GEOLOGICAL SOCIETY NEWS LETTER

Volume 9, 1943

GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

SUBJECT INDEX FOR VOLUME 9, 1943
By Mrs. Amza Barr

AUTHOR INDEX FOR VOLUME 9, 1943

By Mrs. Amza Barr

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For U.S. Patent

GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

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THE GEOLOGICAL NEWS-LETTER
Official publication of the
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address . . . . . Phone . . . . . .

Business Address . . . . . Phone . . . . . .

Occupation . . . . . .Hobbies. . . . . .

I am particularly interested in the following branches of geology: . . . . . .

. . . . . .

I enclose $. . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by . . . . . .
(signature) (member)

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LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S.W. Taylor Street (north side of Taylor Street between S.W. 4th and S.W. 5th Avenues). Luncheon sixty cents.

FRIDAY EVENING MEETING

Friday Jan. 8

Lloyd L. Ruff and Claire Holdredge will speak on "The Idaho Wilderness" at the regular Friday evening meeting, January 8th. These men have spent considerable time studying the Salmon and Clearwater rivers and their valleys during the past year and have an interesting story to tell about the geology and scenery of this little known part of our neighboring state. They also have kodachrome pictures to add variety and color to the lecture.

GEOLOGY COURSE

Dr. Edwin T. Hodge, Ph.D., Professor of Economic Geology, Oregon State College, will conduct a two hour course in Geology in room 114, Lincoln High School, on Thursday evenings from 7:15 to 9:15 during the winter and spring terms. Further information may be had be visiting the class room at the first meeting, or by inquiry at the office of the Portland Extension Center in the Oregon Building, Fifth and Oak Streets, Portland.

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THURSDAY LUNCHEON, DECEMBER 30, 1942

A record crowd of 27 met for the last luncheon of 1942 in the Winter Garden restaurant, the usual group being augmented by students and teachers who were enjoying their holiday vacation.....John Eliot Allen called attention to the fact that we now have both ends of the spectrum represented by two of our prominent members, as Dr. Hodge appeared wearing a tie that is not far from the infra red, as opposed to the ultra violet worn last summer by Dr. Stevens.....Dr. Booth sent around a specimen of "snowflake obsidian" that was very interesting.....A. D. Vance had delved into the Lower Oligocene for a crinoid crown showing calyx and brachia, or arms, from the Nehalem river near Mist, Ore.....Tom Carney had a crystal with malachite showing in it.....E. N. Bates, who abhors a silence as much as Nature does a vacuum, apropos of nothing in particular, told one of his scurrilous stories at the expense of the editor who may be expected to "come back" at him when conditions are propitious.....Mr. Minar called attention to the fact that he has samples of the Georgia marble, used in the State Library at Salem, which he will be glad to give to members who will call at the Perry Granite Co., 1403 S.W.4th Ave.

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The News-Letter needs articles on geological subjects.

GEORGIA MARBLE

Tests by Scientists

Scientific tests prove that Georgia Marble is the ideal memorial material. As the absorption of moisture is the first step in the disintegration of a stone, it can readily be seen from these tests that the formation of Georgia Marble makes it durable beyond question in any climate.

Purity

The purity of Georgia Marble has been proved by many chemical tests. One made by the United States Bureau of Standards is as follows:

Silver Gray

Calcium Carbonate. . . .	98.20%
Magnesia Silicate. . . .	1.03%
Silica	.48%
Alumina.	.09%
Oxide of iron.	.04%
Moisture	.16%
	100.00%

The analysis above indicates the following chemical composition: ($CaCO_3$)--98.2; (MgO)-- .41; (Fe_2O_3)--.04; (Al_2O_3)--.09; (SO_3)--Trace; Insoluble in HCl--1.10. Usually the nearer any material is of one ingredient the better it will wear.

Absorption

The close interlocking of its crystals results in a density such as no other material possesses, which accounts for its being practically non-absorbing. Following is a table of the amount of water absorbed by 100 pounds of Georgia Marble and several excellent granites:

Georgia Marble	.09
Mt. Airy Granite	.25
Barre Granite.	.294
Milford Granite.	.34
Westerly Granite	.34
Llano Granite.	.42
Winnsboro Granite.	.44
Bethel Granite	.47

These figures are obtained from the Bureau of Standards and the U. S. Geologic Survey at Washington, D. C. - the highest authorities on the durability of various materials. They show that Georgia Marble absorbs only one-third to one-fifth as much water as the other materials.

"Low porosity in exterior marble is desirable, as pore spaces permit infiltration of water which may dissolve or discolor the stone, or may cause disintegration by freezing. Porous stones also collect soot or soil particles and therefore are not satisfactory when exposed to excessive smoke or dust."

....Reprinted from United States Bureau of Mines Information Circular 6313.

While crushing strength is not an important factor in a monument, as a monument supports only its own weight, the average crushing strength of Georgia Marble

cubes is over 12,000 pounds per square inch. In other words, a square foot of Georgia Marble will support a weight of almost 1000 tons, without crushing.

Earl Minar, foreman of the Perry Monument Co., S.W. 4th and Columbia Streets, Portland, will give a sample of Georgia Marble to any member who calls on him at the plant.

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ART IS LONG

by O.E.S.

Saturday forenoon I finished a long job that was a little out of the ordinary for me, and nearly had me buffaloed (if you know what that is) at times. The reason I finished it Saturday forenoon was because if it was not finished then, there would be no point in finishing it at all, and I disliked the idea of having wasted all the time that I had already spent on it. Furthermore, others were depending upon me to finish that job and to do it as well as I could. So, as I said, I finished the job Saturday forenoon.

Maybe you know how a person feels to come to the end of a piece of work that has had you down for a week or more. Perhaps it didn't amount to any more than this little thing that I had on my mind, but when it is done, and the results have been handed to the big boss, and you can't add or subtract or explain anything about it, you have a sort of a "let down" feeling.

Leaving the office at noon, I wandered a bit aimlessly instead of heading straight for the restaurant or for home. Finding myself at the library, I looked for a small book that would fit my pocket, so that I might have it to read while waiting for the waitress to bring my food. The subject didn't matter as much as the size, but preference was given to photographic subjects. Unfortunately I had read all the small photographic books that were on the shelves but wandering, still a bit aimlessly, I saw just the sized book I was looking for on the top of the counter. And, to clinch the deal, the book had a red binding. Maybe you don't like books with red bindings, but other things being equal, I do, and on Saturday afternoon everything else was equal, so far as I was concerned.

Well, this book was about the "Pruning and Repairing of Ornamental Trees and Shrubs". It happened to be a subject on which I was woefully ignorant, although I have pruned my roses after a style of my own, and have sawed some limbs from the cherry trees after they had been damaged by ice, and here, right at my hand, was a pocket sized book in a red binding that might well be the answer to all my questions about pruning. I had it charged to me, nodding smilingly to Miss Jones as I passed her desk, I headed for a restaurant where I was sure that I could get a quiet table, not too far from the kitchen, and "wise up" on an essential operation without undue waste of time.

Just to show me that it is not well to be too cock sure about anything, the restaurant door had a big sign in the door: "Closed Friday, Saturday and Sunday."

"Oh, heck!" I thought quietly to myself, not wishing to cause a public disturbance. "Where do I go from here?" I turned my feet loose and found that they took me past a couple of photographic supply stores and into a milling mob of women shoppers at an elevator entrance. The women swept me into the yawning door when it was opened, and I did not even have time to see if the operator had red

hair. A baby in her mother's arms took a look at me and yelled. But her curiosity got the better of her and she looked again, and again she yelled. By this time the car full of femininity was tittering. The baby continued to alternately look at me, yell, and hide her face on her mother's "nigh" shoulder.

I told the worried mother that my own granddaughter, at that age, had been afraid of me until she had assured herself that the moustache was fastened to me and would not hurt her. A delightfully throaty voice behind me said: "In about eighteen years she will doubtless like the tickle of a moustache." Being a very modest man besides being thoroughly married, I didn't take the hint, if hint it were, and by that time we were evacuated onto the eighth floor, where I was swept forward to the tea room.

The waitress thought that it would be a good idea for me to get a rubber stamp to save time writing the same order, day after day, and perhaps she was right. At any rate, having a standard luncheon does save a lot of brain fag as well as time that would be spent in reading the menu, which varies but little.

I got successfully past xylum and chlorophyl in the pruning book before finishing my ice cream, and gave my table to two impatient women. My car was parked near the Art Museum which was holding its fiftieth anniversary exhibition, so I thought that I might acquire a little culture in the hour before the police would tag the car.

The first room that I entered was beyond belief. I looked at each of the paintings and then went around again to see if they were really there. I even read the titles, and noted the names and nationalities of the painters. Then I backed off the full length or width of the room to see if I could make them look like their titles intimated they should look, and was quite convinced that I had better spend my time studying the gentle art of pruning.

From further study of the walls I learned that an American named Yasuo Kuniyoshi was guilty of the picture labelled "Girl with Accordion". The poor girl looked "all played out". She sat there (and is doubtless still sitting) with her head on her hand and an elbow resting on the instrument. The expression on her face seemed to say that her audience had been unappreciative brutes, and that life was no longer one glad, sweet song. Although I am very much inclined to agree with that sentiment, I hope that no painter will catch me while in that mood, and put me on the wall for all mankind to see my shame.

A colorful rendition of five girls and a park bench was titled "Holliday" by the clerk, who possibly lives in Holliday's Addition. But that is beside the point. Yes. Quite. The point is that, although there was plenty of color to do the girls justice, they were terribly misrepresented. Or, if they were not, they have my heartfelt sympathy, for they were the saddest group of picnickers I have seen since my son slipped while carrying our lunch down a Clackamas river bluff and spilled most of it among the leaves and slugs. Of course they may have just discovered that their sandwiches were full of ants, although I failed to see any ants depicted on the canvas.

Amedeo Modigliani, Italian, 1884-1920 may have been cockeyed when he painted the portrait of Anna Dezbrowski, for her face is greatly elongated in a general north-westerly direction. As to the color of the face, one can never be sure, for it may even be that in some parts of the wide world the best people are proud of their terra cotta tint.

Giorgio de Chirico, Italian, can not be sued for slander, for he painted his own portrait, and if he did not do a good job it is just too bad. But from this observer's point of view it appears to be an honest portrayal of a real human being, with eyes, ears and nose of average proportions and properly scattered about over his head. The work shows painstaking care, I should think, and may have been quite out of place in a room with some of the other works of art.

"La Musique" by Henri Matisse, French, appears to have been hurriedly dashed off, even as this critique, with a few broad strokes of bright and contrasting colors. The general effect is that which an embryo photographer achieves with his first roll of film. The legs of the two girls are unnecessarily prominent, for to be prominent, they should at least be shapely, and not too gaudily clad. And their faces are shown very small. The blue pajamas worn by the musician are blue, and that is about all that can be said. The furnishings of the studio are drawn with bold, broad strokes with little, if any attempt at shading. Given a few cans of ready mixed paints and an equal number of two-inch brushes one should be able to duplicate the canvas in an hour or so.

"The Little Pastry Cook" by the Lithuanian painter, Haim Soutine, is in a class by itself. It is possible that Haim had eaten some of the little man's pastry and was still suffering the lack of sodium bicarbonate, for no matter what the cook looked like, it is my opinion that he has been basely slandered. It is a colorful job, though.

Perhaps this has gone far enough without a statement of my qualifications as an art critic. All right! Here they are. But I may only prove that I am old-fashioned.

Fifty years ago I took a freshman course in free-hand drawing. I have drawn two county maps (that sold for real cash) and two city maps (that didn't sell so you'd notice it). Then more recently I took a five lesson course at the Portland Art Museum in Photographic Composition. And if any further qualification is asked for, let me quote the travelling salesman who said: "I don't have to be able to lay an egg to know when one is bad;" (or good, either, for that matter.)

The "1892 Gallery" was much more to my liking, which, you will note, quite definitely "dates" me. The paintings in that gallery are nearly all excellently done and are a credit to any collection. Quite outstanding, even in this collection, are "The Woodgatherer" by J. Bastien LePage, and "The Two Sisters" by W. A. Bouguereau are particularly pleasing. There is also a picture of some sheep that is well done, even though they are of the plain white variety, and not speckled as those along the Rogue River have been said to be.

"Head of a Woman" by the Spanish painter Picasso is doubtless about the newest of the new art, for no sober person could possibly recognize it as such without the title. "Early Morn" by Karl Hofer, German, is a carefully done piece of work, but one wonders why a man would have spent his time on it. "The Judges" by Georges Roualt plainly looks like spite work. The two gentlemen depicted doubtless refused to hang one of the painter's efforts, and he takes this method of telling the world what he thinks of them.

In the gallery devoted to the works of the W.P.A. art efforts one sees a new and different brand of painting, and leaves the room with the feeling that the time and materials would better have been spent in painting some of the nation's barns.

I may live long enough to learn to appreciate all these paintings that fail to stir my finer sensibilities at this date, but that is doubtful.

Having lived and worked for some years in a lumber yard, the painting bearing this title should have been recognizable, but alas! it must have been an old fashioned lumber yard that I knew in my youth, or do I need new spectacles? "Load of Hay" which should have brought back painful memories of aching muscles and blistered hands, did nothing of the kind. It left me cold, for the "hay looks more like an immense rock, and here we get our geological "tie-in" for this too-long tirade about things that I know as little as I do about geology.

A small "Landscape" by C. E. S. Wood is a piece of work that "is good for sore eyes", and "A View of Venice" done on copper with oils is interesting, showing careful workmanship, but little imagination.

There is much, very much, in the exhibition that is excellent, and will long be remembered with pleasure, and perhaps time will heal the scars made by the items that now seem a little too ultra modern, so that they, too, may be recalled without a shudder.

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TALL TALES FROM OREGON'S RED RIVER COUNTRY

Number 1

Hathaway Jones, the Rogue River Munchausen, has already achieved a permanent place in Oregon legend, although his death only occurred a few years ago. His narrative genius, lit by the tangy backwoods idiom and imagination, resulted in hundreds of tall tales which are daily repeated around camp-fires and local post-office gatherings. His stories have yet to be recorded in a permanent form, but they are most of them still extant in the memories of the inhabitants of the lower Rogue River, from Marial to Illahe and Agness and down to Gold Beach. Hathaway was for years a postman on the Agness-Illahe run. During the winter months he met the mail boat at Agness and was the only means of communication of all those living along the river for thirty miles upstream. His mule train carried the mail through mud and flood, through slide and down timber, over the narrow Rogue River Trail, and he died with his boots on, when the cinch on his horse's saddle broke and plunged him over a cliff high on the side of the Rogue River gorge. I will try to record a few of his stories (in somewhat expurgated form, as many of them, in the original, are not exactly parlor fare) in this and succeeding issues.

.....

"Nope, cougar and deer can move pretty spry when there's a need, but for real speed I'll lay my bets on bear, every time. I've seen a bear move so fast..... well, I was back south of Colliers Bar just last March. The snow was goin' off pretty fast and the water was up. I aimed to get in a little ground sluicing on a right nice bar up that way. But I had to get camp meat, and was prowling along through a prairie when I ran onto the durndest sight. A cougar musta killed the night before, and the carcass of the towhead lay at the other end of the clearing. A big bear, gant and lean from his winter's hole-up, was makin' the best of the sitsashun, when another bear came out of the buck-brush and started in on the other end of the deer. Wall, an argyment developed mighty quick; the first bear took a swipe at the second, and pretty soon they were really mixing it. One would get knocked sideways, and then he would dash in and jump on tother and tie into him, and then tother would jump onto the first, and then first onto tother....they got to moving so fast, one on top of tother, that they just natcherly went straight up and outa sight....all you could see afterwards was little bits of fur floating down with a splatter of blood, now and then. Never did know which one won." J.E.A.

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FRIDAY EVENING MEETINGS

Friday Jan.22 — Chester A. Vincent, Bridge Engineer, Public Roads Administration, lately returned from Kodiak, and Orrin E. Stanley, Engineering Bureau Chief, Portland Department of Public Works, will each show about one hundred Kodachrome slides. Many of the pictures were taken in places where but few members of the Geological Society of Oregon have visited, but others will show familiar scenes in the bright colors of Kodachrome. Among so many pictures there will naturally be some of geologic interest, whether the photographers intended them to or not. Others will have as their main interest the beauty of the scene, while still others, we fear, will have as their reason for being shown, that the photographer likes them, or likes to remember the scenes that they recall. If you like pictures, we think that you will enjoy this meeting. There is no "new art", weird imagery, or unnatural pine trees. Just pictures of things that these men have seen.

Friday Feb.12 — Details later.

Friday Feb.26 — Annual Business Meeting and installation of officers. Details later.

Friday May 28 — Annual Banquet

In the best interest of the society, the Annual Banquet has been postponed until May 28. This was done in order to have Dr. John C.Merriam as guest speaker. The present Executive Committee decided that the main event of this year's banquet should be the most outstanding speaker obtainable. When it was found that Dr. Merriam could not be here in March, it was decided (after a conference with president-elect Lloyd Ruff) to make the banquet fit his convenience.

The banquet will be held at the Winter Garden and the cost per plate will not exceed $1.35. More details will be available later.

A telegram from Dr. Merriam to John Eliot Allen, Jan. 15, reads as follows:

APPRECIATE TELEGRAM JUST RECEIVED PLEASED ACCEPT INVITATION SPEAK HONOR GUEST MEETING GEOLOGICAL SOCIETY MAY TWENTY EIGHTH WITH ARRANGEMENTS SOCIETY COVER EXPENSES JOURNEY SUBJECT PROBABLY HUMAN MEANING OF EARTH HISTORY AS ILLUSTRATED IN FEATURES OF OREGON WITH APPRECIATION OF INVITATION

JOHN C MERRIAM.

THE EDITOR INDULGES IN RESEARCH
by O. E. S.

This is a matter that, in a way, Tom Carney is responsible for, but as the ultimate outcome may not be known for twenty, or even thirty years it is nothing that either Tom or anyone else need get unduly excited about. It happened something like this:

Whenever Mr. Carney comes to a luncheon meeting of the Geological Society of the Oregon Country he makes it a point to bring a rather outstanding specimen. Sometimes it is an agate with a drop of water wobbling about in its interior, that he picked up in some creek bed when he got lost from the rest of the Sunday caravan, but more often it is a crystal of rare beauty having a name that the editor is entirely unfamiliar with; and since this is a somewhat scientific sheet, it should, when possible, report the doings of the meetings with at least a "reasonable facsimile" of accuracy.

Now the Carney voice has not the carrying power of an air raid siren, and the editor's hearing is, to say the least, not of the acuteness usually attributed to some of the lower animals, so it sometimes happens that the official notes as taken at the luncheon meetings contain words that may not be found in any list of rocks, or even in any dictionary. This clearly indicates that something should be done.

When one does not know approximately how to spell a word, there is little use in wasting time with a dictionary, no matter how complete it may be, or how abbreviated. A little deep thinking brought about the decision to look for a work on minerals. There, at least, one should find an alphabetical list of the various kinds of rocks, and by elimination, one should find one which might be made to sound similar to the word recorded in the notes. And, believe it or not, the scheme actually worked in two cases, at least. (Let us hope.)

To prove what was said a fortnight ago about books with red bindings, the book found by the prosaic method of using the card index and then searching the shelves for the cryptic numbers: "549 L 86" a red bound book with round corners to slip easily into a coat pocket, was located, and in its index were found two words that were recognized as the correct spellings for what the editor thought he had heard Mr. Carney say.

An easier, and much more obvious method of getting the same information would naturally have been to dial Mr. Carney's phone number and ask him the simple question: "What was that specimen you brought to the meeting last Thursday? I didn't quite understand you. No, I don't get it yet, will you please spell it?"

That would have put it squarely up to Tom, and if the spelling as it appeared in the News-Letter was wrong, we all would know that either he or the printer had erred. But that would not have been as sporting, and we would not have proved the theory that books with red bindings are best, and a still worse calamity would have been that the editor would not have made the acquaintance of the "Field Book of Common Rocks and Minerals" by Frederic Brewster Loomis, Professor of Mineralogy and Geology in Amherst College.

Here is a book that tells quickly the specific information sought for in language that may almost be understood at the first reading, yet intrigues the reader to read a page here and there, and then turn to the preface and really begin reading what should have been learned many years ago.

We know at once that the author is speaking directly to us for his opening sentence reads: "Everyone, who is alert as he wanders about this world, wants to know what he is seeing and what it is all about." Naturally we admit that we are alert, and are a little flattered that Professor Loomis has recognized that fact. He also says that the purpose of his book is to provide a means for identifying rocks and minerals without the use of elaborate equipment or previous training, and there again, he demonstrates that he had us in mind when he penned ("penned" sounds more romantic than "typed") those lines.

In the Introduction Prof. Loomis tells why one should be interested in rocks and minerals; how to go about collecting; and the size of specimens to try to get; emphasizing the fact that each specimen should be labelled besides having on it its number which also appears on the label, so the two may be reunited in case the stickum (this is not the professor's wording) fails to function; where to start collecting; what equipment is really necessary; and what to do with the collection after it is in your basement.

He presents a table of minerals classified by colors, both opaque and translucent, and then sails into the real description of each of the groups of minerals and the various branches, giving the chemical formula for each, and illustrations of many of them. The colored plates are very good, the diagrams are clear, and the black and white cuts are quite remarkable.

But to get down to what started this whole thing: Prof. Loomis tells us (what perhaps all of you already knew) that fluorite, which was mentioned by Mr. Carney at the luncheon meeting on January 14, has a specific gravity of 3.2, a hardness of 4, occurs in crystals or cleavable masses, is colorless or some shade of violet, green, yellow or rose, and is transparent on its thin edges. It becomes phosphorescent when heated to 212° F., exposed to the light for a while and then taken into the dark. From it the element fluorine is derived which is useful as a flux in reducing iron, lead, silver and copper ores. He says that it is found in Connecticut, New York, Illinois, and Missouri, naming the specific places in each of these states where it has been found.

About lepidolite, mentioned by Mr. Carney a week earlier, and shown as a nicely polished sphere, we learn that it belongs to the mica group, that it is pink or lilac in color, and occurs mostly in granites. It has been found in Maine, Connecticut and California.

There may be better books on rocks and minerals for the beginner, or the professional geologist. The editor hesitates to make any positive statement on this point, but after meeting this little red volume (with round corners, too) he is in a state of wonder as to how he has been so bold as to tackle the job he has enjoyed for the past months without having a book like this at his elbow.

Perhaps after the twenty, or even thirty years, mentioned at the beginning of this story, have elapsed, if he is not successful in unloading the editorship of the News-Letter to more capable shoulders, your present editor may begi.. to have a smattering of geological terms and lore so that he will not be entirely bewildered by such terms as "amygdaloid", "staurolite", "Ordovician". and the like.

One notable omission in the volume under discussion, which should not be allowed to pass without mention, is any statement referring to faceted pebbles. At least, if there is such a statement in the book, it was not discovered in the editor's hasty review.

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Introducing Dr. W. Claude Adams

We are pleased to present to our readers another criticism of the newer art, this time from the typewriter of our fellow member, Dr. W. Claude Adams. Since the winter season seems to have "frozen" the output of geological articles, why should we not turn our thoughts to the fine art of painting, and exchange views on what our galleries have to offer?

Dr. Adams says that the picture he saw looks like it had been executed "by someone who had never had the opportunity to get a good look at a real pine tree."

This leads us to believe that it must have been painted by a German artist, and this is our line of reasoning.

Three artists were having a friendly argument as to which could make the best painting of a camel. It may have been for a cigarette advertisement, but that is beside the question.

One of the artists was an Englishman, one was French and the third was a German. Only the Frenchman had ever seen a camel, so he proceeded directly to his studio and made his painting. The Englishman took his easel to the zoo, and there, in the presence of the animal, did his work. But the German, possessing the wonderful deductive powers for which his race is famous, went to his studio, wrinkled his Teutonic brow, and figured out just what a camel should look like. The result was probably as close to nature as was the picture of a pine tree which has caused our fellow member, Dr. Adams, such unrest of mind.

But here is Dr. Adams. Let us see what he has for us.

IMPRESSIONS ON GAZING AT "THE PINE TREE"
By W. Claude Adams

Standing before an exhibit of paintings of the modern school, the serious minded person is dumbfounded to know what to say. It is wellnigh impossible to believe that any real artist would anticipate a serious consideration by serious people of many of the things hung upon the walls of museums today in the name of art.

Almost anyone would welcome a revolution in art that would get away from the nearly conventionalized Madonnas and cherubs of some of the old masters; but one revolts at the revolution which musses up the exhibits at our art museums with things which would do scant credit to a grade school pupil; which produces orgies in paint, cataloged as pictures, but too utterly foolish and silly for words.

Instead of being the signs of a healthy revolution against the oldtime Madonna and cherub style, such contortions in the name of art seem more to be the evidence of the prevailing spirit of disregard for convention and the approved order of civilization.

Imagine, if you have not seen such things for yourself, a picture painted on what resembles a piece of board covered with a mixture of white paint and crumbs of dried plaster, the lines or figures apparently made with a bit of charcoal, and the finished whole reminding you of nothing you have ever seen before.

It was in the company of such progeny of French and American brainstorms that The Pine Tree came to Portland, in one of the traveling exhibits of modern art, sponsored by one of our citizens.

Accustomed to gazing quietly on pictures of real beauty in an art museum, one feels rather startled to find such a picture as The Pine Tree hanging on the same walls with Corot and Rousseau. In appearance, it looks as if it might have been executed with a fairly good grade of house paint by someone who had never had the opportunity to get a good look at a real pine tree. I must confess, it is hard for me to imagine a pine tree like that in the Forest of Fontainebleau, or anywhere else in beautiful France. But that is where the picture came from.

A knowledge of how the picture came to hang on the walls of the Portland Art Museum adds to one's perplexity of mind as one stands before it. After the first of these modern exhibits had been here, local enthusiasts for the new in art made up a purse of fifteen hundred dollars, and purchased this particular painting from the collection, to become a part of the permanent exhibit at the museum. It is difficult to understand how even self-styled connoisseurs could bring themselves to the point of sinking fifteen hundred dollars in a painting which any good sign painter could turn out in half an hour. But that is just what they did.

You stand and look at it, and, then, suddenly your mind goes back to the other pictures in the collection from which this one was taken, and you begin to wonder why, if these connoisseurs were wanting something modern, they did not select one of the ultra modern pictures of the collection, instead of picking one that approaches semi-respectability. Why did they not get one of those lovely creations painted with dirty whitewash, with the cute little newspaper clippings and samples of wallpaper pasted here and there on the picture?

Suffice to say, they chose The Pine Tree, and those really hungry for the very latest thing in art will have to wait until the good fairy brings another one of the travelling collections to our town.

So we stand and look. Drab, demure Pine Tree, chaste in your colorings of slate and gray and black, mute, inoffensive and unsuggestive! No stiff mountain breeze will ever waft the scent of your boughs to the Westerner standing and looking at you. No mountain lover will ever stand before you, swept away in day dreams of the winding trail through the sighing pines. No, not before you, Pine Tree.

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NEWS NOTES

A. W. Hancock is scheduled to speak before the Mazamas on "Under the Ginko Tree", Wednesday evening, January 20 at 8:15 p.m. in the club rooms on top of the Pacific Building. Although this is not a geological lecture it will be well worth hearing.

John Eliot Allen was elected Chairman of the local section of the American Institute of Mining and Metallurgical Engineers. Claire Holdredge was re-elected Secretary-Treasurer of the same body.

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LIBRARY NOTES

The following books and bulletins have been received by the library in the interval since Library Notes were last published, Nov. 25, 1942.

From Thomas A. Carney:

Columbia River Gorge. By Ira A. Williams, 1923.

The loss of two copies of this publication has been called to the attention of our membership by the News-Letter. Evidently these notices have escaped the attention of the borrowers as the books have not been returned. The book is out of print and can no longer be purchased. The society is grateful to Mr. Carney for the gift of this book to make amends for its loss.

From Arthur M. Piper:

Ground-Water Resources of the Willamette Valley, Oregon. By Arthur M. Piper, 1942. Geological Survey Water-Supply Paper 890.

Geology and Ground-Water Resources of the Harney Basin, Oregon. By A. M. Piper, T. W. Robinson and others, 1939. Geological Survey Water-Supply Paper 841.

These copies are autographed by the author and donor.

From Courtland L. Booth, M. D.:

Coal Resources of District III, Western Illinois. By Harold E. Culver, 1925.

Geological Survey of Louisiana. By Gilbert D. Harris and A. C. Veatch, 1899.

Manual of Elementary Chemistry. By George Fownes, F.R.S. Seventh edition. 1866. The first edition was published in 1847. More than 200 pages are devoted to Chemistry of Elementary Bodies - Non-metallic elements and metals.

