feet per day.
19. A single stream may at the same time exhibit features of youth, maturity, and old age.
20. Wind is an important agent of erosion in a humid climate.

See the September NEWS - LETTER for answers if you haven't already looked them up.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 15 September 1945

Portland, Oregon September 10, 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

TRIPS: Watch for announcements of at least one trip each month if the old tires can take it. Make your desires known to trip chairman, Schminky.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St., between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday Sept.14 "Some Aspects of the Geology and Geography of Japan" by Dr. Warren D. Smith. This is a timely subject and should be of interest to all. Come early, bring a friend, and enjoy one of Dr. Smith's interesting, informative talks.

Friday Sept.28 Animal? Mineral? Vegetable? - - - You name it. The program chairman is open to suggestions.

October 1945 Dr. Packard has promised us a lecture in October. It has not been definitely determined whether the date will be the 12th or the 26th of the month. Whatever the subject or date, we can be sure of an interesting talk on Oregon Fossils. Watch your papers for the exact date, and lecture subject.

NEWS NOTES

According to an Associated Press report in the Oregonian Lt. Ava. A. Bickner was scheduled to arrive in New York, August 30th, aboard the S.S. Milwaukie.

It appears that Carol Ann Schminky has scored again with her victory-garden exhibits in the city 4-H competition at the County Fair at Gresham. Anyway she came away with 10 first, 7 second, and 6 third prize ribbons. We understand Carol Ann's vegetables are somewhat in demand in the neighborhood.

The beach has been a popular place since VJ-day. As a matter of fact, the Hancocks and the Ruffs were already there and missed the big fireworks in the old home town. The Vances spent the following week near some of Al's favorite collecting grounds.

A few days' vacation brought Mr. and Mrs. Phil Brogan to Portland where Phil paid his respects to the State Department of Geology and Mineral Industries.

Dr. Robert L. Nichols who has been doing work for the U.S. Geological Survey in the Northwest is returning to teaching as head of the Geology Department at Tufts College in Medford, Massachusetts. Bob wishes to be remembered to the Geological Society and to his many friends in Portland and the Northwest.

LUNCHEON NOTICE

Thursday luncheons will be resumed at the Winter Garden beginning Thursday, September 13.

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TEN YEARS AGO

Ten years ago the Geological Society of the Oregon Country started its march down the never ending aisle of time - an aisle which behind us becomes history.

Because geologists gain their knowledge of the future by study of the past, it is fitting at the end of our first decade to look back to the year of our beginning. 1935 was a full year under Dr. Hodge, our first President, and he was a busy man. He acted as his own program chairman and attended every field trip except possibly one or two.

Our first year was a year of outstanding lectures and never to be forgotten field trips. Because field trips are out until V. J. day, let's reminisce for a minute about the field trips of ten years ago.

Do you remember that trip up the Columbia River under the leadership of Wayne Felts to study the evidence of ancient man along that highway of the Indians?

We left Portland about noon Saturday, May 25, stopped a short time at Bonneville and at Mosier slide we were led along deep trenches and winding paths through the basalt talus - trenches built by the Indians before white men had visited the western hemisphere. One explanation of these trenches was that the local boys lured their enemies onto the rocky slope and then the braves would rise up and shoot them. This explanation led Tracy Wade to wisecrack about someone being "shot in the talus".

Saturday night was spent at The Dalles. Sunday we crossed the river early and visited sites of ancient Indian villages and work shops where artifacts had been made. We studied Indian carvings and paintings on stone cliffs. The comments by Wayne Felts gave us a most complete picture of ancient life in the Columbia Gorge. Added to these comments were the interesting explanations of the gorge geology, given by Dr. Hodge at each point of vantage.

Do you remember that grand trip on June 23rd taken with the Mazamas to the Skamania mining district on the west fork of the Washougal River? Incidentally, for the information of our newer members, we started from S. W. Fourth Avenue and Main Street at 6:25 a.m. Some nice specimens were obtained. We ate our lunch at one of the mines and Leo Simon gave a talk on the local flora. Don't quote me but, unless my memory is playing a trick on me, Franklin L. Davis forgot to bring his lunch. He was well fed, however, from the more than ample lunches of less forgetful members.

A. D. V.

* * *

FIVE YEARS AGO - SEPTEMBER 1940

O. E. Stanley says he always performs best on Friday, the thirteenth. This time he showed "Alaska in Color", the kodachromes of the Stanleys' summer cruise.

Field trips included the White River Region of the Mt. Hood National Forest through the cooperation of ranger Eric H. Gordon, and the Lewis River Region in Washington led by Mr. Vance. Remember Christmas Canyon and the lava tunnels?

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THE SHADOW OF THE MOON

by

H. Bruce Schminky

Many Portlanders rolled out of bed at hours earlier than usual on the morning of July 9th to view the eclipse of the sun at dawn. Among these early risers were two groups composed of members of this society who were up at 4:30 A. M., so as to reach vantage points near their homes well ahead of sunrise. The Kimbrell family, together with Mr. H. J. Carruthers of the Astronomy Study Group of Portland, went to Rocky Butte. The Schminky and Brown families went to Mt. Tabor.

The interest of these groups was not the actual eclipse, for it was only partial in this area, but in looking for the shadow of the moon as it swung in from space to fall on the earth's surface. This is a phenomenom that is only seen to good advantage when an eclipse occurs at or near sunrise. The shadow of the moon becomes visible to the eye as it falls on dust or water vapor that extends to a height of about 10 miles above the surface of the earth in the atmosphere. At a sunrise eclipse the moon's shadow would approach the earth at a tangent, and would therefore pass through a maximum amount of the atmosphere before it touched the earth at the point where the path of total eclipse began.

The beginning of total eclipse on June the 9th was near Cascade, Idaho. Portland is about 300 miles west of there. Portland also was about 200 miles north of the path of totality if it were extended westerly. None of us were sure that the shadow could be seen from this distance.

The eclipse was scheduled to start at 6:14 A. M., Mountain war time, which made it 5:14 Pacific war time. So we were at our stations before 5:00 A. M., in order not to miss anything.

It was now quite light. Mt. Hood and Mt. Helens stood out like cameos on the skyline. A bank of clouds rose above the Cascade mountains in the direction that the sun would rise. We wondered how these clouds would affect our view. About 5:10 a faint glow began to tinge them as the sun was rising in western Montana. As the light increased, the clouds took on a copper color.

Suddenly, about 5:20 (a scientist is supposed to note all time exactly, but at the moment none of us were scientists), a dark streak fell across our cloud screen. It seemed to point in a southwesterly direction, and made an angle between 30 and 40 degrees with the horizon. We could not trace it beyond the upper edge of our cloud bank. This shadowy line grew darker and seemed to broaden a little as time passed. Then it began to fade, and as suddenly as it came, it was gone. During the time that it was visible it seemed to move downward like the minute hand on a clock.

Soon after the shadowy line disappeared, the sunrise glow also faded from the cloud bank. When the sun finally rose at about 5:40, the moon was well past the sun's center in the lower left quadrant. By now both hills were well filled with spectators who came to see the eclipse, but to us, who had seen the shadow of the moon come down to earth, this held little interest.

There will be another chance to view this phenomenom in 1954, and though it may not make such a spectacular sight as seeing the corona around the sun during a total eclipse, it is rare enough to make seeing it an exciting event. It would appear that this is the fartherest that the shadow has been reported by any past

observers. Dr. John Q. Stewart, of the Princeton University Observatory, has been in communication with Mr. Carruthers and asks for a complete report on our observations.

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OLD BILL WILLIAMS - Desert Rat

The Northwest may have its Paul Bunyan, but the southwest lays claim to an equally colorful character, that of Old Bill Williams, whose legend is still growing, although he disappeared into the desert of western Arizona nearly a hundred years ago. The magazine "Arizona Highways" of March 1945 relates how Bill began as a circuit riding preacher in Missouri, a lean and gangling man with raw-boned wrists and beak-like nose. Old Bill was touchy, however, with a hypersensitive nervous system, and when he fell in love with a comely blond who repulsed his advances, he turned misanthrope and went west to live with the Indians, where in search of solace he took to whisky and squaws. He became a trapper of some repute in succeeding years, all along the water courses of the northern Arizona Plateau, but whenever he came to town to trade his beaver pelts for several thousand dollars, the cash would be spent in a few days of riotous living. When General John C. Fremont set out to find a short route to the Pacific through the formidable Sangre de Cristo passes, he chose Bill Williams for his guide. Caught in early snowfall, the expedition almost perished. On their rescue and return to Taos, Fremont unjustly accused Bill for leading them astray. Again the Williams pride was sorely hurt, and once more Bill dropped out of sight, never to return again.

However, if one is to judge from the following letter printed in "Pay Dirt" (December 1944) Old Bill is still on deck, only now that the beaver are all gone, he has turned miner.

* * * * *

"Dead Mans Wells, Ariz.
Dec. 1st 1944

"To Wickenburg Ore Mkt.
Wickenburg Ariz.

Dear Gents: -

I guess you bin a wonderin why I aint bin in with ore latly. Well, my ore pinched out goin ahead and it pinched out in all other directions, so I aint got no ore and am fixin to move over into Yuma County where my ore is supposed to be accordin to gological advise I got from profesor Mc Gregor of the buro of mines, after he had examined my property and figgered out the falts and formations.

Accordin to the profesor, along back in the dark ages and maybe before B C, this country was eruptin and boilen and bein shoved and pushed around which cracked my vein in to and shoved the north end over west 23 miles into Yuma County. Now all I got to do is to go over there and find it. The profesor explained all the formations and what went on, so I can rekonize them over there in Yuma County when I see em. The profesor says and I qote 'You have been a spherulitic structure having a north-south trend and a dippin to the west and intersekted by a cropite dike showing considerable schillerization. I sez whats that? And he says, never mind and continues. Qote 'Your vein belongs to the

orthohombric system and the ore was deposited in the early part of the cretaceous period when them Gigantus-Monstrosus was a romen these parts and consists of oxides, chlorides, sulphides, bromides, andesite, biotite and cropite. Whats that I sez? and he sez never mind and continues. Qote 'During the early tertiary period there seems to have bin a contentinental uplift to the east with a horizontal thrust to the west displacin your ore body in the central regon and depositing the north end some distance to the west. How far west, I sez? Never mind, well, just wait a minute he sez till I do a little figgerin --- about 23 miles he sez. Hell, sez I, that puts me over in Yuma County with no road. Never mind, he sez, we'l build you an acksess road and loan you $7000.00 to look for your lost vein. But I'll sure have to stop cussin them burocrats from now on.

Yours as ever,

OLD BILL WILLIAMS
Dead Mans Wells, Ariz."

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LUNCHEON NOTES - THURSDAY, July 19, 1945

A delightful noon hour was enjoyed under the elms, thanks to Miss Hughes' personal reservation of a picnic table in the nearest park block, at Park and Salmon. It was decided to repeat the affair (bring your own lunch) every Thursday until the Winter Garden reopens. What to do if Jupe de Pluvius should drop in was not decided..... Eighteen of the "out-of-doors" type gathered around the two tables. Eighteen, that is, counting Dr. Booth. Really, he works too hard to keep his record - arriving at 12:45 doesn't allow him much time to talk to those of who should be back to work at one o'clock..... Mr. Hancock commanded our attention after considerable effort (no gavel) and opened the meeting. Several braved the possibility of non-GSOC'rs being at adjacent tables and brought specimens. Miss Hughes brought four rocks from the environs of Redmond, Oregon. One was a volcanic bomb, probably from one of the small cindercones down there, another looked like slag, a third resembled muscovite (but the acid test indicated calcite - possibly a shell fragment); and a fourth went totally unidentified by even the elect..... Miss Henley asked for positive identification of some bon-bombs from Van Duyns', but there were none to label by the time they got back to her..... President Hancock tried to educate and edify those who missed a certain two questions in last Friday meeting's quiz. He displayed a lovely polished specimen of Turritella (a gastropod) in limestone, reportedly from the Eocene of Wyoming. The other was an Orthid-type of brachiopod, a Paleozoic invertebrate outwardly resembling a clam..... Miss Glenna Teeters, represented the vacationing (that is, from school) school teachers..... Mr. Stanley introduced the only guest, Miss Hoover, who is an Oregonian City Hall reporter..... A picnic lunch at Council Crest was proposed for July 20, the Sunday after the next meeting, and enthusiastically received..... Mr. Stanley complained of a lady tourist on the recent Mazama historical trip consistently calling him Mr. Baldwin. Not Dr. Baldwin, just Mr. Baldwin. Insult or compliment, asked Mr. Stanley..... Miss Henley passed around several very interesting issues of the Salem Geological Society publication, "The Geode"..... Mr. Hancock spoke of men often relying on horses to extricate themselves from difficult situations, even as far back as King Richard. Again the horse has come forward - this time a fossil one, Plesippus shoshonensis from Idaho, which enabled Mr. Ruff to determine where he was chronologically..... Mr. Schminky told the prize story after one o'clock. He stood on the top of Mt. Tabor early on the morning of the recent eclipse of the sun, to watch for a rare phenomenon. Sure enough, twenty minutes before the sun could be seen, the shadow of the moon hit the earth's atmosphere,

looking like a pencil line pointing away from the impending sunrise. Geary Kimbrell kept vigil with his camera on Rocky Butte..... After this tale, the group reluctantly dissolved.

L. S.

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A GEOLOGIC MAP OF SOUTHWESTERN OREGON *

Ray C. Treasher

A geologic map of the southwestern quarter of the State of Oregon has been compiled from published geologic maps and from field notes acquired in connection with official duties for the Oregon Department of Geology and Mineral Industries.

Tertiary and Quaternary rocks cover 80 percent of the mapped area. Mesozoic rocks cover 19 percent and pre-Mesozoic rocks cover 1 percent of the area. Most of the published geologic reports deal with the Mesozoic and Eocene rocks, as these are of greatest commercial importance.

Mapped units are pre-Mesozoic Old Schists; Triassic (?) Applegate Series, formerly classed as Paleozoic (Devonian ?); Jurassic Galice and Dothan sediments with interbedded meta-volcanics; undifferentiated Jurassic-Cretaceous Myrtle and Knoxville formations with peridotite and granitoid intrusions; Cretaceous Horsetown and Chico formations; Eocene marine and continental sediments with diabasic intrusions; upper Eocene to lower Pliocene Western Cascades Volcanics; Pliocene to Quaternary High Cascade Lavas; Quaternary beach terraces and Pumice.

Exact age determinations for the Mesozoic formations are highly controversial. Data are presented to illustrate the problems rather than solve them, and the need for further detailed study is obvious.

* * * * * *

LIMESTONE DEPOSITS OF SOUTHWESTERN OREGON *

Ray C. Treasher

The commercial limestone deposits of southwestern Oregon are associated with Mesozoic rocks in Jackson, Josephine, and Douglas Counties. The deposits are lenticular, discontinuous, and stand at high angles. The amount of limestone in any one deposit will range from a few thousand to several million tons. The $CaCO_3$ content will range from 90 to 99 percent. Silica and iron are relatively low. An outstanding characteristic is the low MgO content. The rock is admirably suited for metallurgical uses.

Three principal areas are described. The Roseburg limestones are represented by the Oregon-Portland Cement quarry (abandoned), Harrington, Hatfield, Oden-Hatfield, and Byron properties. The Grants Pass limestones are found at the Marble Mountain near Wilderville, and at three deposits west of Williams Creek. The Gold Hill limestones include the Foots Creek deposit (undeveloped), several small abandoned quarries, and the Kane Creek deposits. In addition, there are several impure limestones of Eocene age in the Oakland area and one in the Marshfield area.

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* Published with the permission of the Oregon State Department of Geology and Mineral Industries.

The total quantity of limestone is not large, compared to the extensive masses in northeastern Oregon, but the high lime content, with low magnesia and silica, makes these deposits extremely valuable for war uses.

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AN INVESTIGATION OF THE SEA-CLIFF SUBSIDENCE OF MARCH 30, 1943, AT NEWPORT, OREGON *

by
Wallace D. Lowry and John Eliot Allen
Oregon Department of Geology and Mineral Industries

Abstract

A crescent-shaped section, about 1000 feet long and 200 feet wide, of the 70 foot sea-cliff at the north city limits of Newport, Oregon, recently broke off and dropped down a distance of 5 to 25 feet, causing considerable property damage. Together with many small tributary cracks and openings, two major fissures opened up from 20 to 30 feet apart, and the block between them fell from 10 to 25 feet.

Minor disturbances which caused walls to crack and doors to stick, were noted by residents as early as late December 1942 but the major movements occurred following heavy rains during the latter part of March and culminated on March 30. Some houses were removed, others were broken apart and left hanging over the crevasse. Previous movements are reported to have occurred in 1911 and again in 1921, and the present movement is a recurrence along the older break, and an extension of it 500 further north.

The sea-cliff is composed of 25 feet of flat-lying Pleistocene dune-sands, unconformably overlying massive brown and gray argillaceous sandstones and sandy shales of Miocene age, which strike north and south parallel to the coast and dip 21° to the west. At the base of the cliff a few feet of dark gray to black crumbly shales of the Nye formation of Oligocene age are exposed. These underlie the sandstones and are notorious along the coast for their incompetent character, as they readily slack to mud upon exposure.

The removal by sea-cliff erosion of the more competent sandy Miocene beds overlying the shales now permits the movement of a block down the sea-sloping unconformity between them. When the shales became saturated by heavy rains soaking through the pervious Pleistocene sands, movement occurred seaward in the lubricated shales, and a block of the cliff moved down and outward.

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* Published by permission of the Director

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New Member: Lucile Jordan, 1533 S.W. 13th, Zone 1, BR 1061

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Bind Your Bulletins: Last call for binding your 1944 geological NEWS & LETTERS. See Ray Baldwin at once.

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"THE SKEPTICS SOCIETY"

A Book Review

"The Books of Charles Fort", Henry Holt & Co., $4.50

Are you an iconoclast? Are you ever skeptical of some of the positive statements made by the "experts"? Do you ever feel that science has failed to explain some of the occurrences of everyday life? Do things occur to you that you can't explain by the laws of physical science? Are many scientific doctrines too dogmatic for your taste? Do you wonder how these generally accepted scientific beliefs came into being?

If you can answer "Yes!" to fifty percent or more of the above questions, you will have the time of your life reading the books of Charles Fort, and may even find yourself a prospective member of the "Fortean Society", an organized group of enthusiasts who refuse to be bulldozed by scientific dogma.

Charles Fort spent a large portion of his life collecting instances in the public prints, from newspapers, magazines, scientific journals, and books, of occurrences which were not or could not be reconciled with the generally accepted laws of science. The strange case of the "Marie Celeste" and other disappearances . . . authenticated falls of frogs, fishes, pebbles, and other strange things from cloudless skies . . . rains of blood . . . observational inconsistencies and contradictions of reputable astronomers, physicists, chemists . . . are reported and commented upon, page after page, until the ironic total becomes almost overwhelming. Thereupon the arch-skeptic proposes a few theories of his own . . . that there is a power called "teleportation", that the stars may not be as far away as they seem, that the earth may not be a sphere; in other words, that science, in spite of its great advances and victories, may not be as omnipotent as we believe, and may contain more self-perpetuating un-rechecked dogmatic beliefs than we would like to believe.

To one who is anxious to keep his mind flexible and open, to one who enjoys the bizarre and unusual, to one who enjoys doubting the obvious and pin-pricking the pompous, this book, which includes the four books, "Lo", "The Book of the Damned", "New Worlds", and "Wild Talents", is fascinating reading. Told in an unorthodox and stimulating manner, it is replete with surprises and surmises, suggestions and corrections, humor and sarcasm. Least of all does Fort take himself seriously, but nevertheless when you put the book down, you will find that you can look upon our past and future scientific achievements with an added savour, gained by the Fortean grain of salt.

J. E. A.

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LUNCHEON NOTES - THURSDAY, July 26, 1945

Another delightful picnic-lunch meeting under the ancient elms in the park block, with an attendance of 18. So popular are these informal gatherings that the hope has been expressed that they may be continued as long as the weather permits. Hot coffee with cream and SUGAR was thoughtfully provided by Miss Hughes, Mr. Bates doing yeoman service by furnishing the strong-arm motive power to transport the coffee from Miss Hughes' home to the picnic table. Cream was also brought by Mr. Minar. Grape juice and a delicious cake, fresh from the oven, were contributed by Mrs. Booth..... Miss Elizabeth Morrow Huebener, continuity writer for KOIN, was the guest of Miss Henley..... Several specimens were shown, including an agatized gastropod and the calyx of a crinoid, by Mr. Vance; two fragments of reddish granite from Minnesota by Mr. Minar;

and by Mr. Hancock, two specimens which he aptly described as "a petrified bird's nest containing three eggs, and a petrified wasp's nest" (the latter being honeycomb coral - the true nature of the former is still a mystery to this reporter.) Also shown was a septarian nodule, containing dogtooth spar crystals, and a copy of the "Desert Magazine" with pictures of this and other calcite crystal forms..... Leo Simon announced that anyone interested in the study of geology may join a weekly class beginning next Tuesday evening, July 31, at 7:30 under John Eliot Allen, Ph. D., in the rooms of the State Department of Geology, 702 Woodlark Building. This is a golden opportunity for everyone seeking more light on this fascinating subject to learn from an expert..... Mr. Hancock invited us to attend the picnic of the Agate and Mineral Society to be held at his home on the evening of Friday, August 3..... We were fortunate in having with us today Carl Richards from Salem, recently returned from a trip to Saskatchewan, Canada, where he went to photograph the eclipse of the sun - called by the "National Geographic Magazine" (November 1932) "Nature's most magnificent spectacle," - and about which he talked interestingly as always. Three cameras were used, the photographic process having been rehearsed beforehand. Some of the pictures were exhibited, showing the total phase, which lasted 34 seconds, and another picture showing progressive phases, exposed every five minutes on a fixed film. Carl told of meeting astronomers - about 40 - from Portland, Maine, to Portland, Oregon, and Texas to Manitoba, gathered there for the event. He has promised to write an article on the subject for "Sky and Telescope"..... Professor Clark of Salem (says Carl Richards) commenting on the new name for their bulletin, "The Geode", remarked that it was most appropriate inasmuch as "sometimes there is something in it and sometimes there isn't". From our personal observation, we would say there's always very much in it.