From Oregon Department of Geology and Mineral Industries:

Bulletins:

- No. 16 Field Identification of Minerals. By Ray C. Treasher, 1940.
- No. 17 Manganese in Oregon By F. W. Libbey, J. E. Allen, Ray C. Treasher, and H. K. Lancaster, 1942.
- No. 23 An Investigation of the Reported Occurrence of Tin at Juniper Ridge, Oregon. By H. C. Harrison and John Eliot Allen, 1942.
- No. 25 Third Biennial Report. January 1, 1941 to July 1, 1942.

G.M.I. Short Papers:

- No. 1 Preliminary Report upon Oregon Saline Lakes. By O. F. Stafford, 1939.
- No. 2 Industrial Aluminum: A Brief Survey. By Leslie L. Motz, 1940.
- No. 3 Quicksilver Prospects in the Butte Falls Quadrangle, Oregon. (advance report) By Dr. W. D. Wilkinson, 1940.
- No. 4 Beneficiation by Flotation of Willamette Valley Limestones of Oregon. By J. B. Clemmer and B. H. Clemmons, 1940.
- No. 5 Survey of Non-Metallic Mineral Production of Oregon for 1940. By C. P. Holdredge.
- No. 6 Pumice and Pumicite. By James A. Adams, 1941.
- No. 7 Geologic History of the Portland Area. By Ray C. Treasher, 1942.
- No. 8 Strategic and Critical Minerals. By Lloyd W. Staples, Ph.D., 1942.
- No. 9 Some Manganese Deposits in the Southern Oregon Coastal Region. By Randall E. Brown, 1942.

Miscellaneous Publications:

Sampling of Small Prospects and New Discoveries.

The Spectrographic Laboratory of the State Department of Geology and Mineral Industries, 1942.

Landforms of Oregon; a physiographic sketch. 1941.

From The American Museum of Natural History:

Bulletins:

Vol. 79, Art. I. Ticholeptinae. A new subfamily of Oreodonts. Dec. 31, 1941. By C. Bertrand Schultz and Charles H. Falkenbach.

Vol. 80, Art. IV. The Osteology and Relationships of the Elephant Shrews (Macroscelididae) By Francis Gaynor Evans. Oct. 7, 1942.

Vol. 80, Art. VI. The Fauna of Papago Springs Cave, Arizona. A study of Stockoceros: with Three New Antilocaprines from Nebraska and Arizona. By Morris F. Skinner, Nov. 6, 1942.

Vol. 81, Art. I. The Vernay Collection of Cretaceous (Albian) Ammonites from Angola. By Otto Haas. Dec. 31, 1942.

American Museum Novitates:

No. 1069 Report on a Collection of Spiders from Mexico. By W. J. Gertsch and L. Irby Davis.

No. 1173 Two Tertiary Mammals from Northern South America. By Bryan Patterson.

No. 1182 Some Upper Cretaceous Ammonites from Angola. By Otto Haas.

No. 1183 Contributions to the Paleontology of the Lebanon Mountains, Republic of Lebanon. By H. E. Vokes.

No. 1186 Fishes from the Devonian of Arizona. By L. Hussakof.

No. 1189 A New Fossil Crocodilian from the Paleocene of New Mexico. By Charles C. Mook.

No. 1190 A Standard Frequency Distribution Method. By George Gaylord Simpson and Anne Roe.

No. 1202 A New Crocodilian from the Belly River Beds. By Charles C. Mook.

No. 1206 Notes on the Lesser One-Horned Rhinoceros, Rhinoceros Sondaicus. 1. A Skull. By T. Donald Carter and John Eric Hill.

No. 1207 Notes on the Lesser One-Horned Rhinoceros, Rhinoceros Sondaicus. 2. Position. By Edwin H. Colbert.

No. 1209 A Miocene Tortoise from Patagonia. By George Gaylord Simpson.

No. 1217 Anglosuchus, A New Genus of Teleosauroid Crocodilians. By Charles C. Mook.

The society will receive this report of the addition of 38 books and bulletins to the library with satisfaction and with warm thanks to the donors.

M.M.H.

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LUNCHEON MEETING THURSDAY, JANUARY 7, 1943.

Vice-president E. N. Bates presided at this meeting, this being his first opportunity to wield the gavel since his election. We will have to admit that he did a "bang up" job.

Among the eighteen people who were present were Prof. George W. Gleeson of Oregon State College and Mr. Twist of Spokane, who is a geologist with the soil conservation service.....John Allen had a box of feldspar crystals from near Lime, Oregon. These were found in a large rhyolite dike. The box bore the welcome sign: "Take some."....Miss Hughes brought some samples of books that she is making to help convalescent soldiers relieve the monotony of their days in the hospitals. The books contain cartoons, cross-word puzzles and jokes. She solicited material for such books, or complete books made by members of the society.....John Allen read a letter from Dr. Francis Jones telling something of his work and some of the

doings of the "Jones boys" which are always interesting to members of the G.S.O.C. .....Tom Carney had a small sphere of lepidolite which is very interesting..... Geological Survey Water-Supply Paper 890, by our fellow member A. M. Piper, was passed around for examination.....Dr. Booth brought a copy of Bushong & Co. calendar which has a reproduction of a painting of "A Ranch in the Klickitats" by Percy L. Manser of Hood River that is very attractive.

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LUNCHEON MEETING, THURSDAY, JANUARY 14, 1943

President Schminky was back in the chair after missing the only luncheon meeting during his term of office. We waited in vain for Dr. Booth to make the fifteenth member of the group, but he was not seen by the editor until twenty-four hours later when he appeared at a meeting of the City Club. We have always said "Better late than never." .....Tom Carney had a lovely group of fluorite crystals with some quartz and pyrite. Fortunately for Mr. Carney the specimen was too bulky for the editor's coat pocket in spite of the fact that his wife thinks he puts practically everything but the kitchen range into it.....President Schminky made a plea for program suggestions and for ideas for field trips. He had word from Ray Treasher that R.T. was glad that the Society is "back on its feet again," adding that he thinks that more geology can be learned afoot than from an automobile.....Arthur M. Piper commented on the work that his office is doing in helping to develop water supply for some districts that have been built up more rapidly than their water supplies. He also mentioned that the Los Angeles district is having some trouble with salt water in some of its wells.....President Schminky said that the executive board had decided to postpone the dinner part of the annual meeting until some time in May when it will be possible for Dr. Merriam to be present.

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THE HORSE AS AN AGE DETERMINATOR

In a vertebrate study, the evolutionary stages through which the horse has passed is an excellent age determinator. The horse has been recorded as far back as the Eocene, and each period is known for certain definite pathological changes in the foot and tooth structure. In the Bridger (middle Eocene) Orohippus, the manus had four functional toes and fifth digit fully developed. The pes consisted of only three digits. In the Oligocene, the manus of the Mesohippus (about the size of a large dog) consisted of three functional digits, the median of which was enlarged and bore most of the weight, but the laterals reached the ground and were not entirely without function. The pes was three-toed.

In the lower Pliocene and upper Miocene the Protohippus was three-toed. The median digit was much enlarged, carrying most of the weight, while the lateral digits, though complete and having small hoofs, were little more than dew-claws. The lower Pliocene genus Pliohippus is the first monodactyl, the phalanges being lost from both the fore- and hind-feet, and each foot had but a single hoof. This animal had the stature of a small pony.

The upper Pliocene horse, Plesippus (meaning "almost horse"), is completely modernized and is the most ancient of the horses having the study proportions of Equus. Therefore, through these definite changes in foot structure, the presence of horse remains in different formations can serve as a means of definitely placing the age of the formation in question.

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GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address . . . . . Phone . . . . . .

Business Address . . . . . Phone . . . . . .

Occupation . . . . . .Hobbies. . . . . .

I am particularly interested in the following branches of geology: . . . . . .

. . . . . .

I enclose $. . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by . . . . . .
(signature) (member)

PORTLAND CHAPTER ANNOUNCEMENTS

LECTURES: On 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: On Sundays following lecture meetings, or as otherwise arranged. Meeting place at Public Market, Front and Yamhill.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor Street between S.W. 4th and S.W. 5th Avenues). Luncheon sixty cents.

FRIDAY EVENING MEETINGS

Friday Feb.12 — Chester A. Vincent, Bridge Engineer, Public Roads Administration, lately returned from Kodiak, and Orrin E. Stanley, Engineering Bureau Chief, Portland Department of Public Works, will each show about one hundred Kodachrome slides. Many of the pictures were taken in places where but few members of the Geological Society of Oregon have visited, but others will show familiar scenes in the bright colors of Kodachrome. Among so many pictures there will naturally be some of geologic interest, whether the photographers intended them to or not. Others will have as their main interest the beauty of the scene, while still others, we fear, will have as their reason for being shown, that the photographer likes them, or likes to remember the scenes that they recall. If you like pictures, we think that you will enjoy this meeting. There is no "new art", weird imagery, or unnatural pine trees. Just pictures of things that these men have seen.

Sunday Feb.14 — Field Trip.
Details will be given at next meeting and in papers. Bring Treasher's "Geology of the Portland Area," U.S.G.S. sheets of Portland, Hillsboro, Oregon City and Tualatin, or Multnomah Co. Soil Report and map.

Friday Feb.26 — Annual Business Meeting and installation of new officers. We will have a grab bag of rock and mineral specimens from the Yukon Territory, which were donated by Major David E. Weber.

Friday March 12 — Details later.

Friday March 26 — "Science and Religion" by Dr. Herman Clark, from Willamette University at Salem.

Friday May 28 — The Annual Banquet - Dr. John C. Merriam as guest speaker. Complete details later. Set this date aside now in your date book.

NOTICE TO ALL COMMITTEE CHAIRMEN

Please have reports of your activities ready to submit at the Annual Business Meeting Feb. 26. For the convenience of the Secretary, these reports should be written on standard letter size paper.

H. B. Schminky, Pres.

TALL TALES FROM THE RED RIVER COUNTRY

No. 2

"Yes, there's a heap of mineral in the back country in Curry County," said Hathaway Jones, who had just entered the store-post-office-community-meeting-place, and had overheard a spirited discussion as to the value of the reported mineral occurrences; "But you kaint get it out over them trails the forest service builds.....and when you do pack it out over thirty-forty mile of rough trail, no one wants to buy it. The Guggenheims don't want this part of the country developed, cause it would make their big mines wuthless." Hathaway settled down on the bench by the stove and started to roll a brown-paper cigarette. The ten or fifteen citizens of Agness, gathered at the store to await the arrival of the mail boat, leaned forward, all attention, for when Hathaway started a story it was well to be all ears.

"I recollect when I was a boy," continued Hathaway, "my pop and two brothers an I went hunting one summer in the Tincup creek country. We found some deer-sign along the big creek near where we was camped, and pop and the boys got busy tracin' em up; I allus was an inyvidooalist....so I wandered off up the main branch, I figgered I'd see if'n I couldn't get me a towhead up on the ridge. It was pretty late in the morning for hunting, though, and it got later and later and I got further and further from camp without no luck. Long about the middle of the afternoon I started thinkin about getting back, and had just started down the ridge in that direction, when I nearly stumbled over the purtiest big crop of rusty quartz-vein you ever seen. It was bout three feet through and ran up over the ridge and through the country as fur as I could see. An when I looked close, there a-stikin out of the comb quartz on the very top of the ridge was the biggest gold nugget you ever seen. It was all jagged an splintery, but it was as thick as the palm of your hand twice as large. I kicked it loose and picked it up (it weighed nigh onto thirty pound) and put it in my pack and went a-kyhootin down that mountain side like a bar with a forest fire on his tail, thirty feet to the jump. I tore into camp just as she was gettin dark, plumb winded.....took the nugget outa my pack an plumped it down on the duffle box in front of pop and the boys. Pop looks at it, and turns it over, and looks at me, and then shakes his head, slow. I was still too blowed to say a word. "Son," says pop, "Thats a mighty fine gold nugget you got there. A mighty fine nugget. But its no good to us," he says, "Its too durn fur from the railroad!"

J.E.A.

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OREGON STRATIGRAPHY: NO. 1

(One or two Oregon formational descriptions, from the"Lexicon of Geologic Names", U.S.G.S. Bull. 896, will be printed in each issue. J.E.A.)

Abrams mica schist, p. 10

Pre-Cambrian (?): Northern California (Trinity and Shasta Counties).
O. H. Hershey, 1901 (Am. Geol., vol. 27, pp. 225-245). Abrams mica schist. - Composed of thin folia of muscovite of dull colors (gray, light-brown, yellow and dull red) separated by irregular layers of white quartz, representing the original laminae. Very highly siliceous throughout. Is of sed. origin, being originally a series of argill. ss. beds in part finely laminated. Thickness about 1,000 ft. in upper Coffee Creek section, but may be much thicker at Bully Choop, to S. Named for Abrams P.O. in upper Coffee Creek region. According to J. S. Diller (unpublished ms. on Weaverville quad.) the Abrams mica schist is 5,000 ft. thick.

BEAUTIFUL SNOW

by O. E. S.

To begin with, I hope that the snow shall have all melted before this gets into print. Otherwise I shall not be able to enjoy reading what I have written. Maybe I shall not enjoy it anyhow.

I became involved in my difficulty with the snow in a perfectly innocent and proper manner as you will no doubt agree when you have considered the evidence.

The first of the snow was not too bad. It had been rumored around the office that someone had prophesied four inches of snow, and, to quote from Li'l Abner: "as any fool could plainly see" there was only about an inch. We felt quite superior to the prophet, whoever he was. Four inches of snow just couldn't happen to Portland and to prove that claim, the first snow nearly all disappeared before the weather turned cold.

The cold chilled the oil in my car and made starting difficult. The car heater proved to be an additional drain on the battery. This, added to the fact that most of my driving is in the wee sma' hours of the morning when the city employees creep stealthily up on their jobs, after meeting in groups on appointed street corners at some distance from the city hall, must have drained the power until by the time the real snow storm began, the battery, catching me in a side street with two "share the rides" passengers, went on a sit-down strike before we were half way home.

Was I embarrassed! Passengers and driver united their frail strength to get the unwieldy car out of the deep snow to where it would roll more easily, and perhaps be persuaded to start by the time-tried method of getting up momentum and then slyly letting in the clutch with the gear-shift set in "high". The ruse failed. A service station, so called, was near. I would get a rental battery installed in a few minutes and all would be well.

There was no one at home in the first station visited (and no loose batteries). The second place had several batteries on the line, but none with enough of the old pep to do any good. A third place had a fully charged battery, but it was one of the long, slender kind that serves the newer and more aristocratic makes of cars. The fourth place had no rental batteries. The fifth, sixth and seventh were dreadfully sorry that they could not serve me, but seemed darned glad that they had an excuse for hugging their heating devices instead of getting out into the storm to install a battery for a foolish stranger who didn't have gumption enough to stay at home on a night like that.

I had left the car on as brisk a trot as could be managed by one of my years and bulk when the depth of the snow and other weather conditions were taken into consideration. I came back to my chilled passengers, crestfallen and dragging one foot behind the other like a boy late to school after receiving two warnings from the teacher that a third tardiness would be dealt with.

A car was standing behind mine. Its driver was wiping the snow from his windshield. I asked him if he would give me a push to see if the motor would start. He would, he said, as soon as the guy came out of the store. Soon we heard a faint toot, and felt the impact of his bumper against ours. I switched on the ignition.

and let in the clutch, when joy of all joys! the motor began to purr, and we pulled away from our benefactor with a glad toot of thanks. And that was that.

The snow was heavier the next morning. At my first stop, although equipped with chains, the wheels spun freely and the car stood as rooted to the spot. The passenger and her son joined their strength to get me going but their footing was almost as insecure as the car's traction! We finally backed down hill to a level street and got started "on the level", picked up the other riders and got to work "not too late."

One learns by experience, or at least he thinks he does. I took the car to the shop for a fully charged battery, thinking to end my motoring troubles for the duration of the snow. But did I? Dear me! no. The yard was full of men and trucks starting to clean up the town. I had to wait for service until the really important work of getting the crews started was out of the way.

Then came the chief. Not a large man physically, but a discerning one, and a good judge of the capabilities of his assistants, as you can plainly see, for he said: "Stanley, I think you'll fit into the picture here pretty well. Get some maps of the city and outline districts for these snow plows to work in, then stick around and keep track of them. Get some men to help you and some others to take over the work at night." And it was so.

That happened well before noon. By the middle of the afternoon my head was aching from lack of food at the usual lunch hour, and from the unusual nature of the work. Besides these contributing factors there was the din of shouting voices of foremen and workmen, and the closeness of a small room full of men. I decided to go out for lunch.

"There's a nice little restaurant a block up the hill," said one of the foremen, and I staggered forth and up the hill. The dining room was neat, and a cheerful looking fire blazed in the fire-place, but that was about all it did, for although I stayed there nearly half an hour, I failed to feel any of its warmth. Even the few nurses who dropped in from time to time failed to cheer me, and I am pretty low when my heart fails to give an extra throb at the sight of a nurse's uniform, well draped over a shapely figure. But that's another story.

Back at the yard I proceeded to send bulldozers where angledozers would have performed more satisfactorily, and motor patrols where bulldozers should have been dispatched, but they plowed their ways through the streets and traffic began to move.

We worked ten, twelve and fourteen hour shifts. One superintendent was on duty thirty hours with no sleep and but one meal, eaten between telephone calls and issuing orders. Most of the streets were open for traffic when the second snow was brought to town by a stiff east wind which piled it in the lee of hedges, buildings and cut banks. Pictures of the snow appeared in the daily papers while I sat chained to my desk throughout the daylight hours, not only approachin the job under the cover of darkness, but in another darkness making my way home at night.

With a competent assistant during the days and competent relief men to take over the burden at night, the work of dispatching equipment continued without intermission. Sunday was just another day at the yard, but with the added excitement of digging my car out of the ridge of snow thrown across my driveway entrance by the "dozers" before I could drive into the home lot.

Monday, sleet on the windshield was no help in getting home promptly. Further delay was caused by more ridges of snow at three street intersections which made shovelling necessary. But such an appetite as it developed! Then after I had eaten supper I shovelled snow from my driveway so I could get out into the street more quickly, but I didn't do enough work, for it required half an hour to dig out into the street on Tuesday morning. I've seen slippery streets, but will have to admit that Tuesday morning was a humdinger (See Funk and Wagnall's dictionary if the term is new to you).

The public had begun to recognize our efforts in its behalf and Tuesday was the banner day for complaints. Two clerks took them from the four phones and the map looked like a small forest of pins with flags designating the location of equipment. We paid no attention to where the shovel crews were busy opening the streets in the business district. They were in competent hands right in the field. Tuesday evening after I had eaten my frugal meal I shovelled snow from the entrance to my driveway to facilitate my exodus the following morning.

Wednesday the snow melted rapidly, and by Thursday evening all the rented equipment had been laid off so that we went back to eight hour shifts with time to discuss the news of the day between telephone calls, but the strain of long hours and high tension work had begun to tell on the nerves of the foremen and superintendents, so loud talking while telling each other "where to get off" added to the confusion in the crowded room where we worked.

Thursday evening when I sat down at my desk at home I noticed a corner of a magazine sticking out from under a pile of miscellany. I pulled it into the open and thumbed through its pages. There I found an article that I felt sure I had seen, and had hunted the house over for without success. But with the snow nearly gone it was inevitable that I should discover an authoritative discussion headed "Don'ts for Snow." Oh, well! I had not disobeyed any of them, for my camera had nestled snugly on my hip for the long week that the snow had been photogenic, without having its lens exposed to the beautiful snow.

But just think of the film that I had saved.

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LUNCHEON MEETING, JANUARY 28.

About 15 hardy members turned out for the first meeting after the big snow. The four ladies, Mrs. Arthur Jones, Mrs. Courtland Booth, Miss Agnes B. Jones, and Mrs. Bruce Schminky were given a round of applause for their braveness in attending. Tom Carney displayed a fine museum piece of quartz and pyrite crystals. Mr. Minor passed around a group of rocks collected in Cow Creek canyon on the Dalles - California highway. These rocks were collected for their color with the possible use as decorative stone in building.

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The editor regrets that this edition of the News-Letter is briefer and perhaps later than usual. The printing of this News-Letter was delayed by his illness, and was complicated by the illness of the multigraph operator.

GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 4 PORTLAND, OREGON February 25, 1943

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Mrs. Kathleen Mahony	Secretary	Box 148 Oak Grove
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J. C. Stevens (1943)	Earl K. Nixon (1944)
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Edwin T. Hodge	Ray C. Treasher	John Eliot Allen
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Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address . . . . . Phone . . . . . .

Business Address . . . . . Phone . . . . . .

Occupation . . . . . .Hobbies. . . . . .

I am particularly interested in the following branches of geology: . . . . . .

. . . . . .

I enclose $. . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by . . . . . .
(signature) (member)

PORTLAND CHAPTER ANNOUNCEMENTS

LECTURES: On 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: On Sundays following lecture meetings, or as otherwise arranged. Meeting place at Public Market, Front and Yamhill.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S.W. Taylor Street (north side of Taylor Street between S.W. 4th and S.W. 5th Avenues). Luncheon sixty cents.

FRIDAY EVENING MEETINGS

Friday Feb.26 — ANNUAL BUSINESS MEETING and installation of new officers. We will have a grab bag of rock and mineral specimens from the Yukon Territory, which were donated by Major David E. Weber. Colored motion pictures of the Steens Mountain area, taken by our president, H. Bruce Schminky, will be shown following the business meeting.

Friday March 12 — Details later. This is likely to be an unusually good meeting.

Friday March 26 — "Science and Religion" by Dr. Herman Clark, Willamette University at Salem.

Friday May 28 — THE ANNUAL BANQUET with Dr. John C. Merriam as guest speaker. Complete details later. SET THIS DATE ASIDE NOW IN YOUR DATE BOOK.

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LUNCHEON NOTES FOR FEBRUARY 4, 1943

Today we initiated the new Victory Room at the Winter Garden. This will be our regular meeting place from now on. There should be no future complaints about the lack of light as this is a nice corner room. Twenty-four were present, including Major and Mrs. David Weber, Mr. Ray Treasher, Mr. M. E. Sandoz and Mr. J. C. Stevens.

Major Weber was home on a furlough after spending nearly a year mending teeth and building bridges for members of the armed forces working on the Alcan highway. His collection of gold nuggets, platinum flakes, leaf silver, cassiterite and native copper was very interesting. Specimens of stibnite and galena with various associated minerals and a biotite gabbro collected near Whitehorse, Y. T. were passed out to those wanting them. Other specimens from this region will be passed on to members at a future meeting. Major Weber will return to his post about the 14th of February.

Ray Treasher said that he was kept busy hunting (censored) minerals of strategic importance at a (censored) locality for a (censored) use in the war effort. The only thing that was not censored was his pleasure at being at another luncheon meeting. He would have felt more at home had Franklin Davis been present to do a little haggling.

Mrs. Arthur Jones read some interesting sections from a recent letter from the doctor.

(continued on page 26)

GOBS OF WATER

by J. C. Stevens

The snow survey which is completed each year as of February 1 reveals an exceptional volume of water stored in the form of snow on the drainage areas of Northwestern streams.

This promises well for irrigation and hydroelectric power during the coming season, which the Japs will have to take philosophically if they learn about it. It means more food production, more planes, more ships, more trouble for those yellow-bellied sons of dragons.

Given below is a tabulation showing inches snow-stored water for the February 1 record period on eleven scattered snow courses of greatest age. The superior snow pack of February 1, 1943, as compared with that of the same date in earlier years is evident.

Snow Water Content (Inches) as of about February 1

River Basin:	Deschutes-Willamette	Umatilla	Walla-Walla	Wallowa	Burnt River	Malheur-John Day	Crooked	Goose Lake	Klamath	Klamath-Rogue	Umpqua
Snow Course: Year	Cascade Summit	Meacham	Toll-gate	Aneroid Lake	Tipton	Blue Mt. Springs	Ochoco Mdws.	Quartz Mtn.	Chemult	Annie Spring	Diamond Lake
1929	23.2	9.2	-	7.7	10.1	-	4.3	4.0	6.5	20.3	8.9
1930	10.3	3.5	-	15.2	3.8	4.4	3.8	6.0	4.6	19.5	5.5
1931	11.2	6.2	14.1	13.0	8.2	3.6	5.6	4.0	6.1	NR	NR
1932	28.0	9.3	23.7	28.4	8.7	13.7	10.0	6.9	12.8	22.3	26.2
1933	27.8	5.6	NR	26.0	NR	13.0	6.5	5.9	11.1	NR	27.5
1934	NR	0.5	12.5	NR	NR	NR	NR	1.0	NR	NR	5.6
1935	28.1	5.6	18.2	21.2	NR	11.0	9.4	7.7	8.6	33.4	7.6
1936	NR	11.2	27.8	17.3	NR	13.4	13.5	11.3	9.4	37.2	12.0
1937	25.1	9.3	16.6	9.3	NR	8.2	6.1	4.1	7.0	NR	15.6
1938	8.8	2.1	9.7	21.0	4.5	9.0	NR	NR	4.1	22.8	7.9
1939	17.4	4.0	14.1	13.4	6.8	7.4	5.7	2.2	5.3	26.5	12.2
1940	6.3	2.3	5.9	16.5	3.1	3.6	1.8	T	5.5	20.5	3.1
1941	13.5	4.0	14.1	19.3	8.7	13.4	8.6	5.0	8.1	36.8	10.5
1942	10.6	3.5	7.0	22.4	4.8	6.8	5.9	3.8	6.3	18.1	6.8
1943	37.0	10.6	28.8	28.6	13.4	23.0	13.7	9.4	20.5	40.8	29.8

Greatest February 1 water content is underscored. NR - No Report.

WE'RE DOING BETTER (WE HOPE)

by O. E. S.

As a technical journal the Geological News-Letter seems to have fallen by the wayside for several issues, but an inspection of the issue for February 10 shows what might be considered by some prejudiced observers as a slight improvement. It is true, that to find this alleged improvement, the examination might have to be made with a 14x lens or we might even have to enlist the services of Dr. Harrison and his spectroscope, so minute have been the references to geology.

In John Eliot Allen's "Tall Tales from the Red River Country" there is reference to a gold nugget which we are led to believe was abandoned at the Jones camp "too far from the railroad" to be worth anything to Hathaway and his family. All that one now has to do is to find this old campsite, scrape away the moss and leaves that may have accumulated in the years that have passed, and pick up the gold.

In case one is greedy and wishes more of the same he simply will have to follow Hathaway's foot-prints back to the vein of ore and break off as much of the precious mineral as he can get away with. It's just as simple as that (if you are).

Then there is "Beautiful Snow" by the editor. This story doesn't seem to get anywhere for a long time and even then the reader is misled into believing that it should have appeared in a photographic magazine. Doubtless one of the reasons that it did not is because no photographic magazine would give it space, and another is the high rates paid by the Geological News-Letter for authoritative geological articles such as this one. (The rates start at nothing a page and are doubled for each subsequent article by the same author.)

We all know that much of our landscape, after having been built into suitable ridges by the internal forces of the earth, has been re-worked by glaciers. And we also know that glaciers are formed from countless tiny crystals of snow quite similar to those with which Portland and vicinity was favored in the latter part of January.

When the snow has accumulated to great depths, the lower part of the mass, from a hundred feet or so, to a mile or so thick, it starts plowing its way to lower or warmer levels, carrying masses of rock broken from the sides of the channel. Some rocks are striated by sliding them over the floor of the valley, making them of interest to beginners in the study of geology. Some are faceted on one or more sides, either by the glacier or by other forces just as interesting, causing discussions between Vance and Treasher and other erudite individuals; and as a by-product there is a lot of sand which is carried towards the sea by the issuing stream of water from the melting ice.

The sand has many uses among which may be mentioned the forming of bar to worry navigators, the building of shifting dunes to keep railroad and highway maintenance men interested in keeping their roadways clear, and the laying out of extensive ocean beaches for the pleasure of children, bathing beauties and summer resort proprietors.

Thus we see that many billions of these tiny snow crystals - possibly even more than there are dollars in the war budget - can, when properly organized,

exert a wonderful influence on the inhabitants of the globe. Even a smaller number, by working together purposely, can cause men whose hands are soft and whose muscles are flabby, men whose waist lines have long ago been replaced by equators, to get out the old snow shovel and do a few hours of hard but honest work on their front walks, and perhaps take to their beds for weeks to recuperate from the effects of unaccustomed exercise.