A. H.

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THE GEODE

Copies of the first four numbers of the official publication of the Salem Geological Society have just been received. Volume 1, No. 1 appeared April 12, 1945, and was dubbed simply 'Bulletin' as were two subsequent issues. On July 12 the four page paper became THE GEODE. The name we are told was suggested by Prof. Herman Clark because a geode is funny, "Maybe there's something in it, and maybe there isn't!" Anyway the editors, Mr. and Mrs. Horace J. Smith according to Vol 1 No. 1, seem to be off to a fine start. Good work! We like the following excerpt from the first editorial: "The function of an editor is not to compose, but to edit, which operation is sufficiently arduous without the additional responsibility of composition." Ho! Hum! Maybe we're just tired.

L. R.

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QUESTIONS AND ANSWERS

Answers to last month's questions:

(1) c	(5) a	(9) d	(13) F	(17) T
(2) a	(6) c	(10) c	(14) F	(18) T
(3) d	(7) d	(11) T	(15) T	(19) T
(4) b	(8) c	(12) F	(16) F	(20) F

Try your skill on the following:

Supply the correct word or words in questions 21 to 30.

(21) What Pacific Northwest volcano erupted in 1843?

(22) Offshore features such as Jump-Off-Joe, Arch Rock, etc. are _____.

(23) A narrow down-faulted block of the earth's crust is sometimes called a _____.

(24) A steep-sided flat-topped butte is a _____.

(25) What common family of minerals occurs in cavities in basic lavas in Oregon?

(26) The most common rock of the central Wallowa Mountains is _____.

(27) The rock debris dropped at the sides and at the end of a glacier is _____.

(28) The glacial scratches on bedrock are called _____.

(29) The study of earthquakes is known as _____.

(30) What was the name of the "terrible lizard" of the Mesozoic era?

Answers next month.

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Orders are now being taken for the following books:

A Dictionary of Geological Terms, by C. M. Rice. Published by Edwards Bros. Inc., Ann Arbor, Michigan. $6.00

The Last Mountains, by Robert Ormond Case, published by Doubleday Doran. The book is on the order of a travel story with legend and description written in. $2.75

Space for Living, by Margaret Thompson. Published by Binfords & Mort, Portland, Oregon. This tells the story of Grand Coulee Dam in fiction. $2.50

Please phone F. L. Davis, BE 2975 for further information or to place your order.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 16 October 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Building, 920 S.W. 6th Avenue at 8:00 p.m.

TRIPS: Watch for announcements of at least one trip each month if the old tires can take it. Make your desires known to trip chairman, H. Bruce Schminky.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 S.W. Taylor St., between S.W. 4th and S.W. 5th Avenues. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday Oct.12 — No meeting, on account of joint meeting to hear Dr. Berkey, held Oct. 4, at Library auditorium.

Friday Oct.26 — "The Artiodactyls of the Northwest" by Dr. Earl L. Packard. This is one of the "must" lectures of the year to anyone who has heard Dr. Packard speak before.

Friday Nov. 8 — "Oregon's Volcanic History" by Dr. John Eliot Allen. The story of the geologic past in Oregon has been one of repeated and violent volcanic activity since the dawn of decipherable records.

Tuesday Nov. 20 — Dr. Howel Williams, head of the Department of Geological Sciences, University of California, has recently returned from a 4-month study of the Mexican active volcano, Paricutin, and will give a lecture illustrated by kodachrome slides on this subject. Watch the papers for the time and place of this lecture and .....

Friday Nov.23 — A lecture on "The Nature of Volcanic Action" which will also be given by Dr. Williams, who has studied more Cascade volcanoes than any other geologist. Besides the splendid monograph on Crater Lake, he has written reports on the geologic history of Mt. Thielson, Three Sisters, Newberry Volcano (Paulina Buttes), Mt. Shasta, and many others. For those who wish to study volcanism, the following papers by Dr. Williams are recommended:

Williams, Howel, "The volcanic domes of Lassen Peak and vicinity, California": Am. Jour. Sci. 5th ser., vol. 18, pp. 313-330, 5 figs., October 1929; abstract, Geol. Soc. America Bull., vol. 41, no. 1, p. 156, March 31, 1930; Pan-Am. Geologist, vol. 51, no. 5, pp. 373-374, June 1929.

"The history and character of volcanic domes": California Univ. Dept. Sci. Bull., vol. 21, no. 5, pp. 51-146, 37 figs., February 13, 1932.

"Mount Shasta, a Cascade volcano": Jour. Geology, vol. 40, no. 5, pp. 417-429, 7 figs., July-August 1932.

Williams, Howel, (Con't.)

"Mount Thielsen, a dissected Cascade volcano": California Univ. Dept. Geol. Sci. Bull., vol. 23, no.6, pp. 195-213, 13 figs. incl. geol. map, 1933.

"Newberry volcano of central Oregon": Geol. Soc. America Bull., vol. 46, no. 2, pp. 253-304, 1935.

"Calderas and their origin": Cal. Univ., Dept. Geol. Sci. Bull., vol. 25, no. 6, pp. 239-346, 1941.

"Crater Lake, The story of its origin": Univ. Cal. Press, 97 pp., 1941.

"The geology of Crater Lake National Park": Carnegie Inst. of Wash., Pub. no. 540, 162 pp., 1942.

"Volcanoes of the Three Sisters region, Oregon Cascades": Cal. Univ., Dept. Geol. Sci. Bull., vol. 27, no. 3, pp. 37-84, 4 figs. in text, 1 map, 1944.

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CHANGE OF ADDRESS

Mr. & Mrs. Charles C. Ralph, 1826 S. E. 57th Avenue, zone 15, LA 2514
Miss Rose H. Jennings, 2816 S. W. Kelly, " 1, AT 0592

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QUESTIONS AND ANSWERS

Answers to last month's questions:

(21) Mount St. Helens
(22) stacks
(23) graben
(24) mesa
(25) zeolites
(26) granite or granodiorite
(27) moraine
(28) striae
(29) seismology
(30) Tyrannosaurus rex

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NEWS NOTES

Ellen James returned to Oregon State College after working during the summer season with the U.S. Engineers.

Lotus Simon has returned to Reed College after working during the summer with the Oregon Department of Geology and Mineral Industries.

Several members have been collecting zeolites lately near New Era, Oregon, and Kalama, Washington. Schminky, Vance, and Dr. Booth have some nice specimens to show.

John Allen spoke before the Salem Geological Society September 20 on the subject "Oregon's Volcanic History". Our indefatigable program chairman, Mr. Vance, has lined up the same talk for the G.S.O.C. for November 8.

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FOR WOMEN ONLY

COOKING UNDER HIGH PRESSURE*

by

Mildred P. James

Hello girls! This is the answer to your requests for a lecture on geology, in words that a housewife can understand. I really went through Hell to do my research work for this paper, but I finally succeeded in copying down some of Vulcan's favorite recipes. Vulcan is Pluto's Italian chef, you know.

Now for the first time in all history, geology steps into the kitchen, as simple a process as every-day cooking!

Practically any of you could make a lava cake, a conglomerate pudding, or a molded breccia---given the proper equipment and an idle eon or two.

First, I want to describe some of the things I saw in Hades. It's the most marvelous place. Simply cluttered up with storage compartments, melting rooms, and cooling chambers. They even have hot and cold running water. NO VACANCIES.

Many of these rooms are full of Vulcan's cooking ingredients. Then there are the pressure rooms where they make their own centigrades. They use centigrades by the thousands! There is an enormous molding compartment where they keep every shape and size of mold you can imagine. I actually saw some that have never been included in any of Dr. Hodge's final examination questions! These forms are all labeled too---dike, sill, batholith, laccolith, and I can't remember how many more. You should have heard Pluto laugh at me. I was running all around looking for a magma frame. Then he told me that they didn't cast magmas into any special shape---they just use them as dump piles.

I do wish you could see the seismic belt Pluto has down there. He wears it all the time!

I had only one complaint to make about Pluto's domain, and I made it right to his face. "Pluto," I said, "You have wonderful equipment down here, but don't you think this place needs a woman's touch, some sorting over and rearranging?"

He agreed with me. He said that was why he married Persephone and took her down there. But the trouble was she didn't stay home more than half the time.

Pluto told me that when he first came to Hades, everything had been sorted out and stored in nice neat layers. The nickel and the iron on the lower level, and the silicon and alumina on the upper level. The other things were arranged in between, just like the pictures in the geology text books. But they certainly didn't stay that way very long. Not after Vulcan once turned on the pressure.

So much for Hades. Now you are ready for your first recipe. We will begin with lava. There are different kinds of lava, just as there are many varieties of cake. Always start out with the basic recipe. It is called, basalt. You can vary this recipe easily by adding a little more of one ingredient, or a little less of another, to make any kind of lava you prefer.

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* Presented as part of stunt, Annual Picnic, August 10, 1945.

BASALT

1 cup silica	2 tbsp. magnesia
5 tbsp. alumina	2 tbsp. lime
5 tbsp. iron	2 tbsp. alkali

1 cup water

Flavor with chlorine and fluorine

Isn't that simple? That is all there is to a batch of basalt. Some years back, when Pluto ordered the Coriba formation for Dr. Hodge, that was just exactly the way Vulcan made the batter. Of course it had to be boiled, vigorously. Then it was rushed up to the earth's surface by hydrostatic pressure (the same thing as forcing icing through a frosting tube) and served piping hot.

Let us suppose you would like to make some nice gabbro. Instead of pouring all your basalt mixture out on top of the earth, you will save out a portion of it. Pluto is a bit traditional about gabbro. He usually has it put in a laccolithic mold, so you will want to do the same. The batter will have to be kept nice and warm for awhile. This is very easily done by covering it up with a big mountain range---or maybe a plateau.

If you would like to try something a little lighter, say for hot weather, I recommend andesite. We will vary our basic recipe, just a trifle.

ANDESITE

1¼ cups silica	1 tbsp. magnesia
6 tbsp. alumina	1 tbsp. lime
3 tbsp. iron	1 tbsp. alkali

Add water and flavoring as before

There, you have andesite. If you were to bury some of this batter down deep in the earth, so it would cool very slowly, do you know what you would find some day? A nice big loaf of diorite!

If you have dear Mr. Hancock to dinner, you will want to serve rhyolite. He's real fond of rhyolite. Once more we will make a slight change in our basalt recipe.

RHYOLITE

1½ cups silica	no magnesia
3 tbsp. alumina	1 drop lime
1 tbsp. iron	2 tbsp. alkali

And again water

Flavor rather strongly with fluorine and chlorine

Before the rhyolite has time to cool, it would be nice to prepare a little surprise for Mr. Minar. This time we will try a different mold---a batholith should do nicely. Be sure and place it deep enough. Several thousand feet will do. Some day, Mr. Minar will have a nice granite quarry all of his very own!

There are a few more pointers I would like to give you regarding lava. You must watch your lava very carefully while it is cooking, and skim off the top scum, just like you do when making jelly. Otherwise, when the lava becomes cool, it will be scoriaceous. You've all seen scoriaceous jelly---all rough and horrid, and bubbly looking on top? Keep on skimming, girls.

Sometimes Vulcan doesn't measure his ingredients as carefully as he might. I have seen some of his basalt that was all full of holes. Of course, the professional geologists could never call a hole, a hole! You might know what they meant. So they call the holes vesicles, and say that the basalt is vesicular. Nonsense, it is just plain holy basalt, and don't let them confuse you.

Vulcan has the cutest little trick when he wants to cover up this mistake. He dissolves some mineral like calcite or quartz. Then he fills up all those little holes with this mineral solution, and lets it harden. Now don't forget this handy trick, girls. The next time you cut into a cake for your bridge club, and find that the cake is vesicular - remember Vulcan. Just stuff all those holes with almonds. Presto---like magic, you have turned what would have been a vesicular failure, into an amygdaloidal success, for that is the name of Vulcan's revamped vesicular basalt. Great heavens! I sound almost professional. Don't lose any sleep over amygdaloidal. It simply means, herts to you.

Tuff is often served with lava. First you gather up some volcanic ash, add a little percolated water, press it down good and firm, and let dry. Even the kiddies could make tuff.

At this time, I feel I must prepare you for a great shock. You will remember how gabbro, diorite, and granite are buried deep in the earth. There really is a grave possibility that some of these rocks may not stay true to form. It will be Pluto's fault. Every now and then, he re-adjusts his seismic belt. Sometimes he takes it in a notch, and sometimes he lets it out a notch. This eternal belt-hitching can simply ruin a whole batch of granite!

After all, even a granite crystal can stand just so much squeezing. When too much pressure is put upon it, it follows the line of least resistance---it falls. The professional geologists say that this makes granite gneiss, when it has finally metamorphosed.

In time, this cake of ruined granite may be exposed to the surface elements of the earth. Then it is scraped, grated, soaked, frozen, and reheated, over and over again. Eventually, it is worn down to drop cookies. Oh dear, I'm getting all mixed up. I meant to say pebbles. Pebbles of granite gneiss.

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The author wishes to express her thanks to John Eliot Allen for his technical work in reducing the "Vulcanic" proportions of lava to practical household quantities.

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LUNCHEON NOTES - THURSDAY, SEPTEMBER 13, 1945

Nineteen members and guests gathered to celebrate the reopening of the Winter Garden. Mr. Libbey officiated in the absence of Pres. Hancock who was reported to be on a collecting trip....Several specimens made their appearance....John Allen's ore from the Bohemia mining district, Lane County, containing pyrite, sphalerite, and galena....Hugh Miller's teredo wood from Otter Rock....Mr. Bates' serpentine from the Lower Smith River on the Redwood Highway....Leo Simon's zeolites from Widow Creek on the Salmon River Highway....and Lloyd Ruff's fluorescent fossil leaves from Rockville, Malheur County....Miss Ellen James introduced Mr. Ford Wilson, a fellow employee at the U.S.Engineers....Franklin Davis dropped in late to take orders for books. ....Coming meetings were announced and field trips were discussed but no dates have been set....Nice to get back to the old meeting place, even though butter is still missing.

L.L.R.

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ANNUAL PICNIC OF THE G.S.O.C.
Mt. Tabor Park, August 10, 1945

The Geological Society of the Oregon Country is developing theatrical talent that bids fair to make the study of geology more interesting than witnessing motion pictures. The program produced at the annual picnic in the crater of Mt. Tabor on August 10th was outstanding in both composition and acting. It is certain that the abundance of excellent coffee made and served by Miss Rosa and her efficient staff did not detract from the enjoyment of either the dinner or the program that followed.

After the tables were cleared the group drifted down the slope to the crater where vigorous members had unostentatiously arranged benches for the comfort of the audience which was to take part in"The Twenty-fifth Annual Meeting of the Portland Branch of the Salem Geological Society."

If, during the entire program, there was a disturbing element, it was the ubiquitous photographer who fluttered about like a cross between a moth and a firefly, causing innocent diners to nearly choke on their sandwiches, and veteran actors to falter in the reading of their lines. But even he thought he was having a good time.

The processional led by Program Chairman Viola Oberson was a scene the like of which old Mt. Tabor had never witnessed in its thousands of years of watching over the valley. The costumes of the actors ran the entire gamut from almost a total lack to the sedate cap and gown of "Madam President, Mildred the First," who, at exactly 2000 o'clock, Feb. 30, 1960, wielding a potato masher in lieu of the customary gavel made from the timbers of the ill fated Beeswax Ship, called the meeting to order.

The first number was the group singing of "The Oregon Country" led by the Phillips boys, Clarence D. and Kenneth N., each of whom modestly deferred to the other until Dr. Stevens demonstrated his right to a seat beside the renowned Solomon by leading them both to the front. A second musical number was a vocal duet, "Walter, Walter" touchingly and effectively rendered by Peggy Ruff and Bessie Fortune in costumes that were the mode of 1945.

The minutes of the last preceding meeting, February 16, 1960, written by Arlene Shaw, were read by the secretary, Miss Ticker, (Glenna Teeters) garbed in the abbreviated fashion of 1960.

The report of the program committee was presented by its chairman, "Miss Crater Lake" (Ellen James), dressed to kill, who announced a forthcoming lecture by the renowned Dr. Lotus Simon on the "The Ecological Symbiolism of the Tertiary to Recent Marine Life with Special Reference to the Non-Com Variety." Those intending to be present were requested to bring their own marines.

The trip committee chairman, Ruff Tarzan Weismuller (Lloyd Ruff) undressed to fit the character, yipped his way to the rostrum and described the Labor Day trip to the Gobi desert and the Easter Islands. He announced that for the Fourth of July trip the caravan was scheduled to meet in the Crater of Archimedes on the Moon and go from there to Venus and Mars, after which they would spend the afternoon hopping from asteroid to planetoid and return by way of the Moon to replenish their supply of green cheese.

"Dr. Frankie Sinatra Stevens" (Kate Rosa), chairman of the museum committee reported the promise of a used Liberty ship as museum headquarters, following the fifth refusal of the voters to approve bonds for a civic center.

Under the head of "New Business" protests were heard from Mrs. "Leolite" Simon, "Miss Penelope Pinch Penny" (Myrtice Fowler), Mrs. "Fluffy" Ruff, "Madame Anastasia" (Viola Oberson), and Mrs. "Annie Oakley" Allen. They complained that the professionals were trying to show off before the less erudite members of the Society. Madame Anastasia was still so confused as a result of an incident occurring in 1945 that she said she couldn't tell whether she was coming or going.

The treasurer, "Miss Penelope Pinch Penny" (Myrtice Fowler) told of her troubles in finding a safe repository for the society's funds, having been dissatisfied with each of the national banks in turn until she decided to trust the "Sixth National Bank" (her stocking) with the nineteen cents.

Under Old Business, Mrs. "Fluorescent" Booth read the report of a special committee on meeting place recommending Great Grandma's Kitchen.

Mrs. James, as Emergency Chairman, was accoutered as though she were the mother of all Boy Scouts --- prepared for any emergency that might arise; she proved her ability to cope with the most difficult of all situations, that of finding a satisfactory speaker for an annual meeting, by introducing "Dr. Nancy High Pressure" (John Eliot Allen) who demonstrated, with the help of her able assistant, Lotus Simon, the art of geological cookery. Recipes for the various rocks found in this vicinity were given, but owing to the poor lighting in the crater auditorium the ladies were not able to take notes at the lecture, so the management has arranged to print the entire lecture in this issue of the NEWS - LETTER. Unfortunately, much of the effectiveness of the lecture will not be available to those who read the printed word, for the feminine charm of the speaker, and the actual mixing of the various ingredients by her assistant can not be reproduced in words or pictures.

After remarks by President Hancock, on whose shoulders rested the success of the meeting; and the group singing of "Auld Lang Syne" the meeting adjourned, and cars loaded with chuckling people wound down the mountain.

The program as a whole stands as a challenge to next year's picnic committee, but we have confidence that we will not be let down.

The charming lecture by Nancy High Pressure was written by Mrs. James. Mrs. Oberson, chairman of the program committee, was assisted by John Allen, Mrs. James, Ellen James, Lotus Simon, and Lloyd Ruff. Assisting Kate Rosa in making and serving the coffee were Myrtice Fowler, Almeda Smith, Clara Nelson, and Ada Henley.

O.E.S.

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LUNCHEON NOTES - SEPTEMBER 27, 1945

The third fall meeting in the Winter Garden was better attended than the second, nearly 20 members being present, and there was an abundance of samples to be exhibited, thanks to the "Zeolite enthusiasts". Mrs. Eleanor Gordon, our commuting member from Salem, passed around another splendid set of samples from various zeolite localities in Oregon and southern Washington. Stilbite, chabazite, apophyllite, and heulandite were present, but since our zeolite "expert" and editor, Mr. Ruff, was absent, the rest of the professionals refused to commit

themselves in identification.....the light was poor.....we didn't have our hand lens.....and some of the samples had to go unidentified. Dr. Booth and Mr. Vance also had struck a bonanza in the new highway cuts south of Kalama, and exhibited one specimen which the writer believes should be written up, if not for the NEWS - LETTER (Ruff take notice) for the Mineralogist, or other publication. Ken Phillips, although a rather infrequent visitor these days, always has an interesting story. This time he had just returned from an air trip over the course of the Alaska Highway to Nome and points north, where he was engaged in a study of the permafrost of the north. He also showed a number of pebbles from the beach at Nome, including several samples of frosted glass, including one frosted glass doorknob.

J.E.A.

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PUMICE BEDS AT SUMMER LAKE, OREGON

by

Ira S. Allison

(Abstract of paper in Geological Society of America Bulletin, Vol. 56, pp. 789-808, August, 1945)

A section of lake beds exposed in the sides of the trench of Ana River below Ana Spring near the northwest corner of Summer Lake basin in Lake County, Oregon, reveals near the top at least six layers of pumice. Four of these appear to record eruptions of Mount Mazama which led finally to the formation of Crater Lake; the source of the fifth is not known; the sixth is attributed to a later eruption of Newberry Crater. As certain layers in the associated sediments imply shallow-water conditions, these eruptions must have occurred when the last pluvial lake, formerly about 215 feet deep, had been reduced by evaporation to a depth of about 85 feet, probably about 14,000 years ago. The data appear to extend back the ages of Mount Mazama pumice, of Crater Lake, and of Paleo-Indian occupation of the area by several thousand years.

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WILLIAMS WILL TAKE FIELD TRIP WITH G.S.O.C.

A field trip is being tentatively planned for Saturday, November 24, which will be to points of volcanic interest and will be attended by Dr. Howel Williams. Those interested in taking this trip please sign up with Bruce Schminky, program chairman. Suggested trips now include Columbia Gorge round trip; Mt. Hood loop trip; Spirit Lake trip; St. Helens lava tunnel and Battleground trip. Any other suggestions?

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NEW MEMBER

Cpl. Richard M. Hoard, 8126 N. Fenwick, Zone 3, MU 8746.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 17 November 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Bldg., 920 SW 6th Avenue at 8:00 p.m.