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LUNCHEON NOTES FOR FEBRUARY 11, 1943

The new, well-lighted room at the Winter Garden Restaurant leaves the professional geologists without the excuse of bad lignting when they are unable to identify a specimen; but this should not prove to be too embarrassing, for many of us have already learned that no one person can know everything, and some of us have even reached the age where we are forced to admit it.....Dr. Booth was not only present on time, but he brought three guests: Mrs. Booth, Mrs. Yates and Mrs. Slonaker.....Corporal and Mrs. Priestaf, who haven't favored the luncheon group with their presence as often as we could wish, were among the "luncheoneers" .....Lloyd Ruff was somewhat worried about where he will find a place to keep his small family since the landlord has given them notice to vacate. It is surprising how many landlords are finding their houses desirable for their own occupancy, these days.....Tom Carney had several crystal spheres, one of which showed phantom tables with crystals on the tables.....Mr. Minar had a piece of granite, said to have come from China as ballast in the old sailing vessels. He said that there was some of it on the Corbett property.....Mr. Ruff had some interesting pebbles from near Hanford and White Bluffs, Washington. These showed evidence of having been sculptured by wind-blown sand, and some of them had smooth facets on one or more sides.....Mrs. Slonaker told of a large maple burl table which is inlaid with interesting rock specimens that she has at her home at Smilk Beach, Washington. Many of the specimens are petrified wood, obsidian, and opalized wood.....There were eighteen members and guests present, with room for more.

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EVENING MEETING, FRIDAY, FEBRUARY 12, 1943.

About seventy members and guests of the Society met at the Public Service Auditorium on Friday evening, February 12, to see Kodachrome pictures shown by Chester Vincent, Assistant Bridge Engineer, U. S. Public Roads Administration, and Orrin E. Stanley, Engineering Bureau Chief, City of Portland. These slides covered the continent from Kodiak Island to Washington, D. C. and from the Canadian Rockies to Taxco, Mexico - rather sketchily, to be sure - but enough to give one some idea of what can be seen when tires and gasoline are again available... ....President Schminky said that Dr. David Weber who is now a major in the 18th Engineers, has been sending specimens of rocks from the Yukon country and some of these will be distributed to the members present at the annual meeting on February 26.....Don Onthank of the Mazamas called attention to the annual pub cation of his society which contains an article on the "Terminal Speeds of the Cascade Glaciers" by Mazama Kenneth N. Phillips, Member G.S.O.C., Assoc. Mem. Am. Soc. C. E.

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Now is the time to fill up those War stamp books!

MAX DEMOREST

Many members of the Society will recall the lecture meeting of Aug. 23, 1940, when Dr. Max Demorest, then a research fellow at Yale University, took time from his studies of snow and glacier ice on Mt. Rainier to address us on "The Crystal Structure of Snow and Ice." We were impressed by his driving energy no less than by his keenly analytical mind, a combination which even then was carrying him to a point at the top of the profession in his chosen field of ice structure and glacier flowage. Since that time he has published papers on a new theory of glacier movement which has found wide acceptance among glaciologists.

It is a shock to learn that Dr. Demorest came to an untimely death recently in a motor-sled accident while on duty with the Army Air Corps at a remote outpost in Greenland. He died as he lived, in company with the element which held for him a singular fascination; and, fittingly enough, his body was consigned to a crevasse in the Greenland ice, "to mix forever with the elements." And who shall say that his hand does not now hold the key to those secrets for which he searched long and well?

K.N.P.

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TALL TALES FROM THE RED RIVER COUNTRY, NO. 3

"The deepest and steepest canyon in Curry County lies back-country just south of the Craggies," announced Hathaway Jones, as he leaned forward to plant a sizzling brown jet in the heart of the campfire coals. "The walls on both sides run up well nigh three thousand feet on each side of the leetle creek which empties into Tincup creek a mile or so down-canyon." He settled himself against the stump, and we knew we were in for another of "Hathaway's stories." "Ten-fifteen years ago, I was a-prospecting down that way, and happened to come along the ridge on the north of that particular canyon.....its a knife-edge ridge, and I was a-pickin' my way mighty slow, when I came on one of them big round boulders a-roostin' on the narrow ridge-top, like a fool hen on a log. It was balanced there so I could jiggle it with one hand, even tho' it was over eight feet high and musta weighed nigh on to ten ton. Yep....I did just what you'd a done.....I put my back to it and heaved, and it teetered, and with another heave started to roll over, slow. It sure picked up speed, and before it'd gone a hundred yard 'twas a-tearin' down the canyon-side bitin' out chunks of rock at each jump. By the time it reached the bottom it was hittin' up such a pace it only made one splash in the creek and then bounded right up the other side of the canyon.... almost to the top of the ridge....before it slowed down and started to roll back. Them canyon walls were so steep and so smooth that that blamed boulder just kept a-rollin' back and forth, back and forth, not quite reachin' the top of the ridges on both sides. I watched it for night onto half an hour before I realized 'twas gettin' late an I'd better hit for camp." Hathaway took time out to replenish his quid, and after a moment in which we all thought, "Well, here it comes!", he remarked, with a twinkle in his eye, "Ye know, I was down to that same place late last fall, just after the big fire, and durned if that boulder wasn't a-rollin' yet....only it had worn itself down so tweren't no bigger'n your head."

J.E.A.

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LUNCHEON NOTES FOR FEBRUARY 4, 1943 (continued)

Mr. Arthur Piper reported that he has extra copies of the report on the "Harney Basin" which he may give to all members making a written request. Address: U.S. Geological Survey, Ground Water Division, 520 S. W. Morrison St., Portland, Ore.

Mr. Sandoz says that he has been busy, but has spent little time around Corvallis.

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LUNCHEON NOTES FOR FEBRUARY 18, 1943

Luncheon notes for February 18th will be short because our Editor, who has so faithfully chronicled the happenings at our Thursday noon meetings, pondered too deeply on a geological problem.

On his way to the Winter Garden he found a faceted pebble that led him astray. Had those facets been formed by ice, wind or water? What could the answer be? Head down and brow wrinkled, he turned into Lipman, Wolfe, rode the elevator to the tea room and ate an excellent lunch but failed to find a satisfactory answer as to why the facets on the pebble. After lunch he remembered the G.S.O.C., but since his better half had many times admonished him against eating two luncheons on the same noon hour it was too late to do anything about it, and the News-Letter must suffer.

Dr. Warren D. Smith was present and told us of some of the new courses being presented at the University at the request of the Army and Navy. He described briefly a new theory advanced by Dr. J. L. Rich as to the origin and concentration of the nitrate deposits of Chile. Dr. Smith recommended a book on Economic Geology, by Allen Bateman, which is being used in class room work at the University.

Wallace Lowry and Paul Fitzsimmons, of the State Department of Geology and Mineral Industries, were back with us, - Wallace Lowry having acquired a degree of Doctor of Philosophy from the University of Rochester, and a wife since he was last with us.

The News-Letter, on behalf of the Geological Society extends heartiest congratulations to Mr. Lowry on his final step in his theoretical education and his first step in his actual education.

Another member of the Society we were glad to again have with us was George Taylor of the Ground Water Division of the Geological Survey, who has spent several months in Washington, D. C.

Extracts from a letter Capt. Arthur C. Jones had written to Mrs. Jones were passed around, telling of some interesting conversations the doctor has had with some Axis prisoners under his supervision; they will appear in the News-Le. er at a later date.

We hope to have reports often from our good friend and loyal member - Capt. (Dr.) Arthur Jones.

This was the first luncheon in many months when no specimens were passed around.

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LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S.W. Taylor Street (north side of Taylor St. between S.W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

FRIDAY EVENING MEETINGS

Friday Mar.12 — Colored motion pictures of the Skagit River country. These pictures were taken by the City of Seattle and are said to be very beautiful and interesting. Since we are not privileged to visit this vicinity under present conditions, here is a chance to enjoy the scenery with a minimum of effort and expense.

Friday Mar.26 — "Science and Religion," a lecture by Prof. Herman Clark of Willamette University.

Friday May 28 — ANNUAL BANQUET. Dr. John C. Merriam will be guest speaker. See that this date is clearly marked in your date book for you will not wish to miss this meeting.

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LUNCHEON NOTES FOR MARCH 4, 1943.

President Ruff had a good turnout for the first luncheon meeting of his term of office, there having been nineteen members and three guests present. Leo Simon took Dr. Booth's place as late arrival, but we know that photographers are nearly as scarce and as busy as doctors, so there is nothing that we can do about it.....Mr. Libbey's guests were Dr. Staples of the Horse Heaven mine, and Bob Bassett from the Grants Pass office of the Oregon Dept. of Geology and Mineral Industries. Mrs. Priestaf brought her co-worker Mrs. Owen. The tired and retired editor wishes to take this last opportunity to express his grateful appreciation for the thoughtful and generous cooperation of these two ladies in the work of getting out the past issues of the News-Letter. They have corrected his geology and his spelling, and have offered timely suggestions on the wording of some of his wandering stories, besides which they have been entirely responsible for the neat appearance of the publication.....Mr. Minar showed some of the crushed, chilled steel shot used in grinding down granite slabs to an even surface..... Corp. Priestaf brought several photographs taken on the Gravel Pit Hike. They will be placed in the album by the historian.....Business Manager Baldwin said that the News-Letter can still be bound for fifty cents a volume. But take out the staples and keep them.....Mr. Nixon is just back from an eastern trip, having attended meetings of the Geologists of New York State, the annual meeting of the A.I.M.E., and his "try-monthly" bout with the WPB where he talked about chromite. He has already left for work in North Carolina to investigate iron deposits..... Miss Henley brought daphnes for the ladies.....Dr. Staples spoke briefly about tantalum, but didn't give much hope that we can find it in abundance around our back yards.....Have you paid your 1943 dues?

SALEM GEOLOGICAL SOCIETY - ONE YEAR OLD

by Carl P. Richards

The first annual meeting of the Salem Geological Society was held in Collins Hall, Willamette University, Salem, on Thursday, February 18, when announcement was made of the election of the following officers for the year March 1, 1943-4:

President	Chas. E. Roblin	: Chr. Program Com.	Carl P. Richards
Vice President	Mrs. Ted Gordon	: Chr. Work Night Com.	L. F. Heuperman
Secretary	Mrs. B. L. Bradley	: Director (2 years)	Horace J. Smith
Treasurer	Mrs. W. E. Richardson	: Director (1 year)	Herman Clark
Chr. Trip Com.	Orrin A. Chase	:	

Reports of the committee chairmen, followed by a few other matters, concluded the business part of the meeting.

The rest of the evening was devoted to a varied program, which included short talks by members, highlighting some geological theme, and the showing of two reels of moving pictures. Professor Clark spoke on "South Salem Hills"; L. F. Heuperman took as his topic "The Polders and Dykes of Holland", and Carl P. Richards discussed "Lunar Craters in Relation to Geology." Franklin L. Davis was to have spoken on the subject of "Eola Hills", but was prevented by illness from attending.

The two talking, motion pictures were from the series issued by the Commission on Inter-American Affairs. The first showed views of Guatemala, depicting the rough terrain of that country and the work and customs of its people. This was followed by one entitled "Orchids" and, for nearly twenty minutes, the audience was provided with a feast of color as scene after scene of the many varieties of orchids and other flowers of Brazil appeared on the screen. They were shown both in their native habitat and in the Botanical Gardens of Rio de Janeiro.

An additional feature of the meeting was an exhibit of a variety of geological specimens contributed by several members. This was a source of great interest, both before and after the meeting. Prof. Clark brought out his ultra-violet lamp and the fluorescent properties of some of the minerals were displayed. Interest was sustained throughout the evening and the hour was late when the last few enthusiasts tore themselves away from the exhibit of minerals and fossils.

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One week following the annual meeting the Society held a party in celebration of its first birthday. The spacious, yet homelike, quarters of the Willamette University Campus "Cottage" was the scene of this gathering of some fifty members and friends under the capable chairmanship of Mrs. Ted Gordon, ably assisted by Mrs. W. A. Reeves. All the members of both the retiring and the newly elected executive committees were present. The new president, Mr. Roblin, gave an interesting talk in description of several articles made by Indians, which were displayed around the fireplace.

The group participated in a few games and stunts and then was entertained by a talkie-movie which, most decidedly, was not geological in theme. On the contrary, it was a satire, after the style of the Walt Disney cartoons, of Old Mother Hubbard and Jack and the Beanstalk. With time growing late, and appetites large, the evening concluded with what might be termed a buffet supper, although the quantity, variety and excellence of the fare would classify it as a royal and

sumptuous repast. The centerpiece of the medley of enticing refreshments was a birthday cake, in the middle of which was a candle, in lonely solemnity, symbolizing birthday number one.

Under such happy auspices was inaugurated the second year of the S.G.S.

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The next meeting is scheduled for Thursday, March 18, when Mr. Roblin, the new president of the Society will speak on "Anthropology of the American Indian." Mr. Roblin is a veteran of the Indian Service, having spent thirty-six years in close touch with the Indians and their problems in many parts of this country. His lecture, to which visitors are invited, will bring out many points concerning the Indians which are not generally known, so a most interesting occasion is assured.

This lecture was originally planned for January 21st., but a heavy snowstorm just before that time made it necessary to postpone it.

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LIBRARY NOTES

February 25, 1943

The library has received:-

Geology of the Eminence and Cordareva Quadrangles. By Josiah Bridge. Published by the Missouri Bureau of Geology and Mines. 1930. From Kenneth N. Phillips.

The Eminence-Cardareva Quadrangles are located in the southeastern part of the Ozark Highland, much of which is situated in the Current River Valley, long known as one of the most beautiful sections of the Ozarks. The recent development and expansion of the state highway system have opened this section of the country to the motorist and offer another attractive item for itineraries through eastern states when peace is restored.

Ward's Natural Science Bulletin. Vol. XVI. No. 4. From Ward's Natural Science Establishment. Rochester, New York.

Conchology - A collection of papers, by Merrill Moore, M. D. From Oregon University Medical School Library.

The articles from which quotations were made in Library Notes (see News-Letter, January 25, 1943, Vol. 9, No. 2) are out of print. From the above collection of articles the reader may gain something of the viewpoint of this well known psychologist and why he includes the study and collection of shells as a valuable aid in the treatment of a certain selected group of patients under psychiatric treatment.

M.M.H.

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An illustrated article on the Willamette Meteorite by J. Hugh Pruett, General Extension Division, University of Oregon, will appear in the News-Letter in the near future. The article deals with the legal ownership of meteorites as well as the history of this particular one.

LUNCHEON NOTES FOR FEBRUARY 25, 1943.

Nineteen members gathered in the bright, new room at the Winter Garden restaurant on February 25, for food, fossils, and fun. There were other matters considered, but they were incidental.

Mr. Minar had a piece of granite from the Yeon building, said to have come from the quarries of the Raymond Granite Co., Inc. at Knowles, California, near Fresno. He also had several photographs of the quarries which showed the massiveness of the structure.....Mr. Ruff had samples of Kinnikinic Quartzite from the upper Salmon river, a volcanic bomb from the Craters of the Moon, Idaho, and some Milligan Quartzite from the Badger creek site.....Mr. Vance had a rock containing fossil shells and a leaf mold; rather a rare combination.....Dr. Booth found the piece of meat on his plate without the use of a reading glass..... DUES ARE DUE.....A suggestion was made that members take their summer vacations as lookouts for the Forest Service, combining patriotic duty with pleasure, saving gasoline, and earning a little more than they spend, thus making it possible to lay an additional war bond or two aside for fuller vacations after peace shall have been restored.....The Geological Society of the Oregon Country was mentioned in "Mineral Club History" by Dr. H. C. Dake.....President Schminky read letters that he had written and received relating to the naming of a Liberty ship after Dr. Thomas Condon.

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THE ANNUAL MEETING

The annual meeting was attended by about fifty members and guests, and what looked a few minutes before eight might be a lonesome few, developed into a good-sized group which was well repaid for the effort of coming out by an interesting business meeting and some very fine colored motion pictures of the Steens Mountains and surrounding country. After the program bags of rock samples from the Yukon territory were distributed to the lucky ones whose numbers were drawn from a box by Miss Ellen James. These specimens were sent to the Society by Major Weber who is looking after the dental health of the army engineers on the highway to Alaska... ....Resolutions of thanks were passed for the use of the auditorium, for the cooperation of the press, for the use of the Audubon Society's projector, and for Mr. Simon's kindness in operating the lantern.....President Schminky asked some of the committee members who had been active during the past year to stand so the audience could see what they look like. Some of them discovered that by being unusually deliberate in rising to their feet they were able to elicit at least double the amount of applause that was accorded to those more active people who jumped quickly to their feet. This item is for the use of the new committee members at the next annual meeting.....The reports of the Secretary and the Treasurer were read and other reports were ordered printed in the News-Letter.....President Schminky introduced those officers and directors who were present and turned the meeting over to the new president, Lloyd Ruff.....There was some discussion of a work room where the members can meet to work with their specimens and to discuss geological matters informally. President Ruff thinks that he has such a room in sight.....The officers for the coming year are: President, Lloyd L. Ruff; Vice-President, Mrs. Elizabeth Barr; Secretary, Miss Florence Iverson; Treasurer, Leo Simon; Directors, Earl K. Nixon, Kenneth N. Phillips, Dr. Courtland L. Booth, H. Bruce Schminky, and Raymond L. Baldwin.

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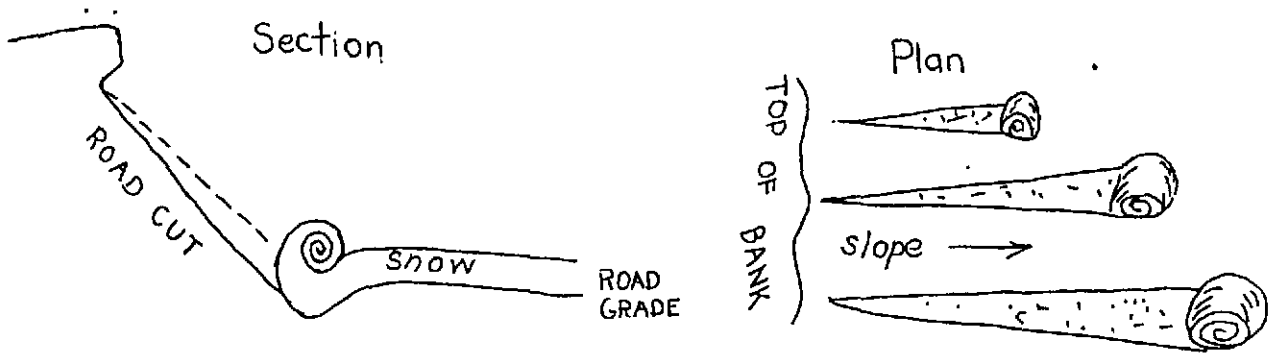
SNOW SNAILS

by John Eliot Allen

The ten-inch fall of extremely heavy, wet snow in early February, 1943, falling on the steep road-cut slopes, resulted, when the snow began to melt, in the development of unusual and spectacular "snow-slip" phenomena whose shapes resembled closely the shells of giant cephalopods.

Road-cuts on the upper Yankton-Spitzbergen road, five or six miles southwest of St. Helens, Oregon, average ten to twenty feet in height. Those cuts facing north were in the lee of the prevailing winds, and snow piled up on the 35° to 40° slopes, being ten to fifteen inches thick at the base and thinning out to nothing at the overhang of the top of the bank. During the preliminary stages of the melting of this water-laden coarsely crystalline snow, particles of soil near the top of the bank broke loose, and as they started to roll, immediately began to pick up a casing of snow. The snow was so "adhesive" that the initial "snowball", an inch or less wide as it started its downward course, picked up all the snow in a band which became from 1 to 2 feet wide before it reached the bottom of the bank. The snow rolled up into the "snail" started at the top (center of the ball) with a width and thickness of one inch or less, and at the bottom (on the outermost layer of the snail) if the bank was ten feet high, it was a foot wide and up to four inches thick. The diameter for such a "snail" was 10 or 12 inches. If the bank was twenty feet high, the "snails" often had a diameter of two or even, in one or two cases, three feet, and the outer layer was 10 or 12 inches thick. The bare patch in the road-cut above each "snail" resembled an acute isosceles triangle, 10 to 20 feet high, with a base, at the "snail", of from one to nearly three feet.



The number of "snow snails" in each cut varied from one or two to eight or ten, and there were at least fifty present along a stretch of four or five miles.

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GROUND-WATER RESOURCES OF THE WILLAMETTE VALLEY, OREGON

By Arthur M. Piper, Past President, Geological Society of the Oregon Country.

This is Geological Survey Water-Supply Paper 890. It is a book of 194 pages, 10 plates, several maps in the text, and two large maps in a pocket inside the back cover, which is made of the tough, red paper, the standard binding for the

technical papers issued by the Department of the Interior. It was prepared in cooperation with the Oregon Agricultural Experiment Station, Department of Soils.

The reviewer did not have to consult his dictionary more than twice to any one line in the book. Otherwise the review must have been held over to the next issue of the News-Letter. As things are, the review must be brief, and will possibly omit some important items.

A two-page bibliography lists thirty books dealing with the geology of the area under consideration. The aim of the study was "to determine the feasibility of recovering water from wells for irrigation on the extensive fertile lowland and in this way supplementing the natural supply of soil moisture which is deficient during the greater part of the growing season in most years. Such assurance of moisture for fully maturing the growing crops would aid materially in stabilizing agriculture in the area."

Tables and diagrams showing the rainfall and snowfall and the maximum and minimum temperatures are included. There are many pages of well records giving information as to depths, strata penetrated, character of the water and capacity of the wells. The large maps give much geological data and show the locations of the wells referred to in the text and the tables.

Mr. Piper has done a creditable work for the residents of the Willamette valley who may be interested in the ground water for any purpose. A conscientious reading of the text, with a good dictionary at hand, will increase the geological vocabulary of 99.44% of the readers.

O.E.S.

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EXTRACTS FROM LETTER FROM ARTHUR JONES
February 18, 1943

I had another talk with the young German prisoner when I stopped at the guard house to sign for my two prisoners there. He told me that he is no Nazi, and agreed with me that Hitler has done the German people more harm than any other man in the history of the world. He admitted that the Germans have been told only what Hitler and Goebbels have wanted them to hear, and agreed that that was not the way to get at the truth. In fact, he seems like any other young fellow, and is taking the news of the defeats of his people quite philosophically. I found him trying to read the newest "Life", and having a hard time with the pronunciation of the words. I can only talk with him for a short time as I don't want to be thought unduly curious nor too friendly with the kid, but I find him most interesting and the guards like to have me come in and tell them something of what he says. They already know that he is no Nazi, and he says that most of the conscripted German soldiers have no love for the Nazi party.

The guard also wanted me to look at a new Jap prisoner there, a commander who had been the only one of his command who was captured. He was very worried, having been foiled in trying to cut his own throat a couple of days ago. He spoke very broken English, and said, "I am verry worried. I have failed. I have verry great responsibirrity, have not done." I told him that he couldn't do anything more than he had done and that he should just forget that part of it, and be glad he was in the hands of the Americans where he would have good treatment, and even kindness. I suggested to him that some day all would be different and that he might be able to do great things for his people. How much of that got across I have no idea, but I will have reason to see him again, as he is next door to the little German prisoner, who, by the way, was most interested in the whole proceeding.

GEOLOGICAL NEWS LETTER

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

PORTLAND CHAPTER ANNOUNCEMENTS

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S.W. 6th Ave., at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S.W. Taylor Street (north side of Taylor St. between S.W. 4th and S.W. 5th Aves.) Luncheon sixty cents.

FRIDAY EVENING MEETINGS

Friday Mar.26 — Subject: "Science and Religion"
Speaker: Professor Herman Clark, of Willamette University. Professor Clark is a member and a past president of the Salem Geological Society. His treatment of the above subject carried a wide appeal to the membership of the Salem group and the lecture is recommended as one you won't want to miss.

Friday May 28 — ANNUAL BANQUET. The featured speaker is Dr. John C. Merriam of the California Institute of Technology who will speak on "The Human Meaning of Earth History as Illustrated in Features of Oregon."

The society is indeed fortunate in having the opportunity to hear this eminent authority who has long been associated with the Tertiary and Quaternary geologic history of Oregon.

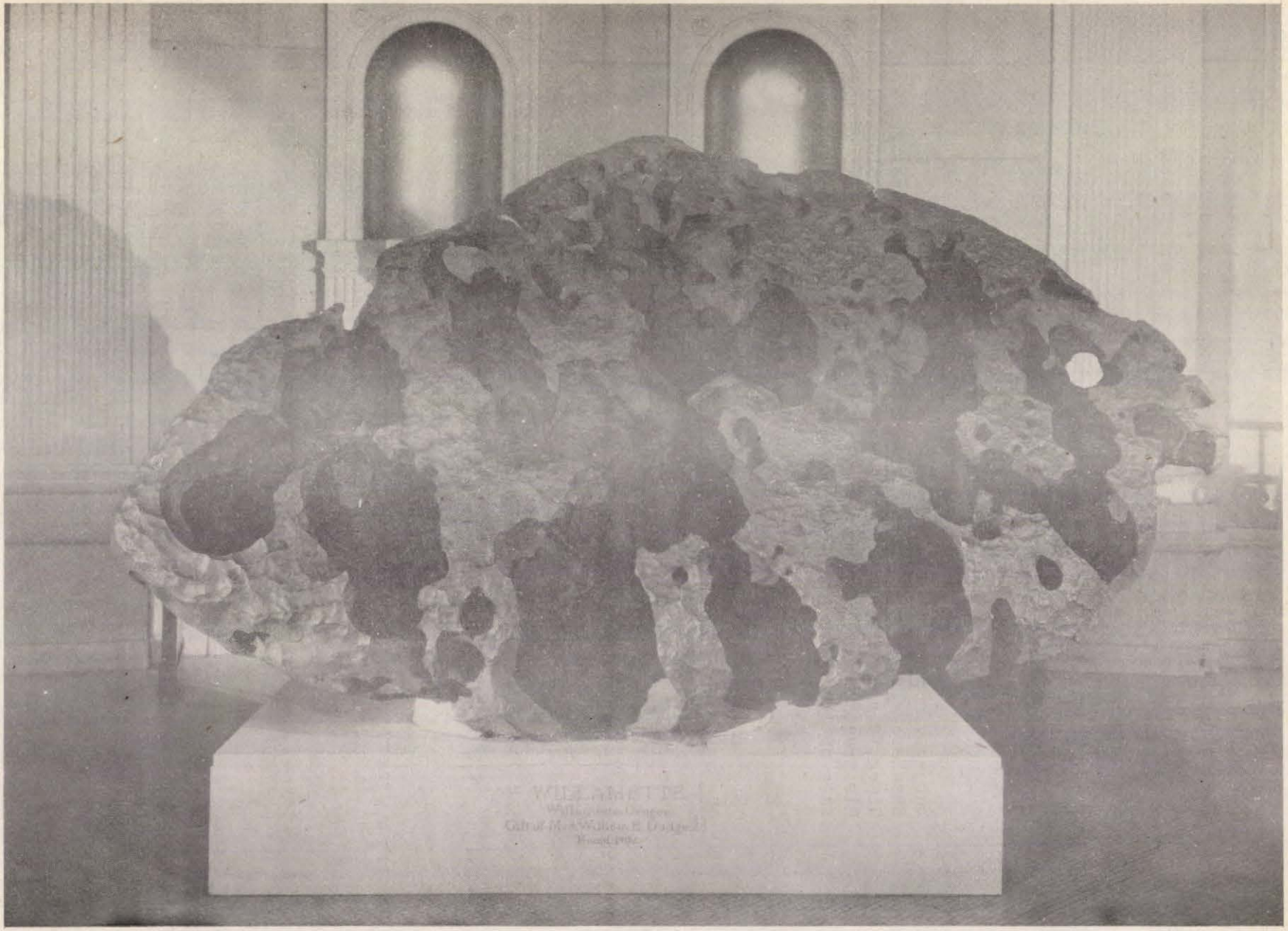
REMEMBER THE DATE - MAY 28 - TELL YOUR FRIENDS

FIELD TRIP - SPECIAL

Sunday Mar.28 — A short field trip is planned for March 28th to the Oswego Iron Mine and Smelter site. Leader: John Eliot Allen. Details and meeting place to be announced later.

LUNCHEON NOTES, MARCH 18, 1943

Sixteen members of the Society met at the Winter Garden on March 18 for luncheon. Among those whose faces are seen by the group too seldom were Mrs. L. W. Bartow who came with her 1st Lieutenant husband, Mrs. Stanley and Dr. J. C. Stevens.....President Ruff demonstrated the fact that one can find geological specimens in his own back yard, by producing a faceted pebble that he had unearthed while spading for his garden.....Mr. Ruff also made the suggestion that a map be prepared showing where the members of the Society live so that arrangements for sharing rides on meeting nights may be made.....John Allen had two small samples for our inspection. One was beryl and the other beryllium concentrates, which had a villainous odor.....Mr. Minar brought a piece of granite like a stone that is being sent by the State of Oregon to a man in Florida who is building a "monument of the states" containing samples of stone from each of the states of the Union.....Leo Simon, our new treasurer, came late and was so busy writing receipts for 1943 dues that he was comparatively quiet.....First Lieut. Bartow is under orders to leave for a Texas training camp within a few days.