TRIPS: Watch for announcements of at least one trip each month if the old tires can take it. Make your desires known to trip chairman, H. Bruce Schminky.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 SW Taylor St., between SW 4th and SW 5th Aves. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday Nov.9 — "Oregon's Volcanic History" by Dr. John Eliot Allen. The story of the geologic past in Oregon has been one of repeated and violent volcanic activity since the dawn of decipherable records.

Tuesday Nov. 20 — Dr. Howel Williams, head of the Department of Geological Sciences, University of California, has recently returned from a 4-months study of the Mexican active volcano, Paricutin, and will give a lecture illustrated by kodachrome slides on this subject. Meeting will be held in Library Hall at 8:00 p.m. Come early and be sure of a seat.

Friday Nov.23 — A lecture on "The Nature of Volcanic Action" which will also be given by Dr. Williams, who has studied more Cascade volcanoes than any other geologist. Besides the splendid monograph on Crater Lake, he has written reports on the geologic history of Mt. Thielson, Three Sisters, Newberry Volcano (Paulina Buttes), Mt. Shasta, and many others. This meeting is also scheduled for Library Hall at 8:00 p.m.

Friday Dec.14 — Negotiations are under way for an illustrated lecture on Imperial Valley.

Friday Dec.28 — Meetings generally are not held on the second meeting night of December due to the close proximity to Christmas and New Years, however, if anyone has ideas about a Hobby Show, New Years Party, or Quiz Program, contact the President or the Program Chairman.

FIELD TRIP

Tentative arrangements have been made for a field trip with Dr. Williams on November 24. See page 117 of this issue (News-Letter) for itinerary for proposed trip (weather permitting).

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CHANGE OF ADDRESS

Lawrence, Donald B., and Elizabeth G.,
Botany Department, University of Minnesota, Minneapolis, Minnesota.

Ogren, Mr. and Mrs. C.C.,
Gladstone, Oregon. (Corner 82d Ave., Oatfield Road and Arlington Ave.)
Phone: Oregon City 25351.

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LUNCHEON NOTES - THURSDAY, OCTOBER 25, 1945

An attendance of thirty kept the one waitress really busy, but everyone was so interested in talking that the slow service and the scarcity of meat on the oxtail bones did not cause too much adverse comment.

The navy was represented by Lieut. Wood and Ensign Taylor.....Mrs. Rice of Hillsboro was the guest of Mrs. Myers.....Mrs. Miller, who has not attended meetings frequently enough to become well known, was also introduced.

Franklin L. Davis was taking orders for "Volcanoes Declare War" by Dr. T.A. Jaggar.....Orrin E. Stanley had a copy of "Outline of Geology, with a map, compiled from the best authorities," London, 1844, which aroused some interest. He had acquired it on his recent trip to Victoria.....Cpl. Hoard brought a fine specimen of Nemocardium Weaveri from the Coast Range on the Wolf Creek Highway at an elevation of 700 feet.....Earl Minar exhibited a chunk of volcanic tuff that had been broken from the Lewis & Clark memorial monument at The Dalles, and a small piece of basalt which is being used as trim on the memorial.....Mrs. Myers brought a good-sized piece of opalized wood from Virgin Valley. It was a very beautiful specimen, but since it was larger than pocket size, she was able to regain possession of it.....Bill Reeves had stopped long enough at the railroad cut at New Era to pick up a small mass of crystals, broken from the rock wall..... Dr. John C. Stevens brought copies of several papers by Dr. Berkey which he presented to the Society's library.....F.W.Libbey passed around a specimen of malachite from Bisbee, Arizona.....E.N.Bates presented a problem which unfortunately was lost in the babble of voices and did not get the response it deserved..... H.B.Schminky called attention to an article about volcanoes in the Sunday Oregonian.....A.W.Hancock had a group of small spheres looking like rusty ball bearings which was said to be cassiterite.

A.D.Vance called attention to the coming lecture meetings of the Society, and H.B.Schminky mentioned the November 24th trip to the Lava-river tunnel on Ole Peterson's ranch on the north fork of the Lewis river in Cowlitz County, Washington.

President Hancock said that two eminent geologists are planning to explore the John Day region next summer and will appreciate some help - possibly the "strong-in-the-back" kind.

Lloyd Ruff said that his basement will soon be prepared to accommodate the work-night group this winter, but that he will not be able to lead the discussions this season.

O.E.S.

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NEW MEMBER

B. J. Linderman, Oregon City, Oregon - Phone: Oregon City 6396.

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OREGON'S VOLCANIC HISTORY

by

John Eliot Allen*

Part I - Ancient Volcanism

Most of us who are interested in geology in Oregon recognize the preponderance of volcanism in the recent geological history of the state. We visit and wonder at the great cauldera of Crater Lake; we climb the Recent and ice-age volcanoes of the great Cascade chain; we cross the Pliocene Cascade lava plateau upon which they stand; and we travel for hundreds of miles over the wide Miocene Columbia River basalt plateau.

Less obvious, however, is the important part volcanism has played in the more distant past - a part that in many ways has been more persistent and has yielded just as continuous a record of volcanic activity.

Throughout nearly all of Oregon's decipherable past, volcanism has been of major importance. The oldest rocks in the state are in large part composed of the products of volcanism, although these products may now be so altered and metamorphosed that they are scarcely recognizable as such except by microscopic study.

Students of Oregon geology since the days of Thomas Condon know that the pre-Tertiary rocks of the state are entirely restricted to the "Two Islands" - the Klamath-Siskiyou province in southwestern Oregon and northwestern California, and the Blue Mountain province in central and northeastern Oregon; the latter containing the Wallowa, Elkhorn, Greenhorn, Strawberry, and Ochoco Ranges, together with several other smaller areas of older rocks isolated by later lavas from the main ranges. Few of these students, perhaps, realize that, if one omits the igneous intrusive granites and ultrabasic rocks, at least one-half and usually over two-thirds of these "island" areas are actually composed areally, of volcanic tuffs, breccias, and lavas.

In the Blue Mountains of northeastern Oregon, the early Paleozoic or possibly even pre-Cambrian Burnt River schists contain more greenstone, derived from tuffs and lavas, than any other type of rock; the lower Carboniferous Elkhorn Ridge argillite, which is the most widespread of any of the Paleozoic rocks in eastern Oregon, is predominantly tuffaceous argillite and tuff, with thin beds of altered lava. The argillite, originally a shale, contains abundant fragments of andesitic lava and pumice, showing that the sediments were constantly being supplied with volcanic debris. The Permian Clover Creek greenstone, which covers large areas in the Wallowa range, and abounds in the Snake River Canyon, is at least a mile thick and consists of altered volcanic flows and pyroclastic (fire-broken) rocks, with only small lenses of limestone, in which the fossils which date the formation as Permian are found. The Mesozoic rocks of northeastern Oregon, unlike the Paleozoic and unlike the Mesozoic in southwestern Oregon, are largely marine, and represent one of the few periods when volcanism was relatively unimportant.

In the Siskiyou Mountains of southwestern Oregon, the ancient Paleozoic and Mesozoic sediments occur only as narrow and relatively infrequent lenses of sandstone (now quartzite), and limestone (now marble), usually completely surrounded by ancient lavas (now schists and greenstones). The oldest schists there, of

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*Chief Geologist, Oregon Department of Geology and Mineral Industries.

unknown but certainly Paleozoic and possibly even pre-Cambrian age, are in large part formed by the metamorphism of andesite and basalt tuffs or rhyolite and dacite lavas. Great thicknesses, measured in miles, of the Paleozoic meta-volcanic rocks were once andesitic and basaltic lavas and tuffs, the former commonly showing remnants of such igneous structures as pillows, vesicles, and amygdules. During the Mesozoic, the Jurassic Galice sediments were laid down upon a great thickness of rhyolite and andesite flows, tuffs, agglomerates, and flow breccias. Both the Dothan and Galice formations are interbedded with numerous great lenses of volcanic rocks, many thousands of feet thick and many miles long.

Although the details of Oregon's more ancient geologic past are blurred by the action of metamorphism, or have been blotted out by the destructive effect of erosion and intrusion, the ancient lands were repeatedly flooded with lavas and mantled with ash; the shallow seas were encroached upon or even filled by lavas, and there were nearly always a few spouting volcanoes on the smoky horizon.

When we come down to the Tertiary period of the Cenozoic era, and speak in terms of tens of millions, rather than hundreds of millions of years, our picture begins to come into clearer focus, and the decipherable details become relatively abundant and clear.

At the end of the Mesozoic the ancient seas retreated once and for all from the eastern part of the state, and at the beginning of the Tertiary in the Eocene or the "Dawn of the Recent," the warm semi-tropical seas lapped against a shoreline which lay just east of the present Willamette Valley. Throughout the 60 million years to come, the State was to be repeatedly deluged with showers of volcanic ash and floods of lava. All during the Eocene, Oligocene, Miocene, Pliocene, Pleistocene, and Recent, volcanoes would be spouting and exploding; fissures would be opening up to pour out lavas. Only the Siskiyou Island would escape being buried, even the Blue Mountains and the Wallowas were to be at one time submerged in the lava floods.

Let us briefly review this record of the Tertiary, epoch by epoch, to see why Oregon can well be called the volcanic wonderland.

Wherever Eocene rocks are exposed in Eastern Oregon, they are of direct or indirect volcanic origin. The Clarno formation, named by J.C.Merriam in 1902 for exposures on the John Day River, appears over considerable areas in central Oregon and is composed largely of explosive volcanic ejecta as bright red, yellow, and multicolored tuffs, massive agglomerates, and angular breccias. Andesite lavas occur near the base, thin basalt flows appear throughout, and rhyolites are abundant toward the top of the formation, which is at least several thousand feet thick.

In northwestern Oregon the oldest Eocene rocks are submarine basalt flows and breccias from 1 - 2 miles thick, now exposed in the core of the Coast Range, near Tillamook, and elsewhere; and the latest Eocene rocks are also basalts, at least 1 mile thick, now exposed here and there along the western edge of the Willamette Valley and along the Columbia River below Portland. At the southern end of the Coast Range the Eocene rocks are mostly sediments, but these sandstones and shales contain large amounts of volcanic ash, and there, too, several thousand feet of lavas are found interbedded with the sediments.

The next epoch, the Oligocene, marks the beginning of Cascade volcanism, with the initiation of that great, deep-seated, north-south zone of weakness in the crust of the earth along which occurred the repeated outbursts which have in large part built up the present-day Cascades. The predominantly explosive volcanoes of this epoch build up great thicknesses of breccias, agglomerates, and tuffs around their vents. The Eagle Creek formation of the Columbia River Gorge represents the debris blown out of one of these volcanoes, located a few miles north in Washington. Glassy ash from the explosions was carried by the winds to fall far to the east, where, along with ash from local sources, it was washed into the lakes which then dotted the Central Oregon landscape to form the famous John Day formation. In places these pale red, yellow, and green tuffs accumulated to thicknesses of as much as 2000 feet. Possibly this volcanism continued on into the lower Miocene; certainly Miocene volcanoes were active in far eastern Oregon, where rhyolite, dacite, and tuff piled up to great thicknesses.