WILLAMETTE METEORITE. Photo by American Museum of Natural History, New York

THE WILLAMETTE METEORITE

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

"Meteorites, though not imbedded in the earth, are real estate, and consequently belong to the owner of the land on which they are found.....Seeing there is no error in the record, the judgment of the circuit court will be affirmed."

Speaking was Chief Justice Wolverton of the supreme court of Oregon in the case of the Oregon Iron and Steel Company vs. Ellis Hughes. The date, July 17, 1905.

Three years earlier on a wooded hillside (property of the plaintiff) near Willamette, Oregon, the defendant had discovered a curious mass of metal - almost 16 tons of it. Later he moved it onto his own land. When the real nature of this find became known, the plaintiff brought suit to recover it and won a decision in the lower court. The defendant appealed to the higher court but was there finally forced to abandon his claims to the huge chunk of nickel-iron which later became famous as the Willamette meteorite, the largest object of its kind ever found throughout the vast expanse of the United States and Canada.

To the day of his sudden death, December 3, 1942, at the age of 83, Mr. Hughes considered this decision an inglorious and unjust defeat. This sturdy, intelligent Welsh woodsman who lived his last 50 years within less than a mile from the spot of the Willamette's discovery, likely never realized that his lasting honor in scientific circles far overbalanced the loss of the mere material possession of the meteorite.

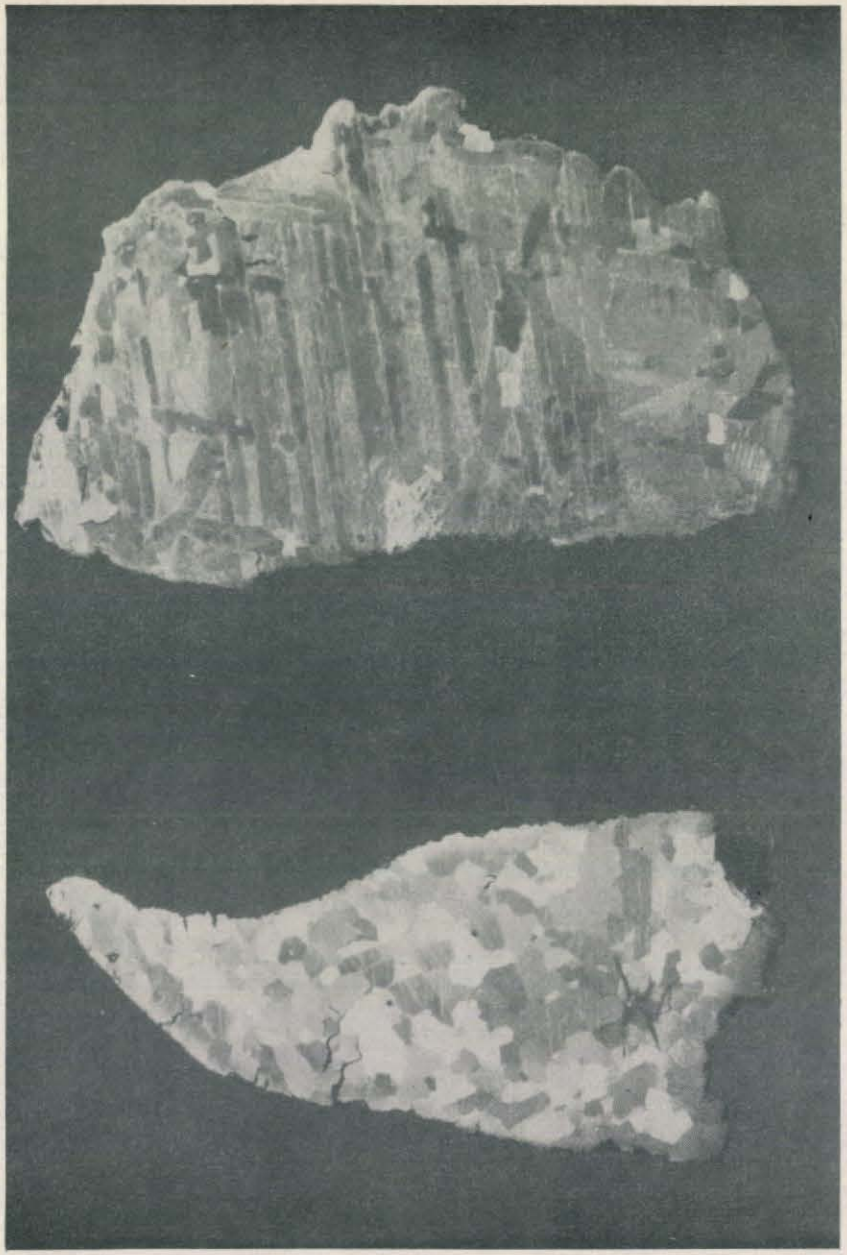
In July 1938, a party from the University of Oregon visited the scene of discovery, interviewed Mr. Hughes and others familiar with the early history of the event, and obtained many valuable photographs. At that time Mr. Hughes seemed in good health and very graciously related to Miss Betty Jane Thompson, the journalist of the visiting group, many details not found in earlier published accounts.

"I was coming home," said Mr. Hughes, "from where I had been cutting wood for the Willamette school. I noticed this big rock for the first time but didn't think anything of it. The next day I saw a very rusty broken saw near it. I sat down on the rock which was very flat and about 18 inches above ground. Bill Dale came along.

"Then I picked up a white stone and started to hammer on the rock. It rang like a bell. Dale said he bet it was a meteor. It would probably be there yet, but my wife - you know how women are - had ideas. She was afraid somebody would go up and get it the next day."

After months of urging by his wife, Mr. Hughes went to work on a crude truck with which to move the huge mass to a spot near his house three-quarters of a mile away. He trusted no one to help him aside from his wife, his 15-year old boy, and his horse. He made the truck of logs and mounted it on ungainly wheels sawn from a tree trunk. Long and tiring work with levers and blocking was required to get the object elevated above the ground level. Finally, when it was sufficiently

See Ore-Bin - April 1952



Two Pieces of the Willamette Meteorite in the collection of Mr.& Mrs.J.Hugh Pruett, showing the two types of etching.

Full size model of Willamette Meteorite which stands on the porch of McClure Hall,U.of O.

ELLIS HUGHES
as he appeared in July 1938.
(Photo by David Hunter)

raised, the meteorite flopped over and tumbled onto the truck flat side down. Mr. Hughes thrilled at the fond remembrance. "It couldn't have been done better if you'd laid it there with your own hands."

Mr. Hughes next set up a "Spanish windlass" which he securely anchored with a chain. One end of a 100-foot cable of braided wire connected with the truck; the other wound on the barrel of the windlass as his horse walked in a circle around it. Thus a relatively small force exerted by the horse resulted in an immense pull on the cable.

Then began the long haul. The ground was soft and board tracks had to be laid and relaid. The windlass had to be moved and re-anchored each time the 100-foot cable was wound on it. So great were the difficulties that some days the truck was scarcely moved more than its own length.

During the process of moving, a neighbor chanced by. The next day a newspaper reporter from the Portland Oregonian appeared but found the meteorite covered with burlap. He insisted on a view of the object but the covering was not removed. Mr. Hughes said with a twinkle in his eye, "When he asked why I wouldn't, I explained the sun might warp it."

After three months of hard work in the forest, during which time few outside the Hughes family knew what was taking place, the meteorite reached its desired destination. When it was at last safely housed in a wooden building on the Hughes' property, it was put on display for an admission fee of 25 cents. People from far and near flocked to see the curiosity.

As luck would have it, among those who paid admission was a lawyer from the company on whose property the meteorite was found. "He offered me $50 for the whole piece," said Mr. Hughes, "and said he wanted to show it at the Buffalo World's Fair. I wouldn't listen to him."

Not long after the attorney's visit, suit was filed by the land owners for possession of the meteorite. Public sympathy throughout the trial was generally with Mr. Hughes. The defense advanced the claim that the mass had originally been the property of the Clackamas Indians, had finally been abandoned by them at the spot where found in 1902, and therefore was not necessarily part of the land. Two old Indians, one of the Wasco tribe and the other a Klickatat, appeared in court in substantiation of this claim. Their testimony ran as follows:

The meteorite, Tomanowos, had originally fallen from the moon and was thought to possess magical powers. It was held in high regard by the Indians. Rain collecting in its hollows was considered "holy water," and into this the Clackamas tribe dipped their arrows before going to war. Their young warriors were initiated by being compelled on the darkest of nights to climb the hill and visit the lonely spot where the celestial visitor reposed.

The account of a somewhat similar litigation was well aired in court by the plaintiff. This was the case of the Wennebago meteorite in Iowa. The tenant on the property saw the meteorite fall - it was comparatively small - and bury itself three feet deep. The next day he dug it up and assumed ownership. Later he sold it. The land owner brought suit and after several years the court granted possession on the ground that such objects belong to the"owner of the soil upon which they fall."

The defense, however, held there was a marked distinction between the Iowa and Oregon cases. In the former, both sides agreed on the place of fall; in the latter, no one knew where it originally landed. The Indians might have moved the meteorite from some other spot in order to give it a place of prominence on the hill. In prehistoric times when water covered the Pacific slope the metallic mass, together with granite boulders lying near it, might have floated from a distant region on an ice-floe. In the language of geologists, it would thus be an "erratic", similar to many large granite masses now found in fields and other places where they do not seem to belong.

Finally the circuit court granted possession to the Oregon Iron and Steel Company. The latter soon hauled the contested object from the Hughes property but got no farther down the road than the Johnson house when Mr. Hughes' appeal to the supreme court stopped further movement. Mr. Johnson, father of Harold Johnson who still resides in the same locality, was then appointed to guard the meteorite against removal or theft of any parts of it.

Harold Johnson tells that during the many months the mass remained there, the family's sleep was often interrupted by souvenir hunters.

"Today with acetylene torches it might be an easy matter to get a specimen without much disturbance, but in those days their only tools were saws and hammers, and the meteorite would ring like a bell when struck. Often in the middle of the night the 'bell' would clang. Then out of bed jumped father, grabbed his gun and, muttering to himself, rushed outside to start the intruder on his way. I still have a small chunk which father took from a fellow who almost got away with it."

Before the meteorite was placed under guard, small pieces were cut off by various persons. At the request of the National Museum at Washington, Dr. A. W. Miller, Oregon geologist, inspected the huge mass. In an article in the Portland Oregonian of June 2, 1912, he described his study of the celestial visitor and mentioned that he removed several pieces. Dr. Henry A. Ward, Rochester scientist, made a trip across the continent to study the object. He also obtained several specimens.

At last came the 3000-word decision of the Oregon supreme court in which the lower court was upheld. After this, the Willamette was taken by water to Portland. From the river it was hauled by 12 powerful horses to the Lewis and Clark Exposition grounds where it was exhibited during the few weeks remaining of this Fair.

Scientifically minded Oregonians hoped that this interesting meteorite might remain in the state. But a very tempting bid came from Mrs. William Dodge II of New York to whom it was sold on February 15, 1906. Mrs. Dodge presented it to the American Museum of Natural History of New York. It was delivered to this museum April 14, 1906, and placed on exhibition June 7 of the same year. One condition prescribed by the donor was that the main mass should be kept intact in one piece. This weighs 31,107 pounds according to the museum catalog. In addition the museum has four other pieces which were evidently removed before Mrs. Dodge's purchase.

In June 1938, the New York museum, through the kindness of Dr. Clyde Fisher, sent to the University of Oregon a beautiful etched slab of the Willamette on an open exchange "in order that your school may have a part of the great meteorite found in your state." In addition to this, small specimens are owned by various Oregon residents related to the Hughes and Johnson families and through purchase from them.

Harold Johnson reports that several residents around Willamette, Oregon, who think they have pieces of the meteorite are badly mistaken. The children of the families most closely connected with the historic object were often asked for specimens by their schoolmates. Finding themselves receiving considerable attention, these children obtained pieces of slag from a smelter and passed them out to the unsuspecting who have since cherished them as genuine.

It is generally known that when etched with nitric acid the polished surfaces of pieces from various parts of the Willamette show two distinct types of crystalline figures. The meteorite is classed as a medium octahedrite. Some parts of it etch in the long bands characteristic of this class; other parts present a sort of crazy quilt pattern. Some assume that this is due to the way the crystals have been cut: crosswise or lengthwise with the grain. Some real authorities do not believe this is the explanation at all. Dr. H. H. Nininger believes the meteorite has crystallized differently in different places. John D. Buddhue offers this:

"If the direction of cutting were the explanation, I should expect the same structure in other meteorites. The only thing I know of that resembles it at all is the Murn Peowie meteorite from South Australia."

The composition of the Willamette is approximately 92 per cent iron and eight per cent nickel. There is some disagreement among scientists as to the origin of some of the holes in it, especially those on the rounded side. The cause of the immense cups on the flat side - uppermost when found - are pretty well agreed upon, however. It is thought that mineral matter softer than the main mass originally filled them but was gradually weathered out during the centuries it has likely lain on the ground.

When the University of Oregon party visited the Willamette vicinity in 1938, great courtesy was shown the members by the owner of the discovery site, H. S. Crocker, who was operating a fox farm there. The original depression from which the meteorite was taken is still quite evident. From this hole several pieces of the original underlying rust were found still intact. This contains abundant nickel.

Although our University has only a small slab of the real meteorite, it does, however, have on display on the campus a "life-size" plaster model of the Willamette. This has such a surface finish and color that many people who do not read the attached description carefully go away believing they have seen the actual celestial visitor.

* * * * * * * * * * * * * *

Note. - In the photograph showing two pieces of the Willamette Meteorite in the collection of Mr. and Mrs. J. Hugh Pruett, cut from different parts of the meteorite, the upper one was bought from Harold Johnson (mentioned in the article) and the lower one was bought from Mrs. C. E. Tucker, daughter of Ellis Hughes.

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WEDDING BELLS AND MUSKETEERS

We note the marriage of a second member of the musketeer trio on March 13th when Miss Helen Iverson, the outgoing Sec.-Treas., became the bride of Mr. Darrell Currier. Best wishes from the G.S.O.C. - don't forget our meetings and field trips.

FRIDAY EVENING MEETING, MARCH 12, 1943

A very select crowd assembled at the Public Auditorium on Friday evening, March 13 to make the trip to Seattle's Skagit river project via a long reel of colored motion pictures taken by the city of Seattle and shown by courtesy of the U. S. Forest Service. Kenneth Phillips, who had been on a similar trip in person, explained the pictures, ably assisted by Leo Simon when it came to the botanical specimens. J. Martin Weber operated the projector.

One advantage of making the trip in this manner, other than the saving of time and gasoline, was the fact that the photographers climbed into the high mountains surrounding the project and showed us what kind of country stores the winters' snows and releases them at the right time in the form of water. Bears, deer and mountain goats were seen at much closer range than would have been possible or practicable for ordinary tourists.

In opening the meeting, President Ruff asked that in the future the members would leave their homes a little sooner and be in the auditorium before eight o'clock so that the meetings may start on time. This is undoubtedly an idea that he has brought over from the Society of American Military Engineers which makes it a practice to open as the clock strikes the hour. It has the advantage of allowing people to get home just that much sooner, and most of us need all the sleep we can get.

The president than announced the appointment of the following committee chairmen, subject to the approval of the executive board. Program, A. D. Vance; Field Trip, Earl W. Minar; Membership, Leo Simon; Research, John Eliot Allen; Service, Kenneth N. Phillips; Exhibits, A. W. Hancock; Historian, Orrin E. Stanley; Librarian, Miss Margaret Hughes; Museum, Dr. J. C. Stevens; Public Relations, Clarence Phillips; and News-Letter, Fred W. Tisdel.

Business Manager Raymond L. Baldwin asked all members wishing their last volume of the NEWS-LETTER bound, to take the index out of the March 10th issue, and the staples out of all numbers of the magazine and assemble them in proper order before bringing them to him for passing on to the binder who will do you a good job for fifty cents a volume. This should be done as soon as you can get around to it.

Kenneth Phillips took orders for five books which are of interest to geologists, and which he can procure for you at a slight discount from the publishers' prices. Owing to the stress of the times, he requests that a deposit on the cost of the book be made at the time of ordering.

Mr. and Mrs. Carl Richards of Salem were present and were welcomed by their many friends of the Society. Carl called attention to the meeting of the Salem Geological Society on March 18th when a lecture on "Anthropology of the American Indian" will be given by their society's president.

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NEW MEMBERS

The society welcomes to its membership Mr. and Mrs. Stuart N. Twiss. Mr. Twiss is geologist for the Soil Conservation Service and has recently transferred here from Spokane, Washington.

GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 7 PORTLAND, OREGON April 10, 1943

GEOLOGICAL NEWS-LETTER
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STATE DEP'T OF GEOLOGY &
MINERAL INDUSTRIES.

THE GEOLOGICAL NEWS-LETTER
Official publication of the
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Executive Board of the Society

Lloyd L. Ruff	President	3105 N. E. 45th Ave.
Mrs. Elizabeth Barr	Vice-president	5417 S. E. 99th Ave.
Miss Florence Iverson	Secretary	5125 N. E. Couch St.
Leo Simon	Treasurer	711 S. W. Ankeny St.

Board of Directors

Earl K. Nixon (1944) Dr. Courtland L. Booth (1945) H. Bruce Schminky (1945)
Kenneth N. Phillips (1944) Raymond L. Baldwin (1946)

Staff of Geological News-Letter

Fred W. Tisdel, Jr.	Editor	U.S. Engineers, 628 Pittock Block
Raymond L. Baldwin	Business Manager	4804 S. W. Laurelwood Dr.

Associate Editors

Edwin T. Hodge	Ray C. Treasher	John Eliot Allen
H. B. Schminky	O. E. Stanley	J. C. Stevens

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

PORTLAND CHAPTER ANNOUNCEMENTS

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S. W. 6th Ave., at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

FRIDAY EVENING MEETINGS

Friday April 9 — Subject: "War Minerals in Oregon."

Speaker: Mr. F. W. Libbey, mining engineer of the Oregon State Dept. of Geology and Mineral Industries. Oregon minerals which are at present important in our war effort, or which have great potential importance in the near future, will be discussed by Mr. Libbey, who is probably the best qualified man in the state to summarize recent mineral developments.

Friday April 23 — The first of two illustrated lectures on the Snake River country, to be given by members of the U. S. Engineer Dept.

Friday May 28 — BE SURE TO REMEMBER THIS DATE - IT IS THE DAY OF THE ANNUAL BANQUET! The speaker of the evening will be Dr. John C. Merriam, who will talk on "The Human Meaning of Earth History as Illustrated in Features of Oregon."

It will be well worth while to see and hear this eminent scientist, who has as wide a knowledge of Oregon geology as any man. So let's all be there - MAY 28.

****

Dr. John C. Merriam, one of the foremost paleontologists in the country, has long been interested in Oregon geology. He first studied fossils in eastern Oregon in 1895, and since that time he has made 44 contributions to the geologic literature of Oregon - this is a number exceeded only by J. S. Diller. Dr. Merriam was president of the Carnegie Institution from 1920 to 1939 (emeritus since then), is a Fellow of the American Association for the Advancement of Science (president of the Pacific Division in 1919 - 1920), was president of the Geological Society of America in 1917, and was president of the American Paleontological Society in 1917. He is a member of more than a dozen honorary and scientific societies, both domestic and foreign. He obtained the Doctor's degree at the Univ. of Munich, and holds honorary degrees from thirteen American universities, including both the Univ. of Oregon and Oregon State College. He joined the faculty of the Univ. of California in 1894, becoming faculty dean in 1920. He has been professor emeritus for the last few years.

LUNCHEON NOTES: THURSDAY, MARCH 11, 1943

If Dr. Booth, Clarence Phillips, Leo Simon and Dr. J. C. Stevens, to mention only four of the many former G.S.O.C. luncheon addicts, had been present there would have been a score of members and guests at the Winter Garden restaurant for this meeting. But Leo Simon had to photograph a scene of an automobile accident and Dr. Stevens has forsworn luncheons for the present. We have wondered for a long time how Dr. Booth could find time to meet with us as often as he has, so perhaps it is not strange that he should miss an occasional luncheon; and we all know that Clarence Phillips is also a very busy man.....Guests were Stuart Twiss, Geologist with the U. S. Soil Conservation Service who will doubtless soon become a member of the Society (he is a member now - Ed.), and Andrei Isotoff, instructor in Geology and Mineralogy at the University of Oregon, who was a guest of Mr. Libbey .....Miss Hughes' high spirits had nothing at all to do with the recent ration allowances of two and a half quarts, but were due to the large number of publications of the U. S. Geological Survey (a list of these will appear later) that had just been received for the library. She also had several late numbers of Dr. Beck's "Fossils of Western Woods."....Miss Henley brought a section of a small nodule which included a crystal. This specimen belongs to Donald O'Connell. She also brought two copies of "Arizona Highways," a well-written and beautifully illustrated magazine which should keep alive an interest in Arizona scenery until we can get gasoline enough to make a trip that far from home. She also reported the death of two rats at her home - one from poison and the other, she says, from fright. We are not yet in position to announce that she and her sister are ready to clear your home of rats by either method.....President Ruff brought a section of what is believed to be a petrified tusk of an elephant. It was found in Pleistocene gravels near Mountain Home, Idaho. He also had some photographs of geophysical explorations in the Hanford project near Pasco. He read a letter from Mr. Holdredge who is doing geological work in South America, and getting some pictures that he hopes to show to the Society when he gets back home.....A letter from Dr. and Mrs. Francis T. Jones gives their new address and the information that they now have room to put some rocks.....Mr. Minar's "specimen of the day" was a heavy, black nodule showing lines similar to those of an agate. Mr. Libbey and Mr. Isotoff believe that it is manganese ore.

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LIBBEY'S LECTURE BEFORE THE PROFESSIONAL ENGINEERS

F. W. Libbey, Member of the G.S.O.C., spoke before a record-breaking attendance of more than seventy members and guests of the Professional Engineers of Oregon at the Heathman Hotel, Wednesday noon, March 17, 1943, on the subject: "Important War Mineral Deposits of Oregon." He showed samples of nearly twenty kinds of ore and metal produced in Oregon, having been helped by other members of the staff of the Department of Geology and Mineral Industries of Oregon in the matter of transporting the samples to and from the hotel.

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Mountain Guide: "Be careful not to fall here. It's dangerous. But, if you do fall, remember to look to the left, you get a wonderful view."

REPORT OF THE PRESIDENT FOR 1942-43

Your society has now completed its eighth year. During this time our country was adjusting itself to its first year as a fighting nation. We did not know at any time what future plans we made would have to be cancelled for the duration. Yet your officers felt that the society could be of service to everyone by continuing to provide a means of relaxation for the members through lectures and field trips as in the past. I believe that, through the efforts of the chairmen of the various committees, this year has been as successful and profitable to the members as any of the past years.

War work prevented many of our members from attending any of the lectures or field trips, and for these the Geological News-Letter was their only contact with the society. It was fortunate that we could continue to publish this little bulletin twice a month. It was also fortunate that we had Orrin E. Stanley to edit it and keep it a readable and interesting paper. Only those in close contact with the inside workings of the society know the task he faced to secure articles for publication at a time when all likely contributors were already doing much extra work.

These same conditions made the work of the Program Committee most difficult. Programs could not be arranged far in advance because most of the speakers were never sure of their free time. Yet Geary Kimbrell succeeded in giving us variety and quality in our meetings. Many of the programs fitted in with the events of the day's news.

Field trips have always been the big highlights in the activities of the society. But this year A. W. Hancock was faced with something greater than the past Trip Committee chairmen ever encountered in the big task of securing trip leaders - "rationing". Trips were curtailed to one a month. Several hiking trips proved that we can still enjoy our local area even if we have to give up driving entirely.

The Thursday luncheons have become an important feature in our activities. We hated to lose our spot at Treasure Island, but after getting acclimated to the Winter Garden we were as content as ever. It is to be hoped that rationing of foods will not make it necessary to give up this gathering.

Our annual picnic was one to remember. It is a good illustration of the manner in which all members cooperate for the good of the society, for when rain threatened to spoil the fun, the Arthur Jones family took us into the shelter of their spacious home.

Our library has been growing so rapidly under the care of our librarian, Miss Margaret Hughes, that more space will soon be needed.

All the other standing committees have given the society their best efforts. Many things could not be accomplished due to conditions of the times. Our hope for a work room was not realized. Neither do we have a museum. Perhaps there are many things that we could have done, but overlooked. For that we are sorry. For what has been accomplished during the past year, I can only thank the officers, the committee chairmen and the members of the society, for it was done through the cooperation of all. May the incoming officers receive as good support is my last request.

H. Bruce Schminky

REPORT OF RESEARCH COMMITTEE, 1942-43

The research committee reports slow but continual progress on each of the three phases of its program. Additional localities have been added to the state-wide fossil locality list which is indexed and filed by counties in loose-leaf ring binders. Some additions have been made to the bibliography and typed reference lists have been prepared to facilitate the checking of publications. Considerable data is available on Portland building stones some of which was disclosed on the field trip led by Mr. Minar. Besides Mr. Minar the research committee personnel included J. E. Allen, Mr. and Mrs. Barr, A. W. Hancock, R. C. Treasher and A. D. Vance.

L. L. Ruff

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REPORT OF SERVICE COMMITTEE, 1942-43

The function of the Service Committee is to obtain maps, books, and other publications for the Society and its members. On certain types of publications discounts are obtained. Any saving thus effected is passed on to the member placing the order. No charge is made for the service, and no profit is made by the Society on personal orders. During the year ending February 28, 1943, the committee incurred no expense other than a small amount for postage and money orders, for which no reimbursement was claimed.

Books purchased in 1942-43	19
List price of above books	$43.25
Cost to Society members	$37.05
Saving effected	$ 6.20
Number of members participating	10
Greatest saving to any member	$ 3.00

The chairman has no suggestion to improve the service except to suggest a more general use by the Society members. During the period when gasoline is rationed and field trips are almost, if not quite, impracticable, a part of the gasoline money may well be diverted to building up a reference library. A book of scientific interest should be a welcome gift for any member. Do your Christmas shopping early!

Kenneth N. Phillips

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APPOINTMENT OF COMMITTEES

The Executive Committee has confirmed the appointment of the following personnel as chairmen of the various standing committees for the year 1943-44.

Audit	J. Martin Weber
Exhibits	A. W. Hancock
Field Trips	Earl W. Minar
Geological News-Letter	
Business Manager	Raymond L. Baldwin
Editor (First Half-Year)	Fred W. Tisdel, Jr.
Historian	Orrin E. Stanley
Librarian	Miss Margaret Hughes
Membership	Leo Simon
Museum	Dr. J. C. Stevens
Programs	A. D. Vance
Publicity	H. B. Schminky
Public Relations	Clarence D. Phillips
Research	John Eliot Allen
Service	Kenneth N. Phillips
Social	Miss Grace Poppleton

Each chairman is authorized to select at any time as many additional members of the society as may be necessary to carry on the functions of that committee and is requested to submit a report of the committee's activities at the 1944 annual meeting.

A special committee consisting of Dr. C. L. Booth, A. W. Hancock, E. W. Minar, H. B. Schminky, and A. D. Vance has been appointed to organize a work night program.

Officers of the society will offer suggestions or give assistance in any way possible when requested, and will expect informal interim reports from any or all committees. Other society members are invited to submit constructive ideas or criticism which may be of assistance to the committees in planning the society activities for the coming year.

Lloyd L. Ruff, President.
March 27, 1943.

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FIELD TRIP TO OSWEGO IRON MINE AND SMELTER, MARCH 28

A party of eight hardy souls met in a driving rain at 9 o'clock, Sunday morning and, led by John Allen, drove to the site of the old Prosser Iron Mine, located two miles west of the town of Oswego. Equipped with rubber boots and slickers, the party examined a three-foot outcrop of the limonite iron ore, exposed below the old water tower, just below the crest of the golf course hill. This outcrop can be traced by means of an ancient roadway for nearly three-fourths of a mile eastward around the hill. The outcrop rises gradually to the east. The iron bed was mined by at least six inclined tunnels which commenced on the outcrop and went down for over a thousand feet along the dip. The ore was taken out by a railroad and carried down to the smelters below the dam on the Oswego River bank.

The wide steep-walled canyon now occupied by Oswego Lake has characteristics which indicate that it must have been at one time a great water course. The steep walls, the bedrock, scabland channels, and its half to three-quarter mile width suggest that great floods coursed through this canyon during the Pleistocene. It was suggested that since it was one of only two possible gateways from the Portland area to the Willamette Basin, the Pleistocene flood waters which deposited the great Portland gravel pits caused a back-flood up the channel into the Tualatin drainage and then south across the Rock Creek scabland into the Willamette Basin.

Still earlier in the history of this channel-way, it was suggested that at one time the Willamette drainage, having been dammed by the Mt. Pleasant lavas at Oregon City, was diverted through it. Later the Sylvanus lavas dammed the Oswego channel in turn, and rediverted the flow, so that it became superposed across the Oregon City dam again.

After discussion of these physiographic hypotheses (hindered by the fog and downpour) the party proceeded to the smelter site and was lucky in finding a sample of iron-rich slag of unusual and spectacular nature containing large platy crystals and globules of metallic iron in a slag matrix.

Having soaked up in three hours time enough knowledge and water to last them the rest of the day, the field trip adjourned at noon.

J.E.A.

****

LUNCHEON NOTES FOR MARCH 25, 1943

After our old friends Dr. Booth and Clarence Phillips had arrived there were twenty-two members and one guest assembled for luncheon at the Winter Garden restaurant on March 25.

Miss Hughes had her niece as her guest. The younger Miss Hughes is librarian at the University of Oregon Medical School and has helped her aunt in the work of cataloguing the library of the Society.....Mrs. Arthur C. Jones read extracts from some of the doctor's letters and told about an unfortunate young man who arrived at the hospital for an amputation operation just in time to allow the photographers to complete a film that was being made to show other hospital staffs the methods in use at Letterman General Hospital.....Clarence Phillips had but recently returned from Washington, D. C. While there he had met our fellow member, Earl K. Nixon, and had visited the Pentagon Building which covers 35 acres and has so many corridors that it is said to be quite a feat to find the exits without a guide.....Dr. Booth recommended wider publicity for the Society. He had found a man who had never heard of us and had given a collection of stones to Portland University.....Miss Henley said that no mention should be made of her generous gifts of scarlet runner beans to all who would agree to plant them, and thus add to the beauty of our city this summer.

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FRIDAY EVENING MEETING, MARCH 26, 1943

President Ruff called the meeting to order very shortly after the appointed hour of 8:00 o'clock and asked A. W. Hancock about the display of crystal spheres that had attracted the attention of everybody. Mr. Hancock said that they were examples of instances where man's work was an improvement on Nature, in that there are no perfect spheres in nature. He then introduced Mr. Bloomquist who explained the method of turning these spheres from blocks of quartz crystals, obsidian, glass, garnet and other hard stones. He also showed some of the tools that he uses in his work.

Carl Richards was given the floor and introduced several members of the Salem Geological Society among whom were Mrs. Gordon, Mrs. Clark, Mrs. Richards, V. D. Hill and Chas. Robards. He then presented the speaker of the evening, Prof. Clark of Willamette University, who spoke on the subject: "Science and Religion." Prof. Clark said that science and religion are not opposed to each other, as some folks believe, but are different aspects of the same subject.

"Religion," said Prof. Clark, "is man's adjustment to his deity and to his fellow men." To make this adjustment, one must have knowledge about his fellow men and the conditions which surround them. Science is systematized knowledge, according to the speaker. Religion is concerned with a search for the truth. Science, also, is concerned with a search for the truth. Therefore they are not opposed to each other, but are in agreement.

After adjournment, the members gathered into smaller groups which slowly dissolved. It is believed that all were out of the building before midnight.

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GEOLOGICAL NEWS LETTER

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Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

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LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday April 23 — Subject: "The Snake River and Tributaries in Idaho and Washington."

This is the first installment of a two part color illustrated program on the Snake River section of the Oregon Country. A large portion of this area has been investigated by the U.S.Engineer's Office in the past two years in connection with studies of the water resources of the Snake and Columbia River basins. The program includes color pictures taken by B.E.Torpen, L.E.Rydell, and C.P.Holdredge. Lloyd Ruff will discuss the geology and show color movies.

Friday May 14 — Subject: "The Snake River Canyon in Color."

A trip through the deepest canyon on the North American Continent illustrated by color slides and movies. Part 2 of the Snake River series by L.E.Rydell and Lloyd Ruff.

Friday May 28 — Subject: "The Human Meaning of Earth History as Illustrated in Features of Oregon."

Speaker: Dr. John C. Merriam, President emeritus of Carnegie Institute. This talk will be given at the ANNUAL BANQUET to be held at the WINTER GARDEN on Friday Evening, May 28th. Make your reservations early.

****

DID YOU KNOW

That the Snake River is the longest and most important tributary of the Columbia, being over 1,000 miles in length and draining an area greater than does the Columbia above the junction of the two streams? That it has potential power projects of equal if not greater magnitude than Boulder Dam on the Colorado River?

****

FIELD TRIP, SUNDAY, MARCH 14, 1943.

The field trip, announced and led by Orrin E. Stanley, was not largely attended. This may have been caused, in part, by the heavy application of "cold water" applied by Kenneth N. Phillips at the time the trip was announced. Mr. Phillips insinuated that Mr. Stanley's interests in the trip were not altogether unselfish, nor of a purely professional nature. Be that as it may, the only member of the Society to take part was the leader, and this, in a way, was fortunate; for the frequent showers which necessitated interruption of field work, might have dampened the ardor of a larger group. As it happened, these brief rest periods had their good points, and the entire party, consisting, as has been said, of the intrepid leader, spent the rainy periods stretched out on the couch. Selah, or something like that.

As had been hoped by the leader when he issued the invitation to the society, many interesting geological, as well as botanical and anthropological specimens were unearthed, not to mention the observation of much wild life, such as an undressed robin taking a bath in broad daylight. Angleworms were numerous, and specimens that an inexperienced observer might have mistaken for petrified angleworms were dug up. These, however, instead of being calcareous or silicious appeared to be more of a ferrous nature. This, added to the slight variation in form, caused the angleworm angle to be dropped. The specimens had large, flat heads and short, rather sharp tails, and many of them were fairly straight except for a sharp bend where their poor little stomachs may have been indicating that they died in sharp agony. Where the reddish, scaly coating was scraped off by the spade, they were bright and silvery in appearance. Query: Could they have been artifacts, left by a long forgotten people?

Some pieces of pottery showed that former occupants of the land may have had some artistic instincts, for on the glazed surfaces appeared geometric and floral designs in colors, apparently as bright and fresh as they must have been when the pieces were made in the dim past. Other pieces were thick, and plainly of a lower grade, for they neither had glazed surfaces nor ornamentation of any kind, but were much less hard in texture. The shape indicated that they may have been parts of hollow cylinders. They were deep red in color.

Glass of many shapes and colors was found. One greenish piece, in particular, had a raised pattern on the outside of its rounded surface which looked strangely like English script letters "B a l l ".

Botanical specimens were numerous. One plant had a bright yellow flower, and a long thick root that was still going down, when last seen, below the bottom of the excavation. Not having access to the Latin vocabulary of Leo Simon it was tentatively identified as Dandeleonis Stanlei, but it may have been what some people call Taraxacum Officinale. No other plants were in bloom.

It is regretted (by the leader) that more of the members of the Society could not have taken part in this delightful outing. It is doubtful that another as interesting can be arranged. O.E.S.

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NEWS OF MEMBERS

Donald B. Lawrence writes that he is teaching meteorology to navigation cadets at Ellington Field, Texas. His address is 5110 Ralama Avenue, Meadowbrook, Houston, T

Cpl. and Mrs. Robt. Priestaf are vacationing in Detroit, Mich. their former home. Mrs. Priestaf will be back in time to help with the May 10 issue of the News-Letter.

LUNCHEON NOTES: THURSDAY, APRIL 1, 1943

After all the mild razzing that your reporter has handed out to certain late-comers, he drifted into the Victory room at the Winter Garden restaurant nearly half an hour late. He wishes to express his appreciation to the members who had waited for him before being served, even though they did so unwillingly. It appears that the management had been notified that the group would not meet on April 1, as all members were going to the blood bank, instead, to donate blood to the cause of freedom.....Guests introduced were Mr. Morrow by Mr. Vance, Mr. Rapp by John Eliot Allen, and Mrs. Stevens (technically a member, but seldom at the luncheons) by Dr. Stevens who, himself, has not been a too-frequent attendant.....Total 19.....Past President H.Bruce Schminky presided, by request, although Vice-President Elizabeth Barr was at the head table.....Two copies of the Christmas number of Arizona Highways circulated and were enjoyed. This was an unusually beautiful copy of a high grade periodical.....John Eliot Allen expects to be absent from the Portland office for about two months while supervising the exploration of the coal deposits in the Coos Bay area. The State of Oregon has appropriated $20,000 for this work, to be matched by an equal amount from the county.....Mr. Minar reported that the field trip of March 28 was a success for those who took part in it, and that they thought it worth repeating when the weather will allow some of the less hardy members to take part.....Mr. Minar also reported that some progress is being made in the preparation for "Work Night". He had gotten prices on suitable tables which are to be installed in President Ruff's basement as soon as lighting and heating arrangements have been made. O.E.S.

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ANNUAL REPORTS

Report of the Secretary for the Year Ending Feb. 28, 1943

During the fiscal year four meetings of the Executive Committee were held; business was discussed and taken care of; minutes were taken of all proceedings.

Mrs. Mahoney resigned from position as Secretary on October 23. Florence Iverson was appointed by the Executive Committee to finish the unexpired term.

Ballots for officers for the year ending Feb. 28, 1944 were mailed to all members. Sixty-eight were returned to me with the following officers elected unanimously.

President	Lloyd Ruff
Vice-President	Mrs. Amza Barr
Treasurer	Leo Simon
Secretary	Florence Iverson
Director	Raymond L. Baldwin
Director	Dr. C. L. Booth

Respectfully submitted,
Florence Iverson, Secretary

Report of Committee on Publicity for the Year March 1, 1942 - Feb. 28, 1943

All lecture meetings and field trips for which details were available prior to newspaper deadlines were covered by notices in both daily papers.

Space allotted by the "Oregonian" amounted to nearly thirty inches, while the "Journal" gave us about half that amount due to the condensed type used for notices of meetings.

Emma Nordgren, Chairman.

Report of the Historian

The historian has received a total of ten pictures for the scrap book during the year 1942. Eight of these were given by Mr. Orrin E. Stanley, one by Mrs. Arthur Jones, and one by Ellen James. This is a decrease of sixty-one from the previous year.

One reason for the decline may be the fact that fewer trips were made in 1942 than in any other year of the Society.

Elizabeth M. Barr.

Report of the Librarian

The annual report for the year ending Feb. 28, 1943 is brief as the usual listing of books, bulletins, and other material received during the year is eliminated. These have been reported at frequent intervals throughout the past annual period under Library Notes in the News-Letter. The annual report submitted Feb. 28, 1942 and these current reports furnish our membership a composite picture of the library contents and resources.

It is very probable that few of the busy readers of the News-Letter visualized the relationship between the lists of current reports and the shelves of the library. The longer the lists the greater was the shrinkage of space on the shelves until at present overcrowding is so great that orderly arrangement of material is no longer possible and a self service library without orderly arrangement is of little use to its readers. The baby of our society has out grown its crib and is crying for more space in which to continue its healthy growth. When a child outgrows its first clothes and crib its development demands stronger food and in increased quantities. This growing child of the society must be fed more and more books and bulletins if it is ever to attain its full strength and stature of usefulness to the GSOC in future years. A review of the contributions made during the past year is proof that a fair percentage of our membership recognize this need of material and give to the library books they have read and found interesting but not essential as additions to their private libraries.

Recommendations: That the library committee be continued and officially appointed.

That the overcrowded condition of the library be relieved by providing added shelf space and that the height between shelves be adapted to the accomodation of large books. It will no doubt relieve the Executive Committee of worry as where an added book case can be placed if I tell them that a suitable space 4½ feet long and 14 inches wide is available for use in the office of Mr. Piper. We are indebted

to his office for the major part of the success of the library.

That the concerted effort of the society be directed to building up the library during this period when some other activities of the organization are somewhat restricted. A fine contribution to the library could be made by members who would weed the dead timber from their library shelves; books that have been read and found of worth but no longer of value in their private collection of books.

That the salary of your librarian be raised from the three cipher class to five for the ensuing year. Nothing less than this increase of salary will be accepted. This firm stand is necessary because of mounting food prices and the prevailing high salaries. It may be well for me to state for the information of those who may be taking this request too seriously that the three ciphers or the five ciphers will not be preceded by a single digit and the net sum of either is zero. That brings the salary of the librarian as equal with that of all the other members working for the upbuilding of the society and its many worthwhile projects including the library. Our reward comes from participation in the program and the objective of an organization pledged to building up facilities for the stimulation of interest in and the study of the vitally important subject geology and its related subjects.

Respectfully submitted,
Margaret Hughes.

Report of the Trip Committee

The trip committee of the Society submits the following list of trips sponsored by the Society during the past year:

1942 Trips

March 15,	Lawton Creek.	Leader:	Dr. A.K.Harris
April 26,	St. Helens Iron Ore Localities.	"	John Eliot Allen and Preston Hoetz
May 17,	Rhododendron and Sandy River Area.	"	Professor Orr
June 14,	Geology of Oregon City Area.	"	Dean Butler
July 12,	Sauvies Island.	"	Walter Lundberg
August 23,	Fossil Beds on the Nehalem River.	"	A.D.Vance and Richard Lewis
Sept. 13,	Lief Erickson Drive.	"	H.Bruce Schminky
October 25,	East Portland Gravel Pits.	"	Lloyd Ruff
Nov. 22,	Jennings Lodge Localities.	"	Mrs. G.M. and Grace Poppleton

No trips sponsored during December, January, and February.

Respectfully submitted
A. W. Hancock.

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LUNCHEON NOTES: THURSDAY APRIL 8, 1943

There were already eighteen members (including Dr. Booth) seated at the luncheon table before the reporter arrived to occupy the last chair. He was followed by Leo Simon and Dr. Adams who brought their chairs with them. After a very satisfying luncheon of edible pot roast with the necessary embellishments, Vice-President Barr asked for specimens to be started around the table.....Tom Carney unwrapped a beautiful specimen of Essonite (a member of the garnet family) with quartz, and sent it around on its black velvet-covered tray.....Mr. Robinson had a small piece of slate from near Cape Knowles, Antarctica which he thought was from

the Mesozoic era.....Mr. Huff brought a piece of shale from Green River, Wyoming, showing thin bars formed by deposits of plankton.....Miss Henley's contribution was a specimen of calcite crystals from the U.S.Mine in Bingham Canyon, Utah, and a piece of dioptase from Famous Mammoth Mine in Arizona.....Dr. Harrison had attended a meeting at Corvallis for the furthering of plans for organizing an Oregon Academy of Science. Nothing definite has been accomplished.....Mr. Vance mentioned a book on how to secure a commission in the United States Army, written by a man who after three months of training had not reached the rank of Private First Class. Mr. Vance was not taking orders for the book.....Dr. W.D.Lowry of the State Department of Geology and Mineral Industries gave a short report of an investigation of the Newport slide which he and John Eliot Allen had recently made.

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FRIDAY EVENING MEETING, APRIL 9, 1943

President Ruff opened the meeting at 8:15, not yet having the membership convinced that 8:00 p.m. means 8:00 p.m.....K.N.Phillips, who said that he is "working his way through college", called attention to his "books of the month", one of which was "Geomorphology" by Norman E. Hinds, associate professor of geology, University of California.

Dr. H.C.Harrison, spectroscopist and chief chemist, State Department of Geology and Mineral Industries, spoke on "Spectroscopy, and some of its applications", explaining how the spectroscope is used in detecting what elements are present in a sample submitted for examination. His lecture was clear and entertaining as well as very instructive. It was illustrated by lantern slides. Leo Simon officiated at the projector.

Dr. W.D.Lowry classified the Newport slide as a "bedding slip" (not to be confused with a pillow slip, we believe) on the Nye shales. He illustrated his talk by sketching a map and profiles of the slide on the blackboard. Although much real estate is moving in the Jump-off-Joe area, Dr. Lowry did not recommend immediate investments in that locality.

****

HELLS CANYON

Hells Canyon to the average reader most likely is associated with all or any part of the mighty 200 mile canyon of the Snake River which separates the states of Oregon and Washington on the west from the gem state of Idaho on the east. Newspaper and other popular articles variously refer to this great chasm as Hells Canyon, Box Canyon, Snake River Canyon, Grand Canyon of the Snake, and Seven Devils Canyon. Consultation of U.S.Forest Service and U.S.Geological Survey maps discloses a probable error in the current terminology. Nineteen miles below Homestead on the Oregon side of Snake River is a small tributary stream and canyon not over three and one-half miles in length called Hells Canyon. Here opposite the Seven Devils Mountains is the original Hells Canyon. Apparently the main canyon needs an official designation. Box Canyon does not command the distinction that is justified. The Snake River has many canyons each distinct in itself and we already have two Grand Canyons in other parts of the country. Seven Devils Canyon is distinctive but infers only the deeper portion of the canyon at the foot of the Seven Devils Mountains. It may well be that by popular use the name 'Hells Canyon' will be recognized as official for the great gorge. L.L.R.

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

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STATE DEP'T OF GEOLOGY &
MINERAL INDUSTRIES.

THE GEOLOGICAL NEWS-LETTER
Official publication of the
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Lloyd L. Ruff	President	3105 N. E. 45th Ave.
Mrs. Elizabeth Barr	Vice-president	5417 S. E. 99th Ave.
Miss Florence Iverson	Secretary	5125 N. E. Couch St.
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Earl K. Nixon (1944) Dr. Courtland L. Booth (1945) H. Bruce Schminky (1945)
Kenneth N. Phillips (1944) Raymond L. Baldwin (1946)

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Edwin T. Hodge	Ray C. Treasher	John Eliot Allen
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Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S. W. 6th Ave., at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday May 14 — Subject: "The Snake River Canyon in Color."

This will be part two of the Snake River Series by Louis E. Rydell and Lloyd L. Ruff in which some of the mysteries of the Hell's Canyon Country will be described and also illustrated by color slides and movies.

Friday May 28 — ANNUAL BANQUET at the WINTER GARDEN

This outstanding event of the Society's activities promises to be even more so this year by the appearance of Dr. John C. Merriam, President emeritus of the Carnegie Institute of Washington, who has been active in Oregon Geology for nearly 50 years. Dr. Merriam's address will be "The Human Meaning of Earth History as Illustrated in Features of Oregon." For further details see the following page.

HAVE YOU PAID YOUR DUES?

Membership dues include a subscription to the News-Letter. After May 20th the News-Letter will be mailed only to paid-up members unless other arrangements are made. Consult the inside cover for the secretary's address.

NEWS BRIEFS

Marian Louise Huff, weight ten pounds, is the newest member of the Geological Society of the Oregon Country, having arrived in the Huff family on Monday, April 19, 1943. It was not stated that she has learned the use of the geologists' pick as yet, but give her time.

***

Wedding bells sounded in the society for the second time recently with the marriage of Jane Ada Hurst to Lloyd Francis Flood on Saturday evening, May first, at the First Unitarian Church in Portland.

***

Funeral services were held Thursday, April 15th, for Miss Margaret Bowie, one of the society members and former teacher in the Portland schools.

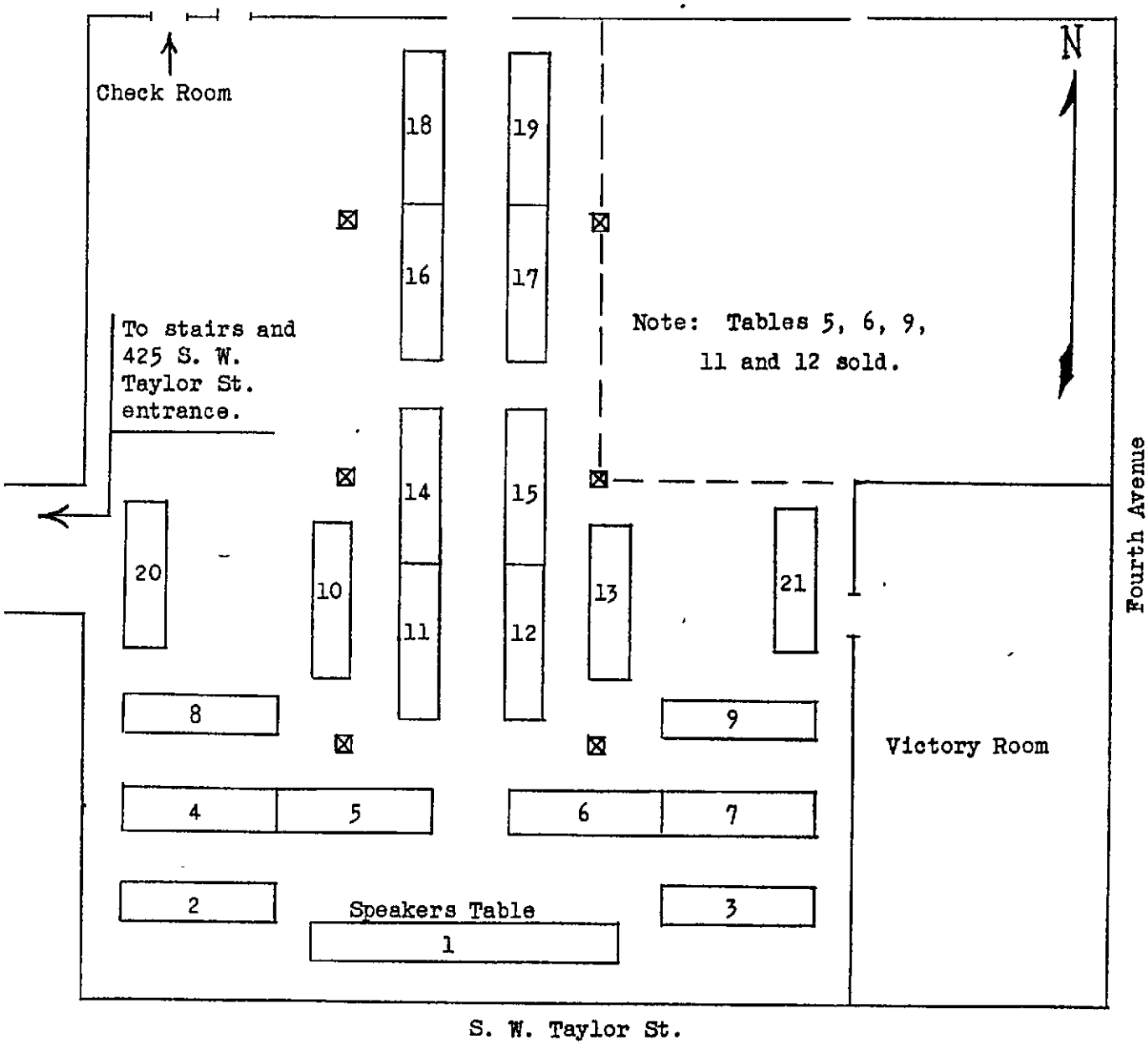
***

Miss Margaret Hughes has gone to eastern Canada to be with her brother who is reported to be quite ill. She will probably remain in the east for a month or longer.

***

MAKE YOUR RESERVATIONS FOR THE ANNUAL BANQUET NOW!

This annual event which has been postponed from the usual date in order to bring you our most distinguished guest speaker, Dr. Merriam, will be held at the Winter Garden, 425 S. W. Taylor St., Portland. For the convenience of those who are unable to attend the luncheons and Friday evening meetings, the seating plan for the annual banquet is submitted below. A public address system will be installed to ensure the program being audible throughout the banquet room. Tables will seat 10 persons each. Order by table number and if possible give a second choice. Price of the banquet is $1.50 per plate which has been kept as low as possible to encourage the fullest participation of members and their guests. Mail your reservations before May 22nd to Leo F. Simon, 711 S. W. Ankeny St., Portland, Oregon, and enclose remittance. Remember the date - Friday, May 28th. Time - 6:30 P.M. sharp.



WATER A PLENTY

by J. C. Stevens

An irrigation farmer once remarked "You can take my automobile, you can burn down the barn, you might even steal my wife, but if you try to take my water bygod I'll fight."

The report of the April first snow surveys in Oregon has just come to hand. The farmer can now do what he sneakingly would like to be before, but his conscience wouldn't let him because he had to pay the hired hands anyway. Now with no hired hands he can irrigate instead of cultivate.

Here is a summary of the water in storage in the form of snow in the major watersheds in the state as of April 1, 1943 and a comparison with the average of all previous years' records as of the same date.

All basins show substantial increases over all previous years except 3 minor basins - Willow Creek (Morrow County), Applegate Creek, and Illinois River, which drain comparatively low altitudes.

SNOW COVER IN OREGON AS OF APRIL FIRST

depth of equivalent water in inches

Drainage Basin	Years of Record	Average of Previous Years	Depth in 1943	
			Inches	% of Average
Owyhee	8	7.6	8.9	117
Malheur	13	6.6	10.6	161
Burnt	10	7.1	13.6	192
Powder	7	14.0	13.7	154
Pine	5	27.0	36.7	136
Grande Ronde	14	19.0	27.8	146
Walla Walla	12	24.5	34.6	141
Umatilla	14	11.8	16.0	136
Willow	14	9.6	9.0	94
John Day	14	10.0	14.8	148
Deschutes	14	18.5	28.4	154
Crooked	13	6.1	8.6	141
Hood	10	7.5	21.4	285
Sandy	11	25.7	47.2	184
Clackamas	6	14.1	35.5	252
Willamette	3	17.5	34.9	199
Silver Lake	4	4.0	7.0	175
Harney	12	7.7	10.2	132
Guano	4	7.2	13.5	188
Umpqua	7	14.7	20.9	142
Upper Rogue	12	19.7	22.1	112
Applegate	8	24.9	17.3	69
Illinois	7	19.4	9.5	49
Klamath	16	11.3	14.0	124
Goose Lake	12	4.4	5.4	123

LUNCHEON NOTES

April 15, 1943

There were 19 people, including President Lloyd Ruff's guest, William Suver, at the weekly luncheon of the Society on April 15. Members who had not been with the group for some weeks were Earl K. Nixon, chief of the Oregon Department of Geology and Mineral Industries who had been in South Carolina for some time investigating coal and iron deposits; John Eliot Allen of the same organization, who came in from his work in the coal region of the Coos Bay area; and George Taylor, who has been in eastern Washington, scouting for ground water among the ticks and sage brush.....Tom Carney had a specimen of corundum crystals in mica schist from near Libby, Montana, and some zircon crystals from Ceylon..... Mr. Minar showed a nice sample of pink granite from near Salisbury, North Carolina, which he said is extensively used in building throughout the Southeast... .....Mr. Nixon brought a very nice specimen of iron carbonate from Roxbury, Connecticut, a district in which silver had been mined for fifty years before the iron was recognized and mined. Many of the rifles used in the Revolutionary War were made from this iron. He also had a nice photograph of one of the old charcoal furnaces used for smelting this ore at the rate of from two hundred to three hundred tons a year.....E. N. Bates had several samples of rice, and many photographs of raising and harvesting rice. He said that this grain is used as the principal article of diet by more people in the world than any other one food. Rice is now being raised in great quantities in the Sacramento valley in California, where it is sowed from airplanes at the rate of three hundred acres a day and harvested by "combines," in contrast to the Oriental speed of planting at the rate of one acre a day for six to eight people, and where it is picked by hand. Mr. Bates, who it appears will go to almost any length to couple the topic which happens to be uppermost in his mind at the time with his hobby of geology, justified his mention of rice at a geological luncheon by reminding us that Dr. Harrison had recently told of gold being recovered in paying quantities from the ash of burned cattails which had grown in swamps below gold-bearing hills. Mr. Bates explained that tules and cattails grown in the same kind of environment, and that rice grows in the tule swamps; therefore, since gold is of geological interest, rice, which may possibly contain gold, is also a geological subject. Q.E.D.....Mr. Nixon said that the iron ore in the district that he had been investigating was to be used in making sponge iron. A heavy snowstorm delayed his work for several days.....Dr. J. C. Stevens called attention to the second war loan drive that is in progress, and to the urgent need for all who can to invest in more war bonds. O.E.S.

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Captain Arthur C. Jones, now stationed at Letterman General Hospital, The Presidio, San Francisco, who was in Portland for the Thursday luncheon, April 29, told the group a little about his work, and about the geology of the Bay Region. He expressed his pleasure to be able to meet with the luncheon group again. Mrs. Jones expects to take the children to California at the close of the school year. They will live at Mill Valley, California, in the redwoods not far from the north end of the Golden Gate bridge. Captain Jones says that after the arrival of the family and the family car he hopes that they can explore the geology of the area so far as the army duties and the gasoline ration will allow.