The sediments being deposited in the Oligocene seas of western Oregon contain large amounts of fine ashy material from the volcanoes of that time.

During the middle Miocene occurred one of the major volcanic events of North American geologic history. In only two other areas on the globe (India and the North Atlantic) have basaltic lavas poured out over equivalent wide areas. Over 200,000 square miles of Oregon, Washington, and Idaho was covered to depths ranging up to a mile with flow after flow of black glassy basalt. These flows, which came up through innumerable cracks in the crust of the earth, lapped up over the highest elevations in the Blue Mountains, and extended at least as far west as the Portland Hills. They covered the northern part of the ancestral Cascades, and overwhelmed and buried great forests again and again. One such buried forest can be seen in Oneonta Gorge. Streams and rivers were repeatedly dammed and their valleys filled, and the entire drainage system of Oregon was radically and irrevocably changed, while most of the evidence of the old drainage courses was buried. The Snake River was shoved over against the Salmon Mountains; the Columbia was forced westward to form the Great Bend country of Eastern Washington. West of the Willamette Valley the seas were invaded here and there by the basalt flood, but for the most part the basalt did not reach far west of the valley.

Volcanic activity contined to increase during the upper Miocene and Pliocene. Not only was the main plateau of the Cascades built up by flow after flow of andesitic lava, but eastern Oregon became the scene of renewed explosive activity. The disrupted drainage in the eastern part of the state furnished numerous lake basins, in which great thicknesses of coarse ash, volcanic conglomerate, breccias, sandstones, and diatomaceous earth piled up. The sediments in these separated basins cannot be easily correlated, and hence bear a formidable list of names, applied to the rocks in the different areas. The Mascall, Deschutes, Shutler, Rattlesnake, Dalles, and Danforth formations occupy some of these basins, having been in part contemporaneously and in part successively laid down. In the late Pliocene, lavas became more abundant, and the Ochoco andesites poured out from shield volcanoes east of Prineville, while the Harney lavas and tuffs covered still wider expanses in eastern Oregon. In the Portland area numerous local cinder cones and lava vents filled valleys with the Boring lavas.

(To be continued next month)

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FIELD TRIP
to
Zeolite Locality along Highway 99 between Woodland and Kalama, Washington

Thirteen carloads of enthusiastic Gesockers assembled at the approaches to the Interstate bridge Sunday, October 7th, to embark upon the first postwar trip to the famous Booth-Vance zeolite locality. ('Tis said that the Salem society has prior claim to the discovery but probably no nicer specimens.)

Although the great majority were interested specifically in zeolite extraction, a few minor diversions impeded progress in that direction. Just north of the acute intersection between the new highway and that which leads to LaCenter, and just beyond a schoolyard, a granitic boulder received the attention of the group. This erratic was probably emplaced much as were other erratics described by Dr. Allison. Its elevation is approximately 300 feet. Another stop was made by the first high cliffs along the new highway north of Woodland, Washington. Here the Troutdale sediments both underlie and overlie volcanic material all of which is well exposed in the high cuts.

Mr. Vance led the group to a stretch of new road where mudflow or agglomeratic material of Cowlitz age formed the predominant rock type. Some green and red tuff was collected plus a few small zeolites and vein of a serpentinelike material.

The famous zeolite locality was finally reached shortly before noon and the crowd swarmed over the hunting grounds, some of which was mined with explosives all primed to uncover more zeolites but by a faster process than generally employed. Tom Carney, upon locating the exact spot that the famous Booth specimen was located, started a drift in a southeast direction to "pick up an extension of the same vein." Mr. Vance, ably abetted by his son, with single jack and drill starting a shaft, for like all true miners, they believe it gets richer at depth. Several very nice specimens were collected ranging through a series of rather unpronounceable names doubtfully advanced by questionable authorities.

Leo Simon, being somewhat more versatile, caught a sawtail fly. It was the dinner call, though, that weeded the goats from the sheep. Those that came just for the ride immediately responded.

With considerable reluctance the crowd was finally jarred loose from this locality and the next stop occurred at a new gravel pit a short distance north of the town of Kalama. It is rather difficult to tell when a gravel becomes a conglomerate, and for that reason, these beds which were assigned to the Troutdale formation, might better be called a conglomerate. The pebbles and cobbles are exposed along a quarry face, 100 feet high and several hundred feet long, from which an immense quantity of material has been removed for highway construction. The pebbles are somewhat ironstained. Like most of the Troutdale, this outcrop contained an abundance of quartzite pebbles and at least one nice piece of petrified wood was collected. This marked the maximum advance of the G.S.O.C. party and from there the group went its way. A few cars however, paused at a cut just north of the more important zeolite locality. At this later locality several nice specimens were found. Miss Hughes found some zeolitic crystals arranged in roseate form, somewhat different than those generally found.

E.M.B.

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LOG OF PROPOSED LAVA TUNNEL TRIP
Saturday, November 24, 1945

The tunnel is over one-half mile by steep trail from the road, climbing about 400 feet. Round trip from the car will take about 4 hours, including the trip through the 3500-foot long tunnel. Those who do not care to take this hike can visit another interesting lava formation close to the highway during this interval.

BE SURE TO BRING:

Heavy boots, flashlights or small Coleman lamps, and Portland, LaCenter, Yacolt, and Mount St. Helens quadrangles, if available.

Itinerary (Logged by A.D.Vance, J.E.Allen, H.B.Woods, October 12, 1945)

Miles

00.0 Leave parking space, Jantzen Beach, 9:30 a.m.
Follow main highway through Vancouver to stoplight on 26th Street.
02.3 Turn right on 26th Street.
02.8 Turn left, and follow around to east out 33rd Street to main highway.
04.0 Turn left on main highway and follow yellow line to
14.7 Turn right (east) on Highway 1S.
15.7 Note low shield volcano 1 mile to south.
18.4 Battleground - turn left.
21.0 Turn left off Highway to
21.3 Park at Battleground Lake.
21.6 Turn left on to highway.
24.4 Lewis River Bridge. Note potholes in volcanic agglomerate downstream below bridge.
24.6 Boring (?) lavas in road cut.
26.3 Notice high terraces on right.
27.0 Road cut in terrace material.
27.6 Fargher Lake to north, turn right. Notice filled lake on north, with old island in middle. Probably lava dammed, with present outlet just west of turn in highway. Notice poorly drained, irregular topography from Fargher Lake on east. Probably due to repeated lava damming during Pleistocene times.
34.4 Amboy. Turn right, stay on Highway 1S.
34.6 Turn left.
34.8 Turn left.
35.6 Chelatchie Prairie. This valley was formed by Chelatchie Creek, was dammed by lava, and filled during glacial times by gravels.
41.0 Passing over divide between Chelatchie Creek and Lewis River drainage.
42.2 Notice borrow pit on left in glacial flood-water gravels.
42.3 Yale Bridge, near head of Lake Merwin. Notice glacial sand deposits in road cuts north of bridge. Road follows terrace on these deposits for 1 mile.
43.8 Quarry on right in platy fractured lavas. Notice peculiar channels, probably due to glacial floods.
44.8 Dropping down into Speelyai Creek, which now occupies the old glacial-gravel-filled channel of the Lewis River.
45.3 Stop near bridge. Walk back 100 yards to borrow pit to collect doubly-terminated quartz crystals from weathered granite-porphyry boulders in gravels.
45.9 Turn right on Lewis River road.
47.9 Crossing "divide" between Speelyai Creek drainage and modern Lewis River. Note glacial outwash gravels in roadcuts on left.

Miles

48.9 Roadcuts on left side of road in older lavas, which are saussuritized, and contain zeolites.
51.1 Stop and turn left into gravel pit, and park. This pit is in a widespread deposit of mudflow breccias, probably from a temporary dam upstream which broke and swept down the canyon.
53.8 Pandemonium Creek. Drive slowly and note wide canyon on left, which was washed out by flood caused by sudden breakthrough and draining of lake 2 miles to the north. This same flood took out bridge below Ariel dam. Pahoehoe lava exposed under bridge.
54.7 Note high lava pressure-ridge on right. Those who do not make hike to lava tunnel will return here and will wait main party at this point.
55.5 Lewis River Guard Station.
55.8 Park in camp grounds. Party leaves from this point for caves and lava field. Time for round trip from 3½ to 4 hours. Lunch either here or part way up trail.
65.6 Remain on paved highway - go straight ahead at Yacolt junction. Highway goes down old course of Lewis River now occupied by Speelyai Creek.
68.0 Note hydrothermal zones and baked soil layers between lava flows in road cuts on the right.
71.5 Rock Creek gorge.
73.4 Highway follows 600 foot terrace for 2 miles.
78.5 Turn left off highway to Ariel Dam (if there is time).
79.0 Note terraces on both sides of the valley at 300-ft. elevation.
84.6 Terrace on right at 110-ft. elevation.
86.5 Note small residual hill, surrounded by valley fill.
94.6 Woodland, Washington - Portland, Oregon, 25 miles.

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LUNCHEON MEETING - THURSDAY, OCTOBER 4, 1945

Our wandering president, Mr. Hancock, once more presided at the head of the table of 20 members and guests, bringing back with him from the wilds of the Madras plains several types of nodules and lithophysae, and some samples of white opaline material, reportedly hyalite which has lost its transparency. A new member was introduced, Cpl. Richard Hoard, recently of North Africa and Italy, who passed around samples of solfatarized scoria with sulphur crystals from near Vesuvius; a fragment from the mosaic of Mussolini's stadium in Rome; a large pecten in marl and some small recent shells from the beaches of Africa; and a number of cut agates from Agate Desert north of Medford. Another member of the armed forces recently transferred to Portland was our old friend Lieut. (Sr.gr.) Hiram Wood, who told of some of his experiences in the North Atlantic and on the St. Lawrence River. H. Bruce Schminky announced that Dr. David Weber has sent the society a large box of mica samples from North Carolina, to be distributed to members at the next meeting. Lloyd Ruff passed around a sample of heulandite from the Row River.

J.E.A.

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GEOLOGICAL SOCIETY NEWS LETTER

Volume 11, No. 18 December 1945

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month at the auditorium (third floor) of the Public Service Bldg., 920 SW 6th Avenue at 8:00 p.m.

TRIPS: Watch for announcements of at least one trip each month if the old tires can take it. Make your desires known to trip chairman, H. Bruce Schminky.

LUNCHEONS: Every Thursday noon in the Victory Room of the Winter Garden restaurant, 425 SW Taylor St., between SW 4th and SW 5th Aves. Luncheon 60¢.

MEETING ANNOUNCEMENTS

Friday Dec.14 "Stratigraphy of the west side of the Imperial Valley," by L.A. Tarbet, geologist for Standard Oil Company of California. The talk will be illustrated with Kodachromes and standard slides. Imperial Valley is the southern part of a large northwesterly trending valley in southeastern California. This valley is a part of a large basin of deposition which existed during parts of Tertiary and Quaternary time. The stratigraphy discussed in this talk is based on a study of the exposed Tertiary and Quaternary sediments in the region bounded by the Santa Rosa Mountains on the north, Salton Sea on the east, Mexico on the south, and the crystalline rocks of the Coast Range on the west.