****

LUNCHEON NOTES

April 22, 1943

Dr. Courtland L. Booth was the 19th arrival at the G.S.O.C. luncheon on Thursday, April 22. The 20th did not come. Miss Mildred Stockwell, a former member who has been living in Salem for some time, had read in the Oregonian that the group was meeting at the Winter Garden restaurant and was waiting when Vice President Elizabeth Barr arrived just ahead of the two champion early birds from the grain inspection division, Bates and Baldwin.....So many people were enjoying the sound of their own voices when President Ruff got ready to ask for the showing of specimens that he had difficulty in making himself heard, even after rapping loudly for order, so we nearly missed hearing about the specimens that he had brought. They were a piece of light gray granitic rock, very coarse in texture; a piece of the rock in which feldspar crystals were found; and a slab of mica schist with corrugations giving it the appearance of petrified corrugated pasteboard.....Earl W. Minar brought a sample of bluish stone which he said was sold as granite. It was fine-grained, and is said to show lettering very well when used in monument work. He said that came from the Lewis river north of Bonneville.....Miss Henley had another copy of the magazine, "Arizona Highways," containing excellent pictures of the desert country.....F. W. Libbey had visited Hobart Butte where the U. S. Government has two diamond drills busy testing the area for clay containing a high percentage of alumina. Favorable results were reported. He had visited the chrome plant at Marshfield with Ray Treasher.....President Ruff had prepared a seating plan for the annual dinner which is to be held in the Winter Garden restaurant on May 28th. The tables will be arranged so that all may be able to see and hear the speaker.

O.E.S.

****

April 29, 1943

Dr. Booth was neither early nor late at this luncheon so perhaps we had better make no mention of him except for the beautiful specimens of calcites that he displayed.....The outstanding feature of the luncheon was the presence of Dr. and Mrs. Arthur C. Jones. The doctor looked particularly well in his captain's uniform. He was on a two-day leave from his army duties, part of which brought him to Portland on his way back to the Letterman General Hospital from Walla Walla where he had accompanied two sick soldiers. He hopes to be here again for the annual meeting on May 28th.....Specimens were as follows: A nicely labelled slab of Jasper from the Panamint Range, Death Valley, California, brought by Miss Henley; specimens of scordite (hydrated iron oxide) and porcelaneous clay from Hobart Butte, brought by F. W. Libbey; iron-stained opal from about a mile west of Lake Oswego, by Captain Jones; and several pieces of beryl from North Dakota and from Columbia, owned and exhibited by Tom Carney. Mrs. Jones had an illustrated book showing shells of the Pacific Ocean that had been sent to her from Honolulu. One could even forgive the Japanese text, so beautiful were the pictures of the shells. Latin names of the shells were printed in Roman type.....A. D. Vance had borrowed some photographs of the John Day country from Franklin L. Davis. They were unusually well made..... H. Bruce Schminky exhibited a copy of "Mineral Club History" by Dr. Dake, and a copy of "Erosion and Relative Land Use Conditions on the Chehalem Mountain Demonstration Project" by H. N. Magness and M. F. Sandoz.....Miss Agnes B. Jones and Mrs. A. D. Vance were present after long absences.....C. P. Keyser, Superintendent of Parks for the City of Portland was the guest of Mr. Vance.

O.E.S.

THE SNAKE RIVER BASIN

Trouble with the slide projector which developed at the last minute delayed the opening of the Friday evening meeting on April 23d for about fifteen minutes, thus preventing President Lloyd L. Ruff from inaugurating his hoped-for practice of starting the G.S.O.C. meetings promptly at eight. But when the meeting started, it proved well worth waiting for.

President Ruff had a series of maps on the easel to show the location of the Snake River basin, its size, its physiography and its geology, which he discussed for half an hour in an interesting and instructive manner. This was followed by two reels of motion picture films showing a trip through the canyon, as well as scenes between Portland and the starting point. Mr. Ruff commented on these as the pictures were shown. The motion pictures were followed by about eighty slides in color, covering the same area, but from the viewpoint of other men including Ben Torpen and L. E. Rydell, engineers with the United States Army Engineer Corps.

At the close of the meeting Leo Simon opened the ticket sale for the Annual Banquet of the Society which is to be held in the Winter Garden restaurant on May 28. See announcement column for details.

O.E.S.

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REVIEW

GEOMORPHOLOGY: The Evolution of Landscape, by Norman E. A. Hinds, Univ. of Calif.; 894 pages, diagrams, illus., index, bibliography. Prentice-Hall, Inc., 1943: $5.00.

The public library has a copy of this new book by Professor Hinds. It should be of lasting interest and value to members who wish to know more of those landscapes which are constantly about us and those new ones for which we travel so far - when gasoline is available.

Geomorphology is that branch of physical geography which deals with the form of the earth's features and the processes by which they are developed. The present book is intended not so much for the professional geologist or physiographer as for the general reader interested in the study of the earth's face. The text is not overly technical, and is largely a running explanation of the abundant illustrations, some 800 in number. About 700 of these are photographs, the greater number showing illustrative features in our western States and adjacent areas. Aerial photographs of many of our favorite mountains and national park areas add interest for our members. Each chapter lists certain Geological Survey maps which depict the type of topography under discussion. A bibliography of 34 pages is arranged by topics, an advantage for a reader seeking reference literature.

This new book is highly recommended for a pleasant evening by the fireplace, or for serious study. The reviewer's reaction is that no matter how much one may have traveled, he will see something here that he missed.....K.N.P.

****

A Guggenheim fellowship has been awarded Dr. Paul Henry Hansen, assistant professor of botany at Oregon State College, for a projected study of post-Pleistocene forest succession and climate in the Pacific Northwest, to be worked out by fossil pollen analyses of peat deposits and other types of lake sediments.

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Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

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. . . . . Sponsored by. . . . . .
(signature) (member)

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Friday June 11 Subject: "Availability of Fresh Ground Water in Coastal Areas"
Speaker: Arthur M. Piper, Sr. Geologist, Ground Water Division, U.S.Geological Survey. This promises to be a most interesting talk by one of our own members whose quest for the sometimes elusive life-sustaining fluid has disclosed many interesting and complex problems.

Friday June 25 Subject: "Highlights in the Geology of the Pacific Basin."
Speaker: Dr. Warren D. Smith, Professor of Geology and Geography, University of Oregon.

NEWS BRIEFS

The Geological Society extends its sincerest sympathy to the Allen family in the recent death of John's mother, Sally Eliot Allen, author and playwright, in Eugene, Oregon.

***

The Geological Society will sponsor a program on geology and related subjects at the American Association for the Advancement of Science meeting in Corvallis, June 14th-19th. Our program will probably be held on June 17th.

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Oregon Shipbuilding Corporation has announced a new list of Liberty ship names approved by the U.S.Maritime Commission. The Geological Society sponsored the name of Thomas Condon, Oregon's pioneer geologist, appears on the list. Launching of the Thomas Condon will probably take place some time in June.

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FINAL NOTICE: This is the last issue of the News-Letter you will receive unless your membership dues are paid.

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LUNCHEON NOTES

May 13, 1943

Perhaps it was because the tables were set for only 22 people that 26 were present at this unusually interesting meeting. An additional table was provided for the late comers, Geary Kimbrell, Clarence Phillips, and Dr. W. Claude Adams. .....Dr. and Mrs. Courtland L. Booth with their two guests, Mr. Leash of Sandy, Oregon, and Mr. Kraft of Chicago were among the earlier arrivals.....President Lloyd L. Ruff started the circulation of specimens with a piece of Wollastonite from a limestone formation in Box Canyon, Pend Oreille County, Washington, and a "mystery stone" found among pieces of slag near the Pend Oreille river in Idaho. .....F. W. Libby brought a specimen containing one one-thousandth of one percent of beryllium, from Jackson County, Oregon, and H. Bruce Schminky had another piece of approximately the same richness (?) of this rare metallic element which came from near Gearhart Mountain in southeastern Oregon.....Miss Stockwell had an attractive piece of brecciated jasper from Whiffen Spit, Vancouver Island, B.C. .....Dr. W. Claude Adams showed a small specimen of stibnite but did not reveal its source.....In introducing H. E. Leash, Dr. Booth said that Mr. Leash's home at Aura Vista Ranch, Sandy, Oregon, is a "collector's paradise" having a workshop well equipped with rock cutting and polishing machinery. Mr. Leash, who was formerly an active saw-mill operator said that he thought it would be nice to run a "petrified saw-mill", so he spends much of his time gathering, cutting and polishing petrified woods.....Mr. Kraft, when introduced by Mr. Leash, told of having collected Indian arrow points and other artifacts near his boyhood home in northern Wisconsin. Later, he became interested in "stones that will polish". He now has a large collection of jade and other stones, and equipment for cutting, polishing, and mounting them. He said that his interest in cutting and polishing stones dates from a few years back when he was looking for a hobby to take his "mind off conditions as they were", and began working on a small collection of rocks that had accumulated in his basement. As president of 52 corporations he naturally has other demands upon his time than his hobby, but he is now picking up agates, petrified wood, and jade in a trip around the United States to work with when he returns to his home in Chicago. Mr. Kraft, whose cheese products are almost universally known and appreciated, gives bits of jade jewelry to his employees for outstanding service or as a reward for faithful performance of duties.....Miss Henley had a brooch made by Mr. Kraft from petrified oak.

O.E.S.

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Copies of the following have been received by the library:

"Erosion and Related Land Use Conditions on the Chehalem Mountain Demonstration Project, Oregon," by H.N.Magness and M.F.Sandoz, presented by Mr. Sandoz.

"Mineral Club History" by Dr. H.C.Dake, a gift of the author.

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Many requests asking the News-Letter to publish Professor Herman Clark's outstanding talk on "Science and Religion" which was given before the society on March 26th. Professor Clark has kindly furnished the text on which his informal talk was based. It appears on the following pages of this issue.

SCIENCE AND RELIGION

By Professor Herman Clark - Willamette University

In my mind science and religion are phases of a single subject. I do not place science in one pigeon-hole of reality and religion in another with a water-tight partition separating them.

Let us review in an elementary way some of the simple features of the universe. We see the sun rise in the morning and set in the evening, and the next morning come up again without fail. We scarcely give it a thought, so certain have we become that its schedule will be maintained; although of course we know that recurring sunrise is due to the faithful rotation of the earth rather than to any action of the sun.

The sun, more than a million times the size of the earth, plows its way through space with a speed of twelve miles per second, carrying along with it its family of nine planets and innumerable smaller objects. It is an inspiring picture one sees as he visualizes the sun swinging through space with its nine planets and a group of planetoids constantly revolving about it all in the same general plane and in the same direction, and rotating on their axes in the same direction as their revolution.

And a number of the planets have satellites which revolve around their planets in much the same plane as that of the planetary orbits and, with three exceptions traveling in the same direction as the planets in their courses about the sun. With so many bodies moving in such a remarkably systematic order there is no wonder that we refer to it as the solar system. If the law of chance be mathematically applied to the number of objects in the solar system and to the number of points of similarity between them, the chance that they would happen to come into this organized relationship upon being tossed into space is one in several billion. This would seem to eliminate chance - there must have been a cause.

This giant sun to which we have made reference is just one of billions of other suns or stars in the sky. The unaided eye can see about 5,000 stars, but they are all suns like our own. Telescopes reveal many more. Some are larger and some are smaller than our sun. These stars travel at speeds averaging 18 miles a second; our sun at 12 miles a second is lazy. These thirty or forty billions of suns do not get tangled up with each other. They do not collide. They do not run away from each other. They remain together making a group shaped something like a watch, and beyond that just space - blackness. But with telescopes, we discover that there are patches of light out in the space beyond this galaxy. With the larger telescopes, it can be seen that those patches of light are other galaxies composed of billions of suns. Astronomers have estimated that there are over a million of these other galaxies, the nearest to us being just about one million light years away. There are others on and on up to a hundred million light years away. Upon further examination these galaxies are discovered to be not merely clusters of stars in space, but as clusters are all moving in space and all going in more or less the same direction; furthermore, they are all turning on their axes and all turning in the same direction, as if they were a million giant pinwheels going down some great corridor of space. There is system and order to the very limits of this giant cosmos.

Now consider a bit of matter like a piece of wood or a stone. It is made up of unit particles which are called atoms. In these days, scientists look indirectly into atoms, which are the smallest particles of matter that exist as matter, and discover that an atom is made up of a number of smaller particles. These components of atoms, which are not to be thought of as particles of matter, are of two types. Those of one type are unit charges of negative electricity called electrons. (Electric currents are made up of streams of electrons.) The other type of subatomic particles are units of positive electricity known as protons. These protons with some electrons are concentrated in the nucleus at the center of the atom while other electrons spin on their axes as they revolve around the nucleus like planets around the sun.

We are fairly startled to discover that an atom seems to be just a miniature solar system. Thus from the smallest to the largest throughout the universe, there is a common plan of organization. This could not be an accident. I think it is rather interesting that some poets have had sufficient insight to refer to the "harmony of the spheres," and to "the morning stars singing together."

If all of the universe from the smallest particles to the greatest bodies are running along smoothly in a harmonious way, then is there any place in the thinking of man for the idea of a divine being in connection with such a system --such a titanic system--such a harmonious system? Any person and every person who has ever seen the lightning, heard the thunder, or seen the sun come up every day in the same way - every person who has seen and experienced those things knows that there are some things and some powers in this universe that are bigger than he is - more ultimate than he is. A person when he thinks and speaks of these great powers is speaking of deity. Every person who has ever lived has had assurance that there is a deity, that there are powers superior to himself. To be sure some people have pictured a certain form for this deity, and someone else not liking that particular picture has said, "It is not so," and then illogically has gone on to make the statement that there isn't any deity - there isn't any God. In reality what they have done is to reject a particular concept of deity, while within themselves they know there are cosmic powers greater than the powers of man; and, that is an admission of deity, call it by whatever name you wish.

May I trace briefly a little of the history of the deity concept as it comes to us through the Hebrew race. If we go far back in the history of those people, we find them at an early time thinking of their god - their deity - as a covenant god. He was a tribal god, too, but there was a difference between their god and the other tribal gods. The other tribes thought of their god as being the great one of their tribe, but the Hebrews thought of their god as a god with whom they had made a contract. The relationship between them and their god was a covenant or contract.

Later, God in the minds of the people was a jealous God. The people felt that they were not to go off and worship other gods. ("Thou shalt have no other gods before me.") although they admitted the existence of other gods.

Then come on down a few generations and we discover in Exodus that these people thought of their Jehovah as a God of war. It was Israel's god who led the Perizzites into their hands so that they could cut off the thumbs and great toes of those people. It was their god of war who gave David the victory in battle.

In the eighth century (B.C.), appeared some prophets. They caught a glimpse of something a little higher. They saw that the people living under the concept of a god of war were not living under conditions conducive to good existence. These prophets came to the people and said that Jehovah was a god of justice, as well as a god of war. Time went on - the Israelites became captives over in Babylon. They were serving the god of war and justice, yet here they were taken captives. In Babylon, they saw temples the like of which they had never dreamed. Their little temple seemed a primitive thing. Here was Marduke, the god of the Babylonians, giving the Babylonians success in battle - giving the people great wealth. This was striking a staggering blow at the religion of this little handful of Israelites in a foreign land. How would their god be able to stand up under this situation?

At this time there came on the scene again a prophet or two who said to the people of Israel, "Your god is the god of righteousness". That was a real advance, as they saw that physical force in battle was not the greatest thing in the world - even simple justice was not the greatest thing in the world. Everyone in the world could not be victorious but everyone could be righteous. Righteousness can be universal; it is higher than might or wealth.

In a few centuries, Jesus came on the scene, revealing more about God. In talking to a certain individual he said that "God is a spirit." All of his teachings were based on the fundamental principle of love. The spirit of love characterizesthe Deity which he recognized. Here we have the highest of Deity concepts, spirit of love. Spirit can be everywhere, and there is no greater force in the world than love and no higher principle than the principle of love.

You will see, I am sure, that it is improper to ask the question"What is the Old Testament picture of God?" There is no one Old Testament picture of God; rather there are these pictures that different people have had at various stages in the development of the race. Man's concept of God thus evolved, and the Old Testament is the textbook of that evolution.

But human thinking did not stop 1900 years ago. At the time of the renaissance in science, people were learning that this is a universe of law and order. This added to their concept of God some knowledge of his method of working. He previously had been thought of as a capricious god, but man discovered along in the sixteenth and seventeenth centuries that things don't just happen, nor are they the results of a super being's whims. There is a cause for all things; principles operate in all realms. Man refers to these principles as "natural laws". So God came to be known as one who operates through principles - a God of law and order.

Just about the turn of the nineteenth century, we made some other discoveries. Milliken and others found that it is possible to take one kind of material element and change it into another element, that nature herself is doing this in some places. It is quite certain that in the sun and other hot stars material is undergoing such changes.

When you look at the stars at night, some of you recognize that they are of different colors. The stars naturally fall into different classes. If the light a star gives out is red in color, it may be made of a very large mass of relatively cool gas, or may be a dwarf and relatively cool but very compact.

A yellow colored star is one that is either smaller than the giant red ones or larger than the dwarfs. The blue-white stars are the hottest of all, but in volume, density, etc., they are just average. When iron is heated just enough, you begin to see a dull, dark red light come off of it, and as you raise the temperature, that color turns an orange, then a yellow, and then finally becomes white. If you raise the temperature above that point, it gets blue-white in color. A star appears to go through such a series of changes in its life history, then cools down reversing the color changes until its glow ceases. There are thousands of derelict old suns floating around. Some are tied up with bright stars, and when such a one comes between you and a bright one, it eclipses the bright one. At different stages in the life history of a star different elements come into existence.

As the renaissance had shown him to be a God of law and order, now with the discovery that matter itself is evolving, we see that we have a god of change. We have to increase the size of our concept of Deity in order to see that the Deity over this system of change is a mighty influence - a tremendous power. We have tried to show the fact that matter itself - inanimate matter - is going through a process of evolvement. We have previously shown that the Bible presents the evolvement of man's thoughts as man has progressed. In it we can see something of the road that man has traveled in an endeavor to penetrate into truth, hence the Bible is a text in the revelation of truth to man. As a matter of fact, there is one thing with which the students of science and the students of religion are constantly confronted - a thing they can never get away from - that every thing is undergoing change. When we use the word "evolution," we are referring to such change.

In the first period of the Paleozoic Era trilobites, water bugs, two or three inches long, were the highest form of life on earth. In the second period the highest life was a scorpion-shaped animal crawling around in shallow water. Later there were fish. Then later some of these fish developed the ability to use their swimming bladders as a sort of primitive lungs. These animals could get out of the water and crawl around on the banks, becoming amphibians, then reptiles, and finally mammals. At the same time that the first animals lived on the land, the first simple plants also lived on the land; and after quite a time, flowering plants developed and with them insects, and so on until we have the life on the earth as it is today. The discovery of these facts was a surprise to man. He had expected to find the remains of man, horses, and so on in the earliest formations, but they are not there. He was forced to see that some of these organisms have gradually changed becoming new forms. Evolution of life on the earth is something he faces as a fact. In the human body many organs possessed by our ancestors have disappeared or been reduced to vestigial remains -- ones that we no longer need. So also in life change is ever present.

What is religion? What is science? A modern psychologist defined religion about the best that I know how. He said that religion is "adjustment", adjustment between man and the Deity, between man and man, and between man and his physical environment. That is, religion is man's adjustment to his complete environment. From the time of the prophets on up, we have discovered that adjustment between an individual and the Deity involves and includes adjustment between himself and his fellow man. In more recent years, we have seen that our relationships to each other are related to the way our glands work which cause us to treat folks the way we do, related to the way we have to live and

what we have to put up with. Where can you stop that chain of environmental factors? Adjustment to deity is conditioned by adjustment to men and that in turn is conditioned by adjustment to physical environment. Now, in order to adjust properly to all parts of my environment about me, I am compelled to search for the truth. Science is defined as "systemized knowledge concerning physical things." It is interested in finding out the facts and how they relate to each other, in other words, truth. Religion also is trying to discover facts, truth. Science and religion approach the problem in different ways. The method of religion and the method of science - each is an imperfect tool in itself with which to tunnel into this mountain of ignorance. Between true religion and true science, there is no conflict, and there can be no conflict, for they are working to the same end, and truth cannot contradict truth. Apparent conflict results only from misinterpretation, or imperfect knowledge of facts.

People read the Bible as if it were just a scientific statement without any regard for the type of literature that it is. Some of it is poetry - some is drama, and other forms, including one form of literature that doesn't occur anywhere else. Every race of people has had grow up a certain amount of primitive folklore - stories which attempted to answer questions in which they were interested. The story-tellers wandered from camp to camp telling tales of their ancestors. The "sweet singers of Israel" went from camp to camp in the same way. They sang songs which were chants attempting to answer the questions in which the people were interested. We have their folklore literature. It gives a picture of the developing minds of its people. The folklore of the Israelites differed from that of other races. Their folklore was deity centered. They had a little more interest in the philosophical things of life. They wanted to know where the rains came from, where they themselves came from, who made everything, and what it was all about. The singers and story-tellers tried to answer those questions. They couldn't answer them the way we can. They didn't know the facts which are known to us. But that literature, comprising the first eleven chapters of Genesis, is most interesting and most valuable. In it we can see how man first tried to answer these questions by a series of poems or songs. If after 3500 years we don't know any more about the answers to those questions than they did, then there is something wrong with the human race; but we do know more and to expect anyone today to confine his explanations to the explanations that those people gave is absurd. There is value in that literature however if we will read if for what it really is, for we can trace in that folklore of the Hebrew race the beginnings of the sort of thought that developing through these centuries has brought the Christian religion.

In this great realm of organized, harmonious things we never raise a question as to whether a rock is going to fall if it is released, for we know that nature's laws are unfailing. But, if everything is so systematized, where does prayer come into the picture? Look over a lamp globe on the table. It looks perfectly good but it gives no light. Now screw it into the socket, and when you turn on the switch, you place it into the realm where certain principles begin to operate through that lamp bulb. Man had discovered that there are certain realms of reality that he can experience, but he must put himself into those realms in order to experience them. He has learned that prayer is the switch that puts us in harmony with a certain set of principles. It raises us to a realm where these forces operate.

Steinmetz was once asked what would be the greatest discoveries in the next century. He replied that he believed that we would discover those principles which operate in the realm we now call the spiritual, and learn to make great use of them. Doubtless man will learn much more of the forces he now in a stumbling way makes use of in prayer.

I have referred to all matter as being made up of atoms which are composed of electrons and protons. Electrons and protons are units of electricity. Therefore, matter is electricity. Electricity is a form of energy. Energy is just urge - influence. The scientist has analyzed things down to the point where the only fundamental thing is found to be energy - that is spirit - urge.

The aim of religion and the aim of science are one and the same, which is the search for truth; and the ultimate of truth is in the realm of the spirit. We can make no distinction between material and spiritual, except to say that matter is one manifestation of energy, and energy in the last analysis is spirit.

In the realm of spirit, we haven't learned all that there is to know; we haven't stated all the laws. But we have found some things which can be and are of great benefit to man, and certainly will learn much more in the years to come.

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The following article followed the editor to Montana and did not arrive back in Portland in time for publication in the last issue of the News - Letter.-L.L.R.

WHY "HELL'S CANYON"?

A few years ago a proposal was put forth to make the area which includes Snake River Canyon into a national park. It provoked a vigorous controversy in the local press and advocates, pro and con, waxed eloquent in their enthusiasm over their particular approach to the proposal. There was one letter, however, which dealt solely with a side issue of the controversy. It appeared over the name of Lewis A. McArthur, who is a recognized authority as a nomenclator. Members of the G.S.O.C. will recall his lecture at one of our meetings dealing with geographic names. The theme of his letter was a vigorous protest against the designation of Snake River Canyon, that geologic and scenic masterpiece, as "Hell's Canyon".

He did so for two reasons. Firstly, because he is a stickler for legality. Such a name, he pointed out, does not appear on any of the government maps, nor is it regarded with favor by residents of the locality. Secondly, because he does not think "there is anything hellish about Snake River Canyon. In fact the contrary is true". Then, with telling satire, he took up the cudgels in protest against the use of the words "hell" and "devil" as names of features of unusual beauty and ruggedness. They are employed geographically, he said, by people who ought to know better, and then he cited "a lot of foolish names such as Devil's Washboard, Devil's Cabbage Patch, Hell's Cauldron, Hell's Half Acre, etc., ad nauseam".

Students of the Creator's handiwork and lovers of the outdoors will, surely, heartily endorse this protest. True appreciation of Nature's scenic wonders should not - and does not, to right minded people - provoke the epithets of the infernal. Where exceptional grandeur is apparent the response of one's appreciation is better expressed by such names as Morning Glory Pool, Great White Throne, Inspiration Point, Rainbow Bridge, etc. It may be claimed that "a rose by any other name would smell as sweet", but, all must admit, it would not sound as pleasing.----C.P.R.

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GEOLOGICAL NEWS LETTER

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S.W.6th Avenue, at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S.W.Taylor Street (north side of Taylor St. between S.W.4th and S.W.5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday June 11 — Subject: "Availability of Fresh Ground Water in Coastal Areas". Speaker: Arthur M. Piper, Sr. Geolbgist, Ground Water Division, U. S. Geological Survey. We can no doubt safely say that water like gold is where you find it, but unlike gold the story doesn't end there. From past President Piper we are to learn more of this story which has been painstakingly extracted from our coastal areas over a period of many years.

Friday June 25 — Subject: "Highlights in the Geology of the Pacific Basin." Speaker: Dr. Warren D. Smith, Head of the Departments of Geology and Geography, University of Oregon. Dr. Smith needs no introduction to the Geological Society, being a charter member and having addressed the Society on several previous occasions. His geological highlights, drawn largely from first-hand knowledge of the region, will provide an appropriate background for coming events in the Pacific.

FIELD TRIP

Sunday June 27 — Get out the old picnic basket for a field trip to the home of H. E. Leash near Sandy where the Society is invited to see Mr. Leash's "petrified" sawmill as well as a fine geological collection - details will be announced later.

NEW MEMBERS

Sgt. & Mrs. Robert C. Priestaf - 5619 N. Commercial Avenue.
Miss Jessie Neikirk - 5231 S. E. Lincoln Street.
Miss Ellen James - 135 S. E. 52nd Avenue (Junior Member).
Miss Lotus Simon - 7006 S. E. 21st Avenue (Junior Member).

CHANGE IN ADDRESS

Mr. & Mrs. E. C. Johnson - Rt. #9, Box 2160, Portland, Oregon.

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Tom Carney is in the neighborhood of Pasco, Washington, where he is engaged in electrical work. He will be absent from Portland several weeks.

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LUNCHEON NOTES

May 20, 1943

Among the twenty members and guests of the Society at the Winter Garden restaurant on May 20 were Earl K. Nixon, just back from a trip in which he covered 9000 miles in three weeks; Albert Vance, son of past president A. D. Vance, wearing as many decorations as a major general; and Professor A. A. Groening, who distributed bits from a mastodon tusk which was more than ten feet long..... President Lloyd L. Ruff had a specimen of asbestos (Ca Mg Silicate) from Box Canyon, Pend Oreille County, Washington.....Mr. Nixon had a piece of Mica from North Carolina, marble (dolomite) from near the Massachusetts border where they are using it in the manufacture of metallic magnesium, and a specimen of high-grade talc, also from North Carolina.....Mr. Ruff called attention to a book on the "Physics of Blown Sands and Desert Dunes" by R. A. Bagnold. This appeared to be a very technical work.....Albert Vance explained the meanings of the various decorations he has earned. He is at present home on a ten day furlough from his work as instructor in flying at Chanute Field, Illinois..... Leo Simon arrived in time to sell some banquet tickets.

O.E.S.

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PRESIDENT LLOYD L. RUFF'S LECTURE

A satisfyingly large attendance of more than 150 people came early to the Public Service auditorium to hear the third of President Lloyd L. Ruff's illustrated talks on the Snake River Basin, its geology and its power potentialities. President Ruff called the meeting to order at 8:05, which is something of a record for our society. The excellence of his two former lectures had doubtless become widely known, and many people wished to get good seats for the last lecture of the series.

By the use of maps the speaker acquainted his audience with the extent and shape of the area to be covered by the talk, which, combined with the pictures, gave his hearers a better knowledge of the country than they could have acquired by months of travel through it.

After Mr. Ruff had concluded his talk he called on A. W. Hancock to explain the exhibit which was spread out on the table in the front of the room. Mr. Hancock said that the exhibit consisted of beeswax from Manzanita Beach and pieces of sal (Pronounced saul) wood, supposed to be from the wrecked "beeswax ship", and wondered how Mr. Bates could have contented himself by gathering wax and weather-worn sal wood when he might have been feasting his eyes on the bathing beauties disporting themselves in the surf and on the sand.

Mr. Bates begs to submit a revised version of his reply to the introduction by Mr. Hancock. (You all know how you think of the "snappy come-back" after the meeting is over, don't you?) Well, we shall re-open the case and allow Mr. Bates to explain that since he had Sal Wood on one arm and some WAACs on the other, he was quite fully occupied, but furthermore, the WAVEs were playing at his feet, and ordinary bathers had no attraction for him.

Dr. Booth, who entered the room just at this time was introduced and gave a summary of the legends surrounding the wrecking of the "beeswax ship." He presented a gavel made from the sal wood by Mr. Bates to President Ruff.

O.E.S.

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LUNCHEON NOTES

May 27, 1943

Mrs. Booth's two guests, Mr. and Mrs. Robert D. Bradley from Seattle brought the attendance at this luncheon to nineteen. In the absence of Dr. Booth, Leo Simon carried away the honors of being the last arrival.....Mr. Bradley, who is a photographer, had just returned from a trip to Mexico with his wife. They visited Warner and Greiger, Los Angeles dealers in stones and minerals, also Pondorfin of Denver, and the Denver Museum. The trip was made by train which is a disadvantage when one wishes to go off the beaten path for specimens..... President Ruff's guest was Francis Peck, a member of the Oakland staff of Montgomery, Ward, & Co.....F. W. Libbey showed some specimens of calcite crystals which were below "optical grade".....John Robinson had a copy of a government publication on "Hardpan and Microrelief in Certain Soil Complexes of Californ" by C. C. Nikiforoff, describing mounds which are similar in outward appearance to the Tenino mounds of Washington.

O.E.S.

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ARMY SEEKS FOREIGN MAPS

Army Map Service, Corps of Engineers, U.S.Army, is seeking maps, aerial photographs, and geographical information covering all countries outside of the continental limits of the United States and Canada. It is particularly interested in large-scale topographic maps and city plans. These include maps ranging from 1:1,000,000 (16 miles to 1 inch) to large-scale city plans, 1:25,000 or greater.

You may be privileged to make a direct contribution to the war undertaking if you have any such maps and are willing to present them to the War Department. If you are not prepared to give them outright, you may lend them to be returned after reproductions have been made.

It is important to take account of what is NOT WANTED: This includes maps issued by the United States Government, National Geographic Society, and small-scale maps.

If you have no maps, you may know where maps of potential military value can be obtained. Franked labels will be sent so that material can be forwarded without expense of postage. Submit any information to:

San Francisco Library Branch
Army Map Service
74 New Montgomery Street
San Francisco, California

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Wallace Lowry of the State Department of Geology and Mineral Industries has recently been awarded the title, Doctor of Philosophy by the University of Rochester. A thesis on the geology of the Ironside Mountain quadrangle in the Blue Mountains of Oregon was part of the work Dr. Lowry did to qualify for his degree.

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ENTERTAINED

Dr. and Mrs. Courtland L. Booth entertained several men members of the "official family" of the Geological Society of the Oregon Country Saturday evening, May 8, at their home at 2444 S. E. Clinton Street.

So far as many of those present were concerned, the main feature of the evening was the dinner which was outstanding in every way, having been prepared and served by Mrs. Booth, and thoroughly enjoyed by all the men.

Glued to each of the place cards was a small sample of a mineral which the guests were asked to name (and most of them could not) and a pan filled with candy and nuts emblematic of "panning for gold."

Dr. Booth was called away from the table to answer the telephone (sometimes referred to as a "modern convenience") about a dozen times. It is hoped that this meant a profitable evening for him, and this partly explains why the doctor is one of the last persons to arrive at the weekly luncheons.

A copy of "Glaciation of the Puget Sound Region" by J. Harlen Bretz which Dr. Booth had borrowed was examined with interest, particularly by those familiar with the Mimi and Tenino Mounds. Another pamphlet about these mounds - ascribing their origin to pocket gophers - was also passed around.

President Lloyd L. Ruff had made a paper model of an octahedral crystal, which started a discussion of crystallography. Mr. Ruff dreams of having a fairly complete set of crystal forms cut from quartz. He disclaims all ambition to have them made from diamonds, not being of an ostentatious disposition.

Business before the meeting concerned the Geological News-Letter and the forthcoming Annual Banquet. Many other matters, including possible field trips, were discussed.

Those present in addition to Dr. Booth and President Ruff were R. L. Baldwin, Amza Barr, A. W. Hancock, K. N. Phillips, H. Bruce Schminky, Leo Simon, O. E. Stanley, J. C. Stevens, and A. D. Vance.

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LIBRARY NOTES

The library has received:

From - Mazamas.

Mazama, Vol. XXIV - No. 12, December 1942.

From - Oregon Department of Geology and Mineral Industries.

Bulletins

Nos.	Year.	
12	1941	Geology and Physiography of the Northern Wallowa Mountains, Oregon. By Warren D. Smith, John Eliot Allen, Lloyd W. Staples, and W.R.Lowell.
14-C	1940	Oregon Metal Mines Handbook, Vol.1-Coos, Curry, and Douglas Counties. By the Staff.
24	1943	Origin of the Black Sands of the Coast of Southwest Oregon. By W.H.Twenhofel.

G.M.I.Short Paper

Nos.	Year.	
10	1943	Investigation of the Tyrrell Manganese Deposit and Other Similar Properties in the Lake Creek District, Oregon. By Wallace D. Lowry.

Ore.-Bin

Vol.2	1940	Nos. 4-5-6-11.
Vol.3	1941	Nos. 2-5. . . . . (Note) No.2 is the mining news number.
Vol.4	1942	Nos. 1-2-4-5-6-8-9-10-11. . .May we hope that one of our members may be able to supply numbers 3-7-12 to complete the 1942 file.

From - Central Washington College, Ellensburg, Washington.

Fossil Woods of the Far West, Nos.7-12, October, March, 1942-1943.

From - H.G.Richardson, Chief Surveyor, City of Portland.

Union Pacific Bulletin on Zion, Bryce and Grand Canyon National Parks. Contains maps and many beautiful illustrations.

From - United States Geological Survey, Washington, D.C.

Professional Papers

Nos.	Year.	
170-C	1931	A Miocene Flora from Grand Coulee, Wash., By Edward Wilber Berry.
175-C	1933	Replacement Origin of the Albite Granite Near Sparta, Oregon. By James Gilluly.
185-E	1934	Miocene Plants from Idaho, By Edward Wilber Berry.

Water-Supply Papers

Nos.	Year.	
370	1915	Surface Water Supply of Oregon, By F.F.Henshaw and H.J.Dean.
377	1915	Profile Surveys in Spokane River Basin, Washington and John Day River Basin, Oregon, By R.B.Marshall.
378	1915	Profile Surveys in 1914 on Middle Fork of Willamette River and White River, Oregon, By R.B.Marshall.
520-C	1924	Power Resources of Snake River between Huntington, Oregon and Lewiston, Idaho, By William Glenn Hoyt.
619	1930	Geology and Water Resources of the Mokelumne Area, California. By H.T.Stearns, T.W.Robinson, and G.H.Taylor.
636	1930	Water-Power Resources of the Umpqua River and Its Tributaries, Oregon. By Benjamin E. Jones and Harold T. Stearns.
637-C	1931	Water-Power Resources of the McKenzie River and Its Tributaries, " By Benjamin E. Jones and Harold T. Stearns.
638-B	1932	Water-Power Resources of the Rogue River Drainage Basin, Oregon. By Benjamin E. Jones, Warren Oakey, and Harold T. Stearns.
659-B	1932	Geology and Ground-Water Resources of The Dalles Region, Oregon. By Arthur M. Piper.
679-A	1936	The Thiem Method for Determining Permeability of Water-Bearing Materials, and Its Application to the Determination of Specific Yield. By Leland K. Wenzel.
679-B	1937	Thermal Springs in the United States. By Norah D. Stearns, Harold T. Stearns, and Gerald A Waring.
774	1938	Geology and Ground-Water Resources of the Snake River Plain in Southeastern Idaho, By Harold T. Stearns, Lynn Crandall, and W.G.Steward.
780	1939	Geology and Ground-Water Hydrology of the Mokelumne Area, California. By A.M.Piper, H.S.Gale, H.E.Thomas, and T.W.Robinson.

Bulletins

Nos.	Year.	
611	1915	Guidebook of the Western United States. Part A. The Northern Pacific Route with a Side Trip to Yellowstone Park. By Marius R. Campbell and others.
613	1916	Guidebook of the Western United States. Part C. The Santa Fe Route with a Side Trip to the Grand Canyon of the Colorado. By N.H.Darton and others.
614	1916	Guidebook of the Western United States. Part D. The Shasta Route and Coast Line, by J.S.Diller and others.
747	1924	Geologic Literature on North America 1785-1918. Part II. Index. By John M. Nickles.
783-A	1926	Mineral Industry of Alaska in 1924 and Administrative Report. By Philip S. Smith.
790-B	1927	The "Palouse Soil" Problem with an Account of Elephant Remains in Wind-Borne Soil on the Columbia Plateau of Washington. By Kirk Bryan.
845	1933	Guidebook of the Western United States. Part F. Southern Pacific Lines, New Orleans to Los Angeles. By N. H. Darton.
850	1934	Quicksilver Deposits of Southwestern Oregon. By Francis G. Wells and Aaron C. Waters.
875	1937	Nonmetallic Mineral Resources of Eastern Oregon. By Bernard N. Moore.
879	1937	Geology and Mineral Resources of the Baker Quadrangle, Oregon. By James Gilluly.
893	1938	Metalliferous Mineral Deposits of the Cascade Range in Oregon. By Eugene Callaghan and A.F.Buddington.
896	1938	Lexicon of Geologic Names of the United States. Parts 1 and 2. By M. Grace Wilmarth.
922-D	1940	Chromite Deposits of Grant County, Oregon By T.P.Thayer.
922-J	1940	Chromite Deposits in the Seiad Quadrangle, Siskiyou County, Calif. By G.A.Rynearson and C.T.Smith.
922-O	1940	Chromite Deposits of the Pilliken Area Eldorado County, Calif. By F.G.Wells, L.R.Page, and H.L.James.
922-P	1940	Chromite Deposits in the Sourdough Area, Curry County and the Briggs Creek Area, Josephine County, Oregon. By F.G.Wells, L.R.Page, and H.L.James.
931-B	1941	Some Quicksilver Prospects in Adjacent Parts of Nevada, California, and Oregon. By Clyde P. Ross.
931-I	1942	Nickel Deposit near Riddle, Douglas County, Oregon. By William T. Pecora and S. Warren Hobbs.
931-J	1942	Quicksilver Deposits in the Steens and Pueblo Mountains, Southern Oregon. By Clyde P. Ross.
931-N	1942	Quicksilver Deposits of the Opalite District, Malheur County, Oregon and Humbolt County, Nevada. By Robert G. Yates.

Note: These books are catalogued and ready for the library shelves, but must await the arrival of the new book case before being placed.

M.M.H.

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Any man will naturally hesitate to question his wife's judgment when he remembers whom she married.

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 12 PORTLAND, OREGON June 25, 1943

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THE GEOLOGICAL NEWS-LETTER
Official publication of the
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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S. W. 6th Avenue, at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday June 25 — Subject: "Highlights in the Geology of the Pacific Basin"
This will be an illustrated lecture.
Speaker: Dr. Warren D. Smith, Head of the Department of Geology and Geography, University of Oregon. Dr. Smith is a charter member of the G.S.O.C., and has addressed the Society on several previous occasions. His knowledge of the Pacific Basin is largely first-hand, and he is well qualified to lay an appropriate background for the coming events in the Pacific.

Friday July 9 — Details of this meeting will be announced in the next issue of the News - Letter.

FIELD TRIP

Sunday June 27 — The trip to Sandy on this date has been postponed and in its place there will be a trip to the Oswego Iron Mine and Smelter Site. Meet at 9:30 A. M. at Front and Yamhill. Reassemble at Oswego at 10:00 a.m. We will visit the site of the iron mine where limonite specimens are available. At this time there will be a discussion of the nearby physiography. Bring the lunch basket for a picnic at the old smelter site beside the Willamette where more specimens are available.

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Editor's Note: The editor returned to Portland, June 13, after a ten-week trip into the field, inspecting diamond drilling operations of the U. S. Engineers. He was stationed first on the Pend Oreille River in northeastern Washington, and was then transferred to the Flathead Lake country of western Montana. During the regular editor's absence, President Ruff did a very fine job of getting out the News - Letter, for which the editor wishes to express appreciation and thanks.

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What a Life

If a man runs after money - he's money mad. If he keeps it - he's a capitalist. If he spends it - he's a play-boy. If he doesn't get it - he lacks ambition. If he gets it without working - he's a parasite. If he gets it after a life of hard labor - he's a fool who got nothing from life.----

Fraternal Monitor.

ANNUAL BANQUET OF THE G. S. O. C. MAY 28, 1943

Celebrating the close of its eighth year of activities, the Geological Society of the Oregon Country met at the Winter Garden Restaurant on the evening of Friday, May 28, for its annual banquet. The speaker of the evening was Dr. John C. Merriam, past president of the Carnegie Institution and a geologist of international repute, and the subject of his lecture was "The Human Meaning of Earth History as Illustrated in Features of Oregon".

Among the guests present were Mrs. Ted Gorman, vice-president of the Salem Geological Society; Mr. and Mrs. Carl P. Richards and Mr. Glenn S. Paxson of the Salem society; Mr. and Mrs. Donald Major of Tenino, Wash.; Mr. and Mrs. W. J. Landon and Mr. and Mrs. Robert D. Bradley of Seattle. Mr. Major is president of the Northwestern Federation of Mineralogical Societies, and Mrs. Landon was last year's president of the Seattle Gem Collectors' Club. Other guests present were Mr. O. E. Haussotte, president of the Oregon Agate and Mineral Society, and Mr. Donald Onthank, representing the Mazamas, who invited the members of the GSOC to take their vacations this year with the Mazamas at Spirit Lake on the north slope of Mt. St. Helens.

Past President H. Bruce Schminky called the meeting to order, using the gavel presented to the society some weeks ago by E. N. Bates, who had it made from the wood of the wrecked "Beeswax ship". Mr. Schminky introduced J. Dean Butler, who acted as master of ceremonies. Mr. Butler said that the committee had experienced some difficulty in sifting out the candidates for a song leader to take the place of Dr. Arthur C. Jones, who has filled that station so well for many years but is now on duty at Letterman General Hospital. The final selection was Dr. W. Claude Adams, who with Mrs. A. W. Hancock at the piano got successfully through the first page of the Society's theme song, but bogged down in the polysyllabic names of prehistoric reptiles. The crowd was just getting going good, and insisted that the doctor finish his job, which, after getting his breath, he did in a very creditable manner, just as though he had cut his musical teeth on an ichthyosaurus bone.

In his lecture Dr. Merriam said, "When we know the background of any nation, we can then determine the true validity of its peoples' beliefs..... They think of human events in relation to their approximate causes and immediate effects. God sees them in their remote causes and judges them in their remote effects".

He said that most people do not see very far ahead or behind, the average being about four years. We spend most of our time shooting at each other instead of finding out how to correct our difficulties. The problem reaches back tens of thousands of years, said Dr. Merriam, and involves differences in sciences and religion. He believes that the ultimate in science, philosophy, and art lies in a knowledge of the Chinese. They have thought farther back than we have, and see more clearly than we do. He said that the Germans believe in the survival of the fittest, meaning themselves, while the British philosophy is that organisms start from a single cell and constantly divide, and that this is the ideal philosophy for the organization of a government. Dr. Merriam said that the John Day country is the handwriting of the Lord, telling the story of what has happened in changes of climate and development of the earth over a period of thirty million years, in a very clear language for all to read and understand. The human meaning is that there is a history that goes back a long way. His conclusion was that we live in a growing and developing world; we are working out a relation between people based on justice and truth.

Dr. Merriam was presented with a piece of polished rock, rich in fossils, taken from the John Day country by A. W. Hancock.

Past-president H. Bruce Schminky was presented with a copy of "Geomorphology" by Hinds after turning over to his successor, Lloyd L. Ruff, the gavel and a copy of "Two Islands" by Dr. Condon, the continuing symbol of the office of president of the Geological Society of the Oregon Country.

O.E.S.

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MEMORANDUM - TO THE ANNUAL BANQUET COMMITTEE

We wish to express our appreciation of the cooperation received from the various members who assisted in the planning and execution of the many details necessary for the success of the annual banquet. Special mention is made of the chairman of the decorating committee, Mrs. R. R. Poppleton, and of the social chairman, Miss Grace Poppleton, for continuing the banquet preparations during their recent bereavement.

L.L.R.

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LUNCHEON NOTES

June 3, 1943

Guests at the luncheon meeting of the G. S. O. C. on June 3 were Dr. Baldwin, who has but recently acquired his Ph. D. degree from Cornell University and joined forces with the Oregon State Department of Geology and Mineral Industries, introduced by Mr. Libbey; and Mr. Minar, a brother of Earl W. Minar who introduced him with the implied apology as to his knowledge of geology. However, if it were necessary for one to pass an examination in geology to attend these luncheons they would, at least, lack a reporter.....Miss Henley passed around a copy of the Desert Magazine; President Ruff had a copy of "Frontier"; and R. L. Baldwin had a copy of the Mazama publication for June 1943, containing a photograph of "Swimming in Spirit Lake" on its front page above the announcement of the summer outing. Mr. Baldwin was not willing to make a positive statement that one of the young ladies on the dock was Emily Moltzner. .....A copy of "The Willamette River Flood, Dec. 31, 1942 - Jan. 4, 1943, U. S. Army Engineers, Portland, Oregon, March 15, 1943," was circulated. It appears to be a very thorough report....."G. M. I. Short Paper No. 11" by F. W. Libbey dealing with the mineral deposits in the Snake River valley was also circulated. It is well prepared and shows the result of much careful work on the part of Mr. Libbey.....Earl W. Minar had a very attractive piece of red granite from Sweden.....O. E. Stanley had brought some samples of pebbles from the Tenino and Mima mounds as evidence that the mounds might have been made by pocket gophers, so far as the weight of individual stones is concerned. They were, however, too large to "be swallowed" by some of the unbelievers in the gopher theory.....Dr. Booth spoke of a call from the University of Rochester for scientific books for distribution to libraries in war-ravaged sections of the world, after the war is over.

O.E.S.

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ARTHUR M. PIPER'S LECTURE

Friday Evening Meeting, June 11, 1943

An attractive display of polished and sand-blasted specimens of granites arranged by Earl W. Minar drew the attention of all who entered the Public Service Auditorium on the evening of June 11, and kept most of them so interested around the table in the front of the room that President Lloyd L. Ruff did not get the meeting called to order until 8:20. After making several announcements the president gave Mr. Minar an opportunity to show and explain his work to the entire group. A small slab of granite with the beautifully polished letters "LLOYD RUFF" standing out from the sand-blasted background was given to the president. Some of the designs shown by Mr. Minar were very intricate and beautiful. A book on "Abrasive Grains and Their Uses" by John Hayward was recommended by Mr. Minar as an excellent reference work for anyone interested in sand-blasting.

Arthur M. Piper, Senior Geologist, U. S. Geological Survey, in charge of the ground-water resources office in Portland showed himself to be well qualified for that work. He made the ordinary-sounding subject: "Availability of Fresh Ground Water in Coastal Areas" so interesting that no one in the room was tempted to doze. The many questions during and following the lecture proved that he had aroused more than usual interest in the subject.

Mr. Piper showed by blackboard sketches how fresh ground-water is obtained in coastal areas and explained how the available supply of this water is determined. When a fresh water well in a coastal area has been used beyond its limit, and salt water comes into it there is little hope that it will ever again furnish fresh water. He said that on the island of Oahu sloping tunnels, sometimes half a mile long, are driven into the bluffs to tap the fresh water supply above the level of infiltration of salt water from the ocean.

And then, as readily as though he had prepared specially for this discussion, he answered questions about the plant requirements of water and explained why the softened Colorado River water available in the Los Angeles area is not suitable for irrigating the kind of soil found in that region.

Finding adequate and suitable ground-water supplies for the many military establishments that have been broadcast over the country has added appreciably to the headaches of Mr. Piper and his assistants. Mr. Piper believes that the proposed Florida Ship Canal might cut off the fresh water supply from the south part of the State by putting a salt water barrier across from the ocean to the Gulf of Mexico.

It was a rare privilege to hear a speaker who was so thoroughly informed, not only on the subject announced, but on other topics both related and unrelated to the main question. The Geological Society of the Oregon Country is indeed fortunate in having a member who is not only a high authority in his chosen profession, but is willing to tell others about it, and is able to make so "dry" a subject as "Ground-Water" as thrillingly interesting as did Mr. Piper.

O.E.S.

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Said Expectetus: Nature has given to man one tongue, but two ears, that we may hear from others twice as much as we speak.

SPECIAL MEETING - CLAIRE HOLDREDGE'S LECTURE

A special meeting of the Geological Society was held on the evening of Wednesday, June 16, when Mr. Claire Holdredge of the U.S. Engineer Office showed some of the many pictures, both still and moving, which he had taken on his recent trip to the headwaters of the Orinoco River, in the little known back country of Venezuela and Colombia. President Ruff called the unusually large gathering to order at 8:10, and after a few brief announcements introduced the speaker of the evening.

Before beginning his talk, Mr. Holdredge requested that no one ask him the purpose of his trip into the jungles, because although the work there is not a strict military secret, it is nevertheless of a confidential nature. He then outlined the route of his trip, describing the general features of the region, after which he presented a number of beautiful colored slides, including many shots of the tremendous Orinoco River, all the while giving an interesting and informative running commentary as the slides were shown. The slides were followed by two reels of colored movies - Mr. Holdredge claimed that he could not show his best pictures, as these had been taken by the Government to make up an official film - however, the reels shown were thoroughly enjoyed. A very unusual geographic feature was brought out - this is the splitting or bifurcation of the Orinoco River, probably the only phenomenon of its kind in the world. The river rises in the Guayana Highlands of southern Venezuela, and after flowing westward a ways it splits into two parts, the larger bending around to the northeast to become the main stem of the Orinoco, while the smaller bends southward and flows into a tributary of the Amazon. Even though this split occurs far up in the interior of the continent, the elevation at that point is only about 500 feet above sea level. Also brought out was the fact that in that tropical country there are two different kinds of streams, "black water" and "white water" streams. The black water streams are colored dark by dissolved chemicals and organic matter, and are of an acid nature, while the white water streams carry sediments which give them an alkaline character. Mr. Holdredge pointed out that wild rubber trees grow only in the floodplains of the white water streams.

Mr. Holdredge is leaving in a few days to take up more or less permanent residence in California. We are certainly sorry to see him leave, and hope he can come back to visit us as often as possible.

****

LUNCHEON NOTES, JUNE 10, 1943

What a meeting! Twenty geologists and not a single geological specimen or piece of literature to pass around the table. But even so, everyone seemed to be having a good time.....Mr. Barr had come to see what kind of a crowd his wife (our vice-president) associates with on Thursdays. We did not hear that he disapproved.....Mr. Vance announced that Claire Holdredge had returned from South America and would be in town for a week.....President Ruff said that Dr. and Mrs. Arthur Jones had offered to place 25 geological books in the Society's library while the doctor has to be out of the city, but owing to lack of shelf room and a full time librarian, he had taken the books to his home, where they are available to members. Ruff also announced that the work room will be open from 4 to 9 PM on certain designated Sundays beginning on June 13. Dr. Adams has agreed to furnish additional tables for the use of working members. Those taking advantage of this opportunity to use the work room, and expecting to spend the full five hours there, were advised to carry their lunches.

THE THOMAS CONDON LAUNCHED AT PORTLAND

Nearly forty members of the Geological Society, including all the officers and directors, were on hand Thursday, June 17, to witness the launching of the Liberty ship Thomas Condon at the Oregon Shipbuilding Corporation yards in St. Johns. The ship was sponsored by Mrs. E. R. Ordway, wife of the assistant administrative manager of the yard.

Several members of the Condon family were present at the launching, and were introduced at the sponsors' luncheon which followed.

The following resume of Condon's life was given as a part of the launching program.

> Thomas Condon was born in Ireland in 1822. His father was a stone cutter, and so his earliest toys were fossils which fell from the rocks in the quarry where his father worked. In 1833 his family moved to America, arriving in New York City when he was eleven years old. A few years in New York were followed by a stay in central New York state, where he finished high school and then taught school for a time, all the while making a fine collection of fossils. He graduated from Auburn Theological Seminary in 1852, and then set out by ship for Oregon. Before sailing, he married Cornelia Holt, who became one of the best beloved pioneer women in Oregon.
>
> His first congregation was at The Dalles. He found many inspirations for his sermons in the surrounding countryside, and at the same time discovered the riches of Oregon's wonderful geology. In 1866 he discovered the remains of an extinct fossil horse, and in May of 1871 he published an article in the "Overland Monthly" on "The Rocks of the John Day Valley", the basis of the study which was later expanded into the famous volume on Oregon geology, "The Two Islands".
>
> In 1872 he became Professor of Geology and Natural History at Pacific University in Forest Grove. When the State University of Oregon was established in 1876, he was the first of the new faculty to be chosen, holding the same position as at Pacific. He remained at the University for more than thirty years, when failing strength forced him to retire. He has been called "Oregon's grand old man of science".

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Because of the launching of the "Thomas Condon", the regular Thursday luncheon meeting of the GSOC was not held.

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Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

LECTURES: On the 2nd and 4th Fridays of each month in the Auditorium of the Public Service Building, 620 S. W. 6th Avenue, at 8:00 p.m.

TRIPS: Until further notice Field Trips will be by special arrangement. Notice will be given at lecture meetings. Meeting place will be announced at that time.

LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday July 9 — This will be a program of motion pictures which includes The Bombing of Tokio, The Battle of the Bismark Sea, and The Battle for Tunisia.

Sunday July 11 — Members are invited to attend the second work night program to be held from 4 to 9 p.m. in President Ruff's basement at 3105 N.E. 45th Ave. Isometric crystals will be the special topic of the evening to be discussed beginning at 7 p.m. - Bring your geologic specimen problems and as many isometric minerals and crystals as you can.

Friday July 23 — Meeting to be announced in the next bulletin and in the local papers.

Friday Aug. 13 — Annual Picnic in Mt. Tabor Park.
The following committee has been appointed to take charge of all arrangements for the annual picnic and is requested to select such additional personnel as may be necessary to carry out the program:

Miss Myrtice E. Fowler
Miss Kate Rose
Miss Almeda Smith

* * * * * * * * * *

NEWS OF MEMBERS

Lt. Leslie W. Bartow, Base Medical Station, De Ridder Army Air Base, De Ridder, Louisana, writes that the weather is hot in that logged-off district, and that an hour of physical training three times a week is not greatly enjoyed by the officers. Lt. Bartow is sanitary inspector at the camp, and feels that he is getting some improvement in the sanitary conditions of the eating places in and adjacent to the air base. From the letter one gathers the notion that Lt. Bartow would enjoy a few days in Portland and possibly a Thursday luncheon with the G. S. O. C.

O.E.S.

* * * * * * * * * *

"What were you in the war?" he asked.
"A private," replied the veteran.
And Diogenes blew out the lamp and went home.

--Army and Navy Journal.

* * * * * * * * * *

RECONNAISSANCE GEOLOGIC SURVEY IN CURRY COUNTY ALONG COAST HIGHWAY FROM GOLD BEACH TO CALIFORNIA STATE LINE *

Ray C. Treasher

Curry County, in extreme southwestern Oregon, has a total population less than that of a small sized town, and it contains some of the roughest, wildest, and most inaccessible territory in the West. Development of the county's resources reminds one of the story of which came first, the chicken or the egg - because there are very few roads, development is retarded, and because there is such a lack of development, there are very few roads.

The county is part of the Klamath Mountains physiographic province, and so the topography is characterized by high mountains with deeply incised, steep walled streams. The relief in many places may exceed 3000 ft. The coast line is rugged, the mountains coming down to the ocean's strand line, and harbors are almost non-existent. The coastal area contains a series of wave cut terraces up to elevations in excess of 1500 ft.