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CHRISTMAS GREETINGS

As the calendar year draws to a close and we approach the season of festivities, may we do so with a humble heart and an open mind in regard to our new found responsibilities.

The changing fortunes of a global war have left us at the crossroads and we may at this time be witnessing the passing of history's most fateful hours with the most of the decisions up to us.

It would seem that the gates of the millenium lie directly ahead and partly ajar, and we may either enter or we may slam them closed, by our own greed, our bigotry, or intolerance.

Will we prove equal to our assignment?

The membership of this splendid organization, the Geological Club, is composed of the descendants of the many diverse families of Europe, and the very fact that we have throughout these many years been able to study, to work, to play together in perfect harmony and comradeship, amply proves that races of men, if they so desire, can live together in peace.

So it behooves us at this Christmastide, as we gather with our families and friends around our festive boards, weighted with fabulous abundance, not to be unmindful of the less fortunate peoples of the earth. Peoples who, through their efforts have made our ways of life more secure, have lost their all. They also will at this time of the year gather with broken remnants of families in cold makeshift shelters around tables barren of food, and shivering ill clad children with sunken cheeks will pray in vain for a small taste of milk.

This is not an attempt to sermonize, but just a reminder that this is Christmas time, and that we are our brothers' keepers.

May the cup of bitterness speedily pass and peace and plenty drop their mantles over the earth, forever hiding the scars of hate.

And in the meantime let us continue as members of the Geological Society with all lovers of nature, to labor towards the fulfillment of our dreams - dreams which can never end till the hearts of the rocks, the mountains and valleys have been thoroughly searched, and their well-guarded secrets released. Then will the fascinating story of old Oregon be complete.

Wishing all a joyous Christmas, a happy and prosperous New Year.

A. W. Hancock
President

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LUNCHEON NOTES - THURSDAY, OCTOBER 11, 1945

An extra table had to be set up to accommodate the 23 members and guests this week. Specimens started around the table early enough, this time, so that everybody had a chance to see the following:

Ruff: fluorescent calcite veinlet from Dallas limestone quarry.

Vance: apaphyllite from Kalama - Woodland highway cuts.

Booth: manganapatite, black tourmaline, and muscovite, mined for tantalum in Hell's Roaring Creek, B.C.

Hancock: soapstonelike material from between flows of rhyolite.

Franklin Davis passed around two pamphlets presenting the various sides of the Palestine controversy. Two new members, Mr. and Mrs. L.S.Hamberg, were welcomed to the luncheon group for the first time. Al Vance Jr., back from 27 months in India was proudly presented by Al Sr. We all felt that we knew him well, as we have been following his adventures closely. Hugh Miller announced that his son will be in Portland for Navy Day, on board the flat top Independence. Mr. Reeves was a guest from the Salem group. Lloyd Ruff reported that a relief model of the Umatilla Dam is on display on the second floor of the Pittock Block. Pres. Hancock brought the meeting to a close with an account of his recent trip to the high desert in which Dr. Booth reportedly did all the talking. The trip was not a full success, since they brought back less than 2 tons of material, and were lost in the desert till the wee sma' hours.

J.E.A.

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NOMINATING COMMITTEE

The following members have been appointed by President Hancock to nominate officers for 1946 - 1947:

H. Bruce Schminky, Chairman — A. D. Vance — Rose H. Jennings
Louis E. Oberson — Earl M. Minar

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OREGON'S VOLCANIC HISTORY

by

John Eliot Allen

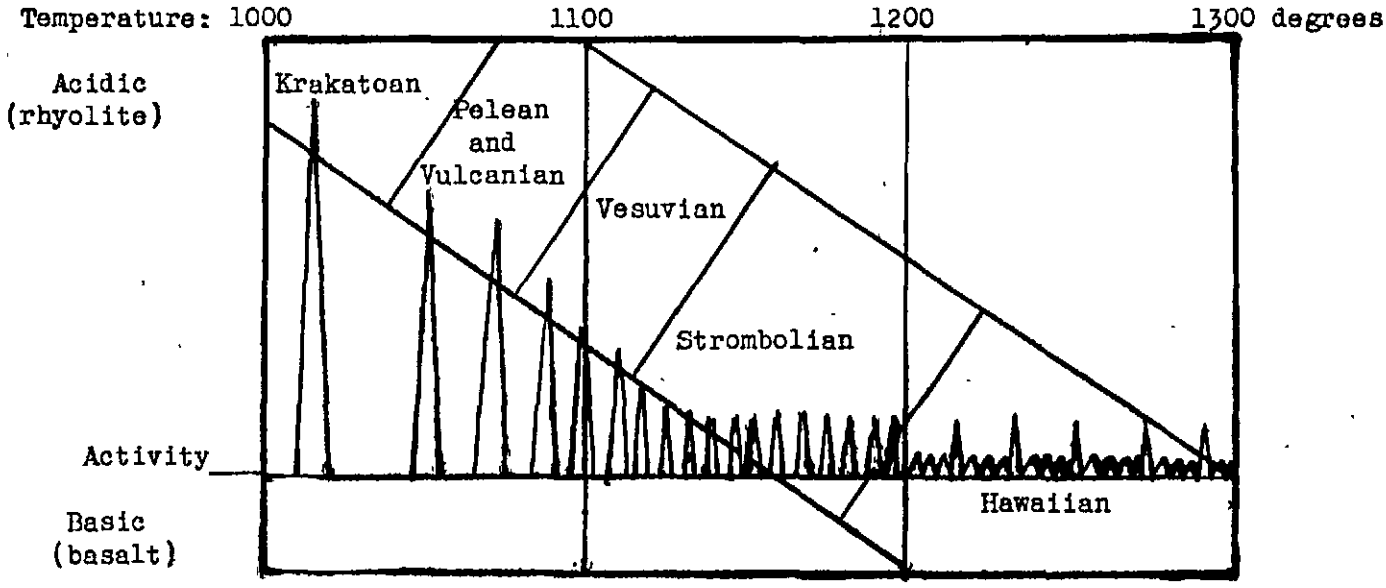
Part II - Quaternary Volcanism

The Quaternary period, including the Pleistocene and Recent - has left a volcanic record that can be at least in part deciphered and understood by the newest beginner in the study of volcanism, it is so spectacular and the evidences are so voluminous. Before discussing the features of the Quaternary volcanoes and flows of the High Cascades and other lavas, however, let us digress a bit, to examine more closely the various types of volcanic activity which has been observed in actual operation during historical times throughout the world. The principle of "Uniformitarianism" postulates that the geologic past can be interpreted in terms of what we can see going on during the present, and this principle, governing geologic research since the days of the Catastrophists and the Neptunists, has paid rich returns in the logical development of our geologic history. Let us review, then, the forms of modern volcanic action, and then apply this knowledge to Oregon's recent past.

Volcanoes are classified according to the way in which they act, and are named for prominent examples of each type. They have been thus divided into five main groups, which in places somewhat overlap.

Wide, low, shield-shaped volcanoes, which emit flows of extremely hot and gaseous basaltic lava, without accompanying explosive action, are called Hawaiian, after Mauna Loa and Kilauea. Steeper cones, which erupt with a series of remarkably rhythmic explosions of moderate violence at slightly lower temperatures are called Strombolian, after the active volcano in the Lipari Islands north of Sicily. Very little liquid lava is given out by this or the still more explosive types of volcano. A steep-walled volcano that erupts with great violence and then lies dormant for long periods is known as Vesuvian. When a volcano erupts with terrific violence - emitting great quantities of gas and only a little extremely viscous and acid lava, it is known as Vulcanian, after another of the Lipari Island group. A similar type is the Pelean volcano, named after the peak on Martinique, which, in 1902, explosively emitted heavy burning clouds of incandescent gases which poured down the mountain to overwhelm the city of St. Pierre, resulting in the death of the 30,000 inhabitants. The only lava given forth by this type is an almost solid plug, which is pushed up through the vent during the gas explosions, to crumble and break down into a pile of giant lava boulders. The final and most explosive type of volcano is the Krakatoan after the island in the Sunda Straits between Java and Sumatra, which almost completely blew itself away in a series of four explosions in 1883, leaving a cauldera or hollow from which it has been estimated 4$\frac{1}{2}$ cubic miles of material was removed. Bandaisan in Japan similarly destroyed its top and one side in 1888, and Katmai in Alaska also blew off its top in 1912.

It is possible to make a graph of these types - with the acidity of the lava as an ordinate and the temperature as abcissae; the magnitude and frequency of the explosive activity is indicated by the jagged line.



Now let us return to Oregon and see if we can apply this classification to our own volcanoes. We have already seen that the main platform of the Cascade Range was built up by a series of Hawaiian-type shield volcanoes, with possibly occasional Strombolian eruptions of andesitic lava. The recent basaltic lava flows from Belknap Crater on the McKenzie Summit; those from the little cones which dot the country side around Paulina Buttes are both largely of this latter type, as is, indeed, the new volcano Paricutin in Mexico. We also know that recent basalt flows came down the Wind River in Washington to cross and dam the Columbia in the gorge.

As the Cascade volcanoes grew older, they had a tendency to erupt less and less frequently, and more and more violently. If we examine the walls of the glacial cirques today we find that there is more and more explosive material, ash, breccia, and agglomerate. Vulcanian or Pelean explosions undoubtedly destroyed the south portion of the Mt. Hood Crater, and has probably helped to break down other of the Cascade Peaks. The North Sister and other peaks to the south, which were supposed to have formed the hypothetical rim of the cauldera of Mount Multnomah, are now believed to represent remains of shield-type volcanoes, now largely destroyed by glacial erosion and the Middle and South Sister build upon their remains.

We have another excellent example of the shield type of volcano in Oregon. The Paulina Buttes, southeast of Bend, are the remnants of a great Newberry-shield volcano, which collapsed, probably after the extrusion of great amounts of basalt which released the magmatic support from below. This collapse was along great concentric faults which border the rim of the cauldera. Later, there were great ash explosions and flows of obsidian, rhyolite, and basaltic tuff.

The most famous example of a cauldera, however, is of course, Crater Lake, which was formed by the destruction of that great 12,000-foot volcano, Mount Mazama. This giant andesitic volcano rested on a base which lay between 5000 and 6000 feet in elevation, and the main cone had been built by relatively quiet extrusions of the andesitic lavas from a number of vents, hence it was actually a closely grouped aggregate of overlapping cones. During the closing phases of its construction a series of great dacite flows escaped from fissures on the north and east flanks,

flows which now form Llao Rock, Cloudcap, and Rugged Crest. Glaciation eroded the slopes of the volcano while it was being built up, and many of the flows rest in valleys carved by the ice. At one time the entire peak was sheathed in ice. After a long period of quiescence, and the retreat of the ice so that only three small tongues extended below the present rim of the crater, the climactic explosions began. Recent work on the dating of the pumice falls in eastern Oregon indicated that this took place only 8000 to 14,000 years ago, a mere second in geologic time. The explosions blew out pumice in increasing amounts from an arcuate line of vents around the base of the volcano, the pumice covering at least 5000 square miles to a depth of over 6 inches, with the fine ash falling at least as far east as Idaho. As the explosions increased in violence the clouds of incandescent ash boiled out of the vents at a tremendous rate and poured down the valleys as glowing avalanches, filling them to the brim, or spreading out over the plains. Some of them traveled as far as 35 miles down the canyons, or 25 miles across the Klamath plateau. Twenty miles from the vents, the flows include bombs of pumice 14 feet in diameter. When the eruptions had come to an end, the glacial canyons had been transformed into broad plains dotted with countless fumaroles, each canyon had become a "Valley of Ten Thousand Smokes."

When the explosions had ceased, the summit of Mount Mazama had disappeared, 17 cubic miles of material had vanished. The total volume of the ejected pumice has been calculated to be at least 12 cubic miles, and it is now believed that the top of the peak collapsed into the cavity caused by this extrusion. The remaining 5 cubic miles may be accounted for by the injection of large amounts of magma into fissures at depth. The last phase of activity, although an anticlimax, built up a 3000-foot volcano on the floor of the cauldera, now known as Wizard Island.

The history of volcanic cycles seems to be one of increasing violence and increasing periods of quiescence. The periods between explosions become longer and longer, the size of the eruptions become greater, until finally many of the peaks destroy themselves. It is not impossible that the present generation may live to see others of the Cascade volcanoes erupt so violently that they are destroyed - certainly every volcanologist in the west would welcome this majestic expression of the only power on earth which still exceeds in violence the atomic bomb.

September 18, 1945.

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LUNCHEON NOTES - THURSDAY, OCTOBER 18, 1945

Members and guests present numbered 22.....Samples passed around: Mr. Libbey, phosphate rock from Idaho; Mr. Hancock, thunder eggs and opal from Opal Mt..... Guests introduced by Dr. Booth, Mr. Waide Lewis, mining engineer from Montana; by Mr. Schminky, Mr. Bush, city engineer.....Discussion by Mr. Stanley on the west coast of Vancouver Island; by Dr. Booth on the recent Neahkahnie fire; by John Allen on the recently proposed city park.

J.E.A.

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Thank you note: Thanks to Miss Ruby Zimmer for several years' back numbers of the NEWS-LETTER.

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ONE HOUR

Directly in the center of an otherwise unobstructed passage in the lava tunnel, our flashlights revealed one large rock. It appealed to me as a resting spot so, deciding that wisdom was the better part of valor, I concluded to stay there while the others in the party proceeded onward and to await their return. This would take approximately one hour and checking the time it was exactly 2.15 p.m. With a promise like MacArthur's - "we will return" - from some of the party, I seated myself upon the rock, being admonished to turn out my flashlight to conserve the batteries.

As the others continued onward the sound of their voices gradually died away and also the glimmer of their flashlights, so I was left in utter, total darkness with no sound save the monotonous drip, drip, drip, of water seeping through the cracks and crevices of the tunnel walls and roof. With head and shoulders drooping forward to avoid the drops of water from a large crack directly overhead, perhaps I drowsed. Suddenly piercing the darkness I saw two greenish-yellow spots of light, apparently moving toward me, and heard a kind of shuffling sound. Turning on my flashlight there was a huge black bear reared up on his hind legs and almost ready to hug me. Being too encumbered with clothing to get at my jack knife, which was in an inner pocket, the only weapon of defense available was my geological pick, and as the bear lunged toward me I caught him in the throat with it and tore the flesh almost the entire length of the under side of his body. As the bear fell forward, howling with pain and rushing ahead, I crawled from under his body in the opposite direction and out between his hind legs. Then sitting up I looked at my watch and the time was 2:40 p.m. Not so bad; twenty-five minutes of the hour had passed.

Darkness again and no sign or sound, as yet, of the stragglers in the party who, supposedly, were to have overtaken me at my resting spot. No "Leolite," not any light, just drip, drip, drip. Just as I was wondering if the air in the tunnel might cause me to become drowsy I felt a cool draught pass over me, - or was it a chill? Was it like this in the Mediaeval dungeons where prisoners languished and starved? If I only had my thermos bottle with me for some more of that hot soup! Time now checked at 2:50 p.m. This is not so good; time is passing more slowly. Evidently the stragglers have decided not to come through the tunnel or have turned back after encountering some of the boulder obstructions. Oh well! it will not be long now before the advance party are returning. Brrrrr! another cold draught of air. At any rate I have nothing to fear like the Japs had who were in the lava caves of volcanic islands in the South Pacific. There will be no bombs to blast me out of here nor any flame throwers to burn me out.

Now a spicy aroma, resembling the odor of pine, assails my nostrils. Strange I had not noticed it when I first sat down here. What can it be? The time now checks exactly 3:00 p.m. I must try to restrain myself from looking at my watch so often as it makes me too aware of the slow passing of time. Surely it is time for some sound or glimmer of light from the returning party. I strain my ears to listen and think I hear the tread of feet but find it is only the thumping of my own heart. In order to occupy my mind I turn on the flashlight for a few minutes and study the surrounding walls of the tunnel. I find that "Dave" and "Ben" and several others have been in this same spot before me, having left their marks behind them. There are numerous cracks overhead where the water is seeping through and a large hollowed out space in the roof of the tunnel, evidently left when the very rock, upon which I am sitting, fell down. What if some more boulders should fall from the roof entirely blocking the passage where I am? Perhaps this is not a very wise thing for me to be doing - sitting here alone in the middle of a 3500-foot lava tunnel. How long do miners survive when buried in a cave-in of a mine?

Of course I am not a miner; neither am I in a mine, so need I worry? Moreover there is no dessicated billy-goat such as Isabel Jaggar experienced when she spent the night in a lava cave.

It seems as if half an hour must have elapsed since I last looked at my watch so I'll check up again. Well it is now 3:15 p.m. - one hour has passed. I arise and stretch, deciding to start for the entrance without further waiting. Turning on my flashlight the tunnel seems to be filled with fog which becomes denser as I go forward, or rather backward. I have surmounted one pile of rocks and am proceeding along a passageway when I hear a faint "Hullo, Hullo." I answer but get no return response. Am I hearing things? Soon however a faint gleam of light appears and another shout and here are two stalwart men to the rescue? - shall I say?

That piney fragrance I noted awhile back and the fog---all emanating from a fire which the laggards had built at the mouth of the tunnel, which now appears in sight---and the hour is ended.

H.M.S.

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LUNCHEON NOTES, THURSDAY, NOVEMBER 1, 1945

Mr. Baldwin introduced two guests, Jack Sather and Bob Fletcher, both of O.S.C., the latter having recently returned from 5 years in the armed forces, 3 of them in New Guinea.....Mrs. Hancock, an infrequent visitor to the luncheon was also present.....Mr. Hancock's recent experiences in talking before student groups, one of the very important functions of the Society, was discussed..... Samples passed around by Miss Henley, of galena and sphalerite; by Mr. Minar, of a piece of Ashland granite which split along a veinlet of pyrite.....Three new members were welcomed, Mr. and Mrs. Richard L. Rice, 535 East Oak Street, Hillsboro; and Mr. B.J.Lindeman, Oregon City.

J.E.A.

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LUNCHEON NOTES - THURSDAY, NOVEMBER 8, 1945

Vice-president Libbey presided over the 22 members and guests assembled at this Thursday luncheon. Highlights of the meeting were the announcement of the geologic map of the St. Helens quadrangle by John Allen; a pamphlet: Man and the Soil passed around by Mr. Bates; and the following geologic specimens: Mr. Minar's Rutland, Vermont marble still fresh after 60 years of service, Miss Henley's copper ore from the Old Dominion Mine near Globe, Arizona, and Mr. Libbey's high-grade bauxite ore from the Salem area. Mrs. Rice, one of our new members, introduced her sister-in-law, Mrs. Hart, as her guest.

L.L.R.

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NEW MEMBERS

Mr. and Mrs. Oscar E. Hausotte,	2034 S.E. 28th Place, Portland 15,	LA 1682
B.J. Lindeman,	Oregon City, Oregon	Phone 6396
Mr. and Mrs. Richard L. Rice,	535 East Oak St., Hillsboro, Ore.	" 1191
Mrs. Clara Warner,	168 N.E. Lombard St., Portland	
Mrs. R.F. Cleveland,	168 N.E. Lombard St., "	

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LUNCHEON NOTES - THURSDAY, NOVEMBER 15, 1945

Considering the rain and wind an attendance of 23 was quite remarkable for a weekly luncheon meeting. In the absence of Dr. Booth the "latest arrival" honors went to Dr. Adams with Miss Agnes Jones a strong contender. Dr. J.C. Stevens and Amza Barr who have not been able to attend the meetings frequently were also present.

Mrs. Stockwell had a specimen of talc, 99.99 percent pure, from about 50 miles south of Golden, B.C.....Mr. Davis brought a photographic record of the winning of Iwo Jima from the Japanese, which he generously allowed President Hancock to carry back to the library. He also read the announcement of the publication of a new edition of Romer's "Vertebrate Paleontology"..... Mr. Baldwin read a part of a letter from Florence Iverson Woodard who now lives near Bend and would like to know the location where thunder eggs may be found.....President Hancock said that he recently had been to Friday's ranch, now under new ownership, which has advertised specimen-hunting privileges at $3.00 per person per day, but that he was refused admission to the part of the ranch he wished to visit. Our genial president was unhappy about such treatment.....Mr. Sporseen had a copy of the Oregon Bluebook which was passed around for examination. Neither he nor Mr. Davis would promise a discount on it..... Miss Henley exhibited a very nice specimen of sulphate chromate-molybdate and tungsten group from the Mammoth district, Pima, Arizona.....Mr. Simon told about a two-man field trip which he and Pres. Hancock took looking for agates but compromised on zeolite crystals from the New Era vicinity.....Pres. Hancock showed what he believed to be a calcite crystal embedded in a mass of zeolites .....Dr. Adams passed around a specimen of "ice-stone".....Dr. J.C.Stevens announced that the Oregon Museum Foundation, Inc., is in a receptive mood, and will issue membership cards graded from "Juveniles" at twenty-five cents a year and "Juniors" at fifty cents, up to "Members" at rates as high as $50.00 a year, and "Life Members" from $100.00 to as high as you want to go.....Pres. Hancock adjourned the meeting early to keep an engagement with 40 school children who were to meet him in his basement museum at 1:30 p.m. He said he had talked for an hour and a quarter to a group in a school near Gresham yesterday, and they clamored for more. He is either an excellent lecturer or a high class publicity agent for Hancock.

O.E.S.

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CHANGE OF ADDRESS

Mr. and Mrs. E. Clyde Woodard (Florence Iverson) 1527 Division St., Bend, Oregon. (Incidentally Florence attended the Dec. 6 luncheon and informed us that this is the second move since arriving in Bend. This move is to be more or less permanent.)

Correction to membership list: Miss Hughes' name should read Mary Margaret Hughes instead of Margaret A. Hughes.

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F L A S H

Word has just been received as we go to press that Major and Mrs. Arthur C. Jones and family will arrive Sunday, December 9, to take residence at the Jones' manor on 3300 S.W. Heather Lane. It will now be Dr. Jones again. - - - Welcome back!

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Reminder:

Dr. A.A.Knowlton, Reed College, will speak on "Atomic Energy" in Library Hall, Sat. Dec.15, on the first of the Oreg. Museum Foundation series of lectures.

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