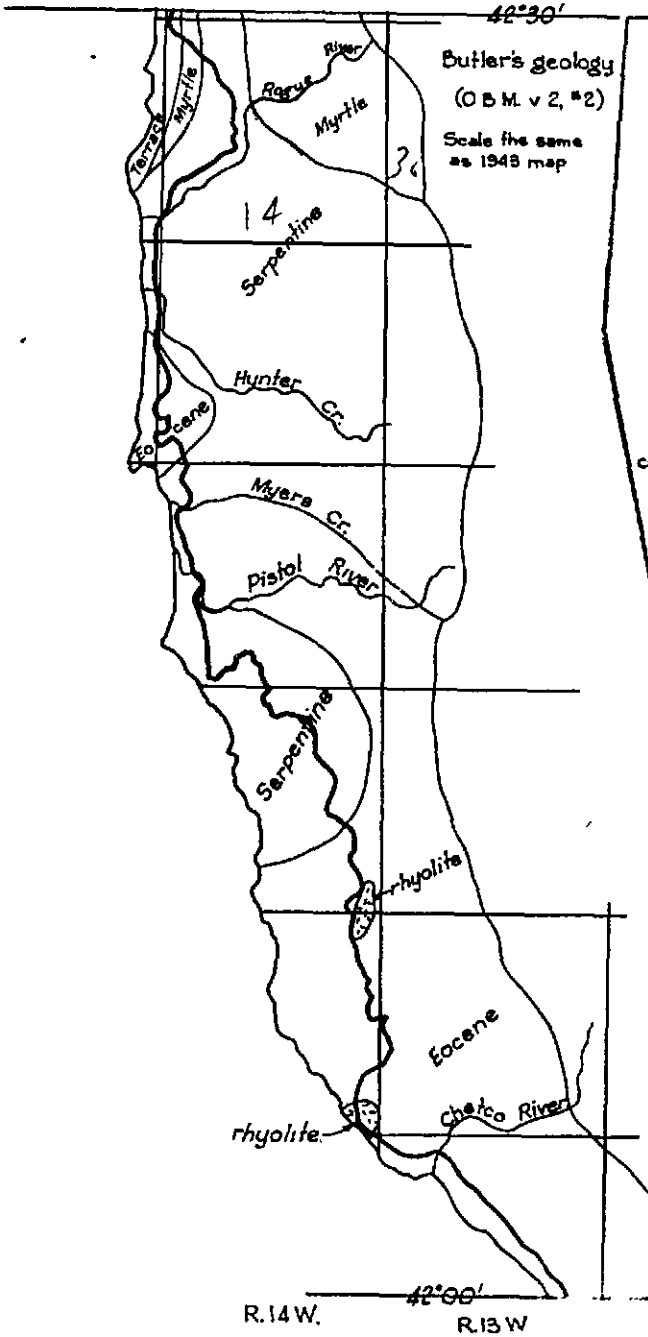
Transportation is limited to the Coast Highway, U. S. No. 101, which skirts a rugged coast line throughout the length of the county. Several Forest Service roads pierce the back country, but most of them are passable for only a few months of the year. Boat service is maintained on the Rogue River from Gold Beach to Illahe. There are no railroads in the county.

The mineral resources were reported upon in 1916 by Butler 1/, who published the only geologic map of the area, except for a portion of the Port Orford Quadrangle 2/. The fact that Butler's map is highly generalized is no discredit to his ability, as his alloted field time was inadequate, he had neither topographic maps nor even an accurate base map, and portions of the country were (and still are) inaccessible. In 1940 the Oregon State Dept. of Geology and Mineral Industries published a mines catalog of Curry County 3/. In 1943 the writer began compiling a geologic map of southwestern Oregon, and used Butler's map as the only available source of material for most of Curry County. Certain features of Butler's geology did not check with casual observations made along Highway 101, so in May two days were spent in making a reconnaissance survey of the Coast Highway from Gold Beach to the California state line. These observations, coupled with a certain familiarity with the formations, suggested that a general revision of the existing geologic map was necessary.

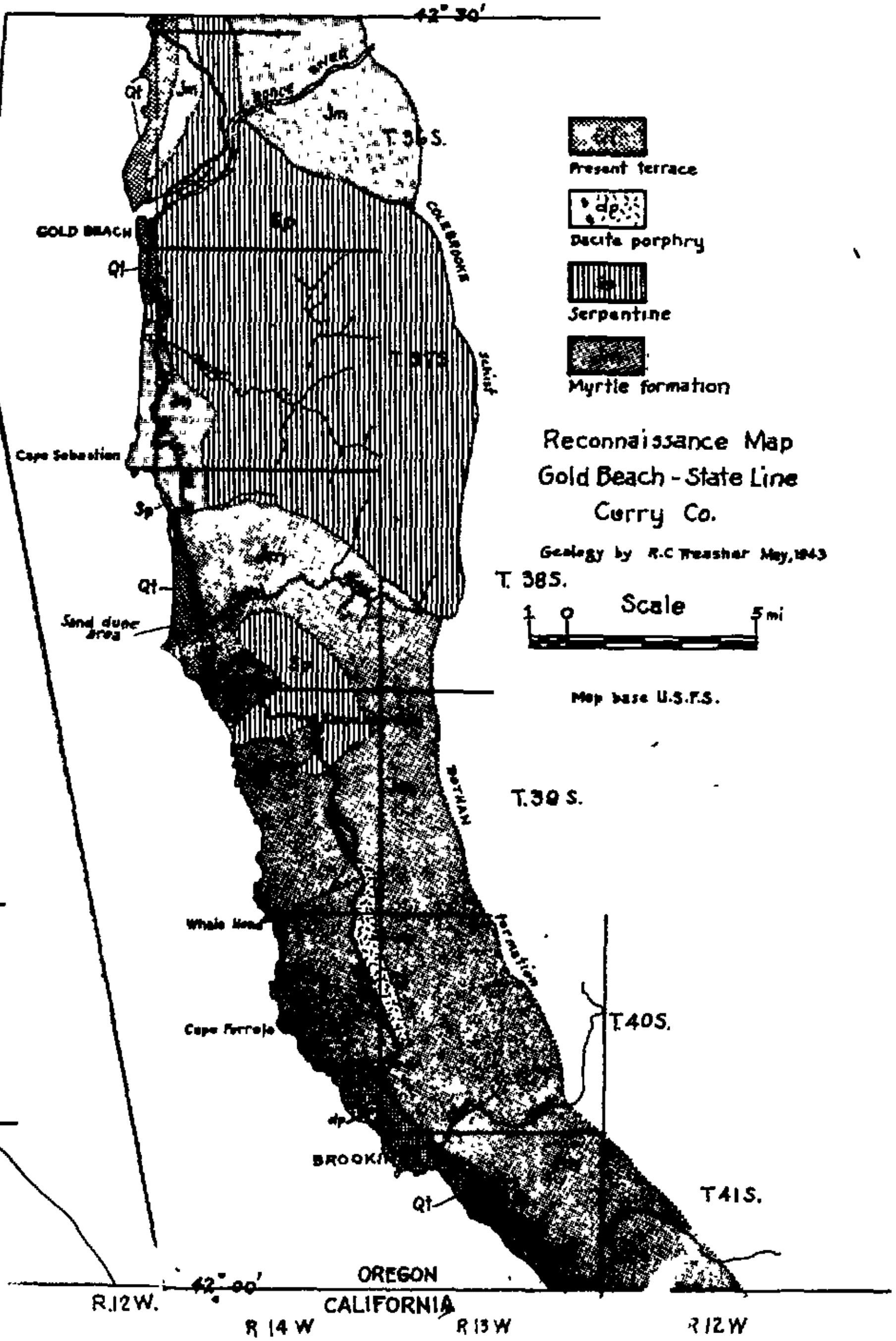
Butler recorded the following formations along the Coast Highway: Myrtle formation of Jurassic or Cretaceous age north of Gold Beach; serpentine in a large mass intrusive into the Myrtle formation in the northern half of the area; greenstone between Pistol River and Thomas Creek, correlating with Diller's 2/ gabbro in the Port Orford area; Eocene sediments throughout the length of the county; rhyolite of undetermined age in the southern portion; and Quaternary beach terrace deposits north of Gold Beach.

The Myrtle formation consists of dark colored shales, fine-to-coarse grained arkosic sandstones, conglomerate which lacks the characteristic quartzose pebbles of the basal Eocene, and variously colored cherts. The formation is well indurated, and locally the shales may be altered to slates. High grade metamorphism may be effected close to intrusives, with resultant glaucophane and amphibole schists.

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



42°30'
Butler's geology
(O B M. v 2, #2)
Scale the same as 1943 map
Rogue River
Myrtle
Terrace
Serpentine
Hunter Cr.
Eocene
Myers Cr.
Pistol River
Serpentine
rhyolite
Eocene
Chetco River
rhyolite
42°00'
R.14 W.
R.13 W
R.12 W.



42° 30'
Present terrace
Dacite porphry
Serpentine
Myrtle formation
Reconnaissance Map
Gold Beach - State Line
Curry Co.
Geology by R.C Treasher May, 1943
Scale
5 mi
Map base U.S.F.S.
GOLD BEACH
Cape Sebastian
Sand dune area
Whale Head
Cape Ferrelo
BROOKINGS
T. 38 S.
T. 39 S.
T. 40 S.
T. 41 S.
42° 00'
OREGON
CALIFORNIA
R 14 W
R 13 W
R 12 W

The serpentine intrusions are not large, but they are close together and the outcrop relationships are very complex. The serpentine may be altered to the slick, light greenish material locally called "serpentite". Weathered serpentine is frequently light brown, producing the "buckskin rocks" of the area.

"The sedimentary formations south from the Port Orford Quadrangle are more characteristic of the Myrtle formation than of the Eocene sediments. The degree of induration , the complex serpentine relationships, the presence of chert, and the absence of "basal Eocene" all confirm the conclusion that the material mapped by Butler as Eocene actually belongs to the Myrtle formation. Minor changes have been made in the contact relationships."

No indication of Butler's greenstone area could be found. The rocks between Pistol River and Thomas Creek to the south check lithologically with the Myrtle formation and with the serpentine, and have been so re-mapped.

The rhyolite areas south of Whalehead Creek are identified megascopically as dacite porphyry, because of their similarity to Diller's dacite porphyry in the Port Orford Quadrangle. One large elongated mass parallels the highway between Whalehead Creek and Black Mound. A small mass straddles the road between Black Mound and Harris State Park, and another one crops out at Harris State Park. Three very small outcrops were found south of Harbor, two of them east of the highway and one to the west. From their relationships it is concluded that the dacite porphyry is slightly younger than the serpentine, and should be correlated in age with the granitoid intrusions of the late Jurassic or early Cretaceous.

"A greater extent of beach terraces are mapped than were shown by Butler. The first group extends from the northern boundary of the mapped area southward past Gold Beach to the mouth of Hunter Creek. The second group extends from the mouth of Pistol River to Mack Arch. This group is characterized by sand dunes, of which those west of the highway are active at the present time. An extensive terrace begins near Cape Ferrelo and continues southward into California."

Except for minor modifications in its western boundary, the large serpentine mass east of Gold Beach is left unchanged. Serpentine masses within the Myrtle formation are usually small; this fact suggests that such a large mass as shown by Butler does not exist intact. However, time did not permit a careful examination of that particular region, so the areal distribution is temporarily left as Butler mapped it.

"The results of the hurried reconnaissance survey suggest that the geologic map of Curry County is badly in need of revision. However the area is without both topographic maps and adequate planometric base maps, and as the territory is still difficult to enter, it is doubted that a satisfactory geologic map of Curry County can be made until some of these difficulties can be overcome."

1/ Butler, G.M. & G.J.Mitchell, "Preliminary Survey of the Geology and Mineral Resources of Curry County, Oregon," Ore. Bur. Mines & Geol., Mineral Resources of Oregon, vol. 2, no. 2 (1916).

2/ Diller, J.S., Port Orford Folio, Oregon, USGS Geol. Atlas of U.S., no.89 (1903).

3/ Oregon Metal Mines Handbook, Bull. 14C, vol. 1 (1940).

LUNCHEON NOTES FOR THURSDAY, JUNE 24, 1943

Dr. Warren D. Smith was one of the seventeen geologists who met in the Victory room of the Winter Garden restaurant on June 24..... Dr. Courtland L. Booth arranged a fine display of jade on one of the small tables, and showed several samples of jade jewelry which had been sent to him by J. L. Kraft who was a guest of Dr. and Mrs. Booth at a recent luncheon, and at their home later. Some of the larger pieces of jade had been picked up by Mr. Kraft in Wyoming on his trip back to Chicago after his visit in Portland. Two brooches for Mrs. Booth and a pair of cuff links for the doctor, all mounted in antique mountings would seem to add proof, if such were needed, to the saying: "Cast thy bread upon the waters; for thou shalt find it after many days".....Dr. Booth also had a clipping from the editorial column of the Thurston County Independent, edited by D. M. Major, reprinting A. D. Vance's verses which appeared on the program of the annual banquet, followed by the editor's comments on the meeting.....Mr. Vance called attention to the fact that on the Monday following the launching of the "Thomas Comdon", the same yard launched the "Irving W. Pratt" named for the father of Allyn F. Pratt, the first secretary of our Society.....By the way, Dr. Booth's jade collection is said, by competent authority, to be the best in the state; not excelled by the museums in any of the state institutions.

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LET THE PUNISHMENT FIT THE CRIME

For the man(I am sure that no lady would stoop to such an act) who mutilates books not belonging to himself, and particularly those which are the property of the Public Library, by taking out for his own use, leaves that have pictures that particularly please his fancy or formulas that he is too lazy to copy, I most fervently wish that the ink will fade, not only from the stolen pages, but from every five dollar bill that comes into his possession.

The volume that gives rise to the present grouch is "Mortensen on the Negative". After finding that the continuity of the text was interrupted in several places I noticed that certain leaves had been neatly extracted. By reference to copies of this work on the shelves of a bookseller I found that on one or both sides of each missing sheet was a picture of a comely girl.....not overdressed.

I was told by a librarian that a set of Encyclopedia Brittanica had to be discarded on account of having had many articles clipped from it.

Is it probable that this is the work of children, now grown to men's stature, who were given magazines and papers to tear up to keep them quiet while their mothers were reading murder mysteries? Or just where does the responsibility lie?

O.E.S.

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"Some Common Geological Terms for Engineers" is the title of an article by D.G.Runner, Washington, D.C. in the May 1943 issue of Roads and Streets magazine.

This list of definitions starts with "Abney Level--A hand level with a clinometer attachment", and runs through the alphabet to "Water Lime--Hydraulic Lime", and includes such terms as "Nigger Head, Intratelluric, Gobbet, Fat Coal, Charco and Ayr Stone".

Mr. Runner is co-author with Lt.Col. Victor J. Brown of the book "Engineering Terminology" published by the Gillette Publishing Co., Chicago.

THE PHILOSOPHY OF GEOLOGY*

An eon of life history
  One grain in the glass of time;
A rift in the veil of mystery,
  A chord from the hymn sublime.

Etched in this hillside grandeur
  Is part of the infinite plan;
A hint from the Master Builder
  To Faith in the soul of man.

A. D. Vance

Last Friday evening we attended the annual banquet of the Geological Society of the Oregon Country, held in Portland. The principal speaker was Dr. John C. Merriam, president emeritus of the Carnegie Institute. He has spent 44 years studying the geology of the John Day country of central Oregon, and is rated as an authority on the history of the period which saw the development of the animals. He has a profoundly religious outlook, and we pass on a few thoughts from his address.

"Man sees things in immediate causes and effects; God sees things in remote causes and effects", was the text of his subject. He pointed out that the Chinese have a long distance conception of events, and are not so much bothered with present events. In other words, the long-time development is really important, while the things that loom large today really mean little in the long-run.

Bringing his point to the subject of geology, he indicated that Moses had tinkered with the story of creation. He said he found the John Day story better, and that in geology he found a greater truth. "It is one great story," he said, "Dig it out and understand it."

* From the editorial page of the Thurston County Independent - Tenino, Washington, May 4, 1943, D. M. Major, Editor and Publisher.

* * * * * * * * * * *

DR. WARREN D. SMITH'S LECTURE ON THE GEOLOGY OF THE PACIFIC

The fifty or more people who attended the Friday evening lecture on June 25, 1943, at the Public Service auditorium are now much better able to interpret the war news of the Pacific area than they were before hearing Dr. Warren D. Smith tell about the geology of the Pacific basin, and explain its relation to the causes of the war and its influence on the campaign in that sector.

Dr. Smith, who has spent twenty-five years studying this region, having been for many years located in the Philippines, described this as being the most active area in the world, geologically. He showed maps giving the locations of earthquakes and volcanoes, and other maps on which were depicted the positions of deep and shallow areas of the ocean floor. Another interesting map showed the boundaries of the land as it was supposed to have existed at the time the polar ice caps were deepest. From this map it was seen that land travel from India to Tasmania may have been possible. Motion pictures of a volcano in action were shown.

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 14 PORTLAND, OREGON July 25, 1943

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MINERAL INDUSTRIES

THE GEOLOGICAL NEWS-LETTER
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GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Yearly subscription: $2.00 Single copies: $0.15
Communications and material for publication should be sent to the Editor. Change of address and subscriptions are required 30 days in advance of date of change, and should be sent to Emily M. Moltzner, Morgan Building.

MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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LUNCHEONS: Every Thursday noon at the Winter Garden, 425 S. W. Taylor Street (north side of Taylor St. between S. W. 4th and S. W. 5th Aves.) Luncheon sixty cents.

MEETING ANNOUNCEMENTS

Friday July 23 — Watch the newspapers for details of this meeting - an outstanding program is in the making. The speaker is expected to be a nationally known geologist.

Friday Aug. 13 — Be sure and mark this date on your calendar - you won't want to miss the annual picnic in the crater at Mt. Tabor Park.

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OSWEGO FIELD TRIP

Twenty-seven members and guests attended the field trip to the Oswego Iron Mine and smelter site on June 27. Not wishing to brave the poison oak and other luxurious growth on Iron Mountain, the first part of the trip was limited to iron ore outcrop on the bridal path near the top of the mountain. No evidence was seen of the tunnels through which considerable ore was supposed to have been removed from the northward dipping ore body. The physiography of the Oswego-Oregon City area was reviewed briefly. This appeared in a previous issue of the News-Letter.

Lunch was eaten beneath the shade trees near the old smelter on the banks of the Willamette River. This was followed by inspection of the smelter site and a hunt for specimens. Many pieces of iron were found along with the varicolored chunks of slag.

The group concluded that the old smelter should be repaired as a historic monument and this beautiful spot at the mouth of Lake Creek be made a public park.

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Isometric minerals which may occur as cubes:

Alabandite	Cerargyrite	Halite	Monimolite	Pollucite
Altaite	Cobaltite	Huantajayite*	Naumannite*	Pyrite
Argentite	Cuprite	Hydrophilite	Percylite*	Sperrylite
Betafite	Dysanalyte	Iridium*	Periclase	Spinel
Boleite	Fluorite	Iron	Perovskite	Sylvite
Boracite	Gahnite	Lazurite	Pharmacosiderite	Tantalum*
Bornite	Galena	Magnetite	Platinum*	Thorianite*
Bromyrite*				Voltaite

* Listed by Dana as occurring in no other crystal form.

LUNCHEON NOTES FOR THURSDAY, JULY 1, 1943

To Dr. J. C. Stevens goes the honor of having arrived at the luncheon at the Winter Garden restaurant later than Dr. Courtland L. Booth. Clarence D. Phillips was already at the table when the reporter arrived, but perhaps he may be forgiven for being early as it has been several months since he has been seen at a luncheon of the G.S.O.C.....The total attendance was thirty, eleven of whom were women. This seems to disprove the idea that these luncheons are "for men only"... ...Miss Esther Miller, ceramics engineer with the State Department of Geology and Mineral Industries, was the guest of Dr. Harrison.....Franklin L. Davis, who has been in Salem for about four years is living in Portland again. He brought a photograph of the erratic which the Salem Geological Society has installed on the campus of Willamette University. He gives credit to Mrs. Stockwell for keeping the matter before the society until the stone was in its present location..... Mrs. Poppleton announced that she does not live in Jennings Lodge nor in Oswego, Illinois, although people who have recently been at her home have addressed mail to those places for her.....Outstanding among the "specimens" was a box of crystal forms which Mr. Schminky had made from paper. They have required much patient workmanship to construct.....Miss Henley had a piece of pure nickel from a smelter in New Caledonia.....Mr. Minar brought a piece of marble similar to some that is used in floors of some of Portland's office buildings. It was quarried at Carthage, Mo., and contained many minute fossils.....Mr. Bates had some photographs of large piles of wheat which had been left unsheltered from harvest time until it was marketed late in the fall. These were in Eastern Washington. He also had two very nice photos of home scenes which might well be the basis for Christmas greetings.

O.E.S.

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LUNCHEON NOTES FOR THURSDAY, JULY 8, 1943

With the entrance of the president, the editor, and Mr. Shepard, guest of President Ruff, the attendance figure shot upward 13.6%. No doubt some carping critic may object to the slight inaccuracy in this figure but we can't help that, for this is simply a straightforward meeting report, and not a mathematical problem.....Mr. Baldwin presented a new member, Mr. Miller, whose son, Hugh, will be remembered by many of our group.....Miss Eliza Stevens of Bonneville, who is not able to attend many of our luncheon meetings, was present..... Mrs. Stockwell brought interesting specimens of cauliflower and zucchini squash which she had raised, as an illustration of what a practical geologist can do with the soil. She declined to make a statement as to the brand of liniment she used after twice spading her garden plot.....Miss Henley had an interesting number of the Desert Magazine which she shared with the group.....Sergeant and Mrs. Priestaf brought a box of eight nicely prepared fossils from Ohio and Tennessee. Among them were the Ordovician trilobite, Calymene meeki, and a Permian shark tooth; also a Cretaceous gastropod, the pelecypod, Trigonia, and Teredo Rectus-Wade.....Dr. J. C. Stevens said that a natural history museum is definitely a part of the post-war construction program, and urged the members to keep the issue alive.....Mr. Ruff brought a magazine containing a description of the growth of the Paracutin volcano in Mexico. He also read extracts from a letter from Dr. Merriam who says that he hopes to be in Portland again before long.

O.E.S.

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THE VANTAGE FOREST OF THE GINKGO PETRIFIED PARK

By Geo. F. Beck - Central Washington College of Education

Eighty-five tree types of generic and near-generic level are now recognized in the Vantage forest, for which photomicrographs have been made available to the public. The known conifers include Douglas fir, spruce, fir, and yew listed in the order of abundance. There is a trace of a cedar-like wood which may represent redwood or swamp-cypress or both. At any rate both were numerous in certain associated forests. Ginkgo is the only wood known to be more primitive than the conifers.

The dominating spruce element is now understood to include many Douglas firs, although the two cannot always be distinguished one from the other. The dominance and association of these two trees suggest that the modern Sitka Spruce-Douglas fir forest west of the Olympics is a relic of the Vantage Miocene forest.

The hardwoods which account for only slightly less than half of the individual logs are dominated mostly by genera now more characteristic of the Atlantic coast. In order of abundance they are elms, oaks (mostly red and a few white oaks), red gum, maples, walnuts, hickories, nyssa gums, and buckeyes, plus a few examples of birch, beech, persimmon, witchhazel, and sycamore. Among some 30 imperfectly known hardwoods are several which rank with the oaks in order of abundance. Some of these may represent the Asiatic or the subtropical element or may have become altogether extinct.

This wealth of hardwoods hints at a more even distribution of annual precipitation than that now existing. The consistent presence of annual rings supports the concept of a dormant winter season. The Vantage forest is undoubtedly an aggregate of river rafts from higher altitudes and latitudes and does not necessarily represent only one or even several forest units. The rooted forests immediately above and below the Vantage forest are much more restricted in number of types present and contrast strongly with it and with each other.

It is still accepted that the Vantage forest is buried in pillow phases of a given flow of the Yakima basalts - some 500 feet and ten flows from the top - but it is not certain that we have exhausted the possibility of logs lying already petrified on the bottom of Lake Vantage.

Hints of the Ellensburg formation on the flanks of Saddle Mountain at Beverly and a considerable vertebrate fauna from this formation in the Yakima valley are the basis for assigning this forest to the Miocene.

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WORK NIGHT - JULY 11

In spite of a slow start the isometric crystals began to grow in profusion toward the close of the session. The late arrival of Mr. and Mrs. Simon and Emma Nordgren no doubt helped materially.

Cubes, tetrahedrons, and octahedrons made their appearance with the aid of cardboard, scissors, transparent tape, and old razor blades. It cannot be definitely stated whether nature was improved upon or not.

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STANLEY BATTLES LEAKY WATER PIPE

Associate Editor, O. E. Stanley, who occasionally does a little "editing" as well as the required amount of "associating," widened his already broad field of activities by pinch hitting as "associate plumber." The occasion was a water leak, or as it developed later, two leaks - one on either side of the meter which measures his ration of Bull Run.

When the plumber was called on Saturday morning he cheerfully said that he would be there before noon. He arrived about 3 p.m. After a brief glance at the situation he said that he couldn't do anything before Monday, and added, since he was not able to get any diggers, Stanley might hasten the repairs by digging the hole around the meter box himself. The hole should be "about 'so' square, and three feet deep" said the plumber.

That sounded easy to one who has supervised several million cubic yards of excavation, and who, up to this time, had considered a dollar a yard as a rather exorbitant cost, and who, on that fateful afternoon, believed himself to be in excellent physical condition as the result of some months of victory gardening and some fairly extensive work with a hand shovel among the Tenino mounds.

The hole filled with water nearly as fast as it was dug. Bailing operations seemed futile, but were necessary. Hip boots were brought out of long disuse and pulled one. As the hole deepened a neighbor boy who had been helping bail, felt sure that the three-foot limit had been reached. Measurement proved that he was both optimistic and inexperienced, for more than a foot of the yardstick was above the level of the walk. But it does not take forever, even though it had begun to seem so, to dig a three-foot hole. Stanley was tired and sweaty, and strongly inclined to call the job finished, but the thought of going into the street to turn on the water when, as, and if it should be needed over a two-day period was distasteful. He decided to see what the leak looked like if possible, and began to tunnel under the sidewalk. When he uncovered the pipe past the leak, and saw the water spurting from a split in the thirty-year-old corroded conduit he believed that he could make a temporary repair. What he needed was a piece of old inner tube and some string or wire. The inner tubes had all gone with the rubber drive and the only bit of soft rubber around the place was a few square inches cut from an old overshoe. But it sufficed. When it had been bound over the wound and the valve turned again, the darned thing held, and water again flowed into the Stanley home. But the associate editor, pinch hitting as associate plumber was thoroughly plastered (with mud, I hope you understand) and was refused admittance to the home he had so loved and labored for, until he removed his outer garments on the back porch, which, fortunately for this operation, is well screened with shrubbery.

The second leak, on the street side of the meter, was the city's trouble. The plumbers, when they came, drove a new pipe from the basement to the meter box. But they smeared a lot of mud around the basement floor in spite of having used a large developing tray as a receptacle for the slime resulting from their operations.

It will be weeks before the Stanley home is really "home" again, for there is much work yet to be done to restore the basement to anything like its former state of "a place for everything, and everything all over the place."

O.E.S.

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GEOLOGICAL NEWS LETTER

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GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

VOL. 9 NO. 15 PORTLAND, OREGON August 10, 1943

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

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Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

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

TRIPS: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place at Public Market, S.W.Front Avenue and Yamhill Street.

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 sixty cents.

MEETING ANNOUNCEMENTS

Friday August 13 — Annual Picnic in Mt. Tabor Park at 6:30 p.m. Enter the park through the S.E.69th Avenue entrance at S.E.Yamhill St. and drive west to the parking place near the crater.

Coffee and cream will be furnished. Bring your own sugar. Tea will also be furnished for those who prefer it. Bring your own sugar for the tea, too, as well as cups, spoons, and whatever you think you will want to eat.

If weather conditions make it impracticable to hold the picnic in the park, the committee has another meeting place up its sleeve. Should it be necessary, this information will be divulged by Mrs. Schminky and Mrs. Stanley whose telephone numbers are respectively, La.3903 and Ta.1250. Don't hesitate to call them if you are in doubt.

Besides stunts and other entertainment there will be a fifteen minute talk by Dr. Robert L. Nichols on "The Newberry Crater---A National Park (?)."

Friday August 27 — Dr. Edwin T. Hodge will speak on the subject: "A Geologist Views the Industrial Future of the Northwest."

Friday Sept. 10 — Dr. Robert L. Nichols will speak on "Alumina, Aluminum, and Northwest Clays."

FIELD TRIP

Chairman Earl Minar has a field trip to Oregon City in the making. If all goes well he will announce details a little later. He thinks that there will be a chance to inspect the pulp mills at the foot of the Willamette Falls and to inspect some Indian carvings on the rocks that are below water much of the year. Historical sites will be visited and geological points not thoroughly investigated on the former Oregon City trip will be studied. J. Dean Butler will probably be leader of the trip.

A NEW FEATURE

We are fortunate in securing so competent an authority as H. Bruce Schminky to write a series of articles on "The Public Land Survey in the Oregon Country", the first of which appears in this issue of The Geological News-Letter. These are interesting to those of our readers who already are familiar with the public-land surveys, and instructive to the few who have always wondered about the meanings of some of the terms which appear in deeds, and in geological articles which give definite locations of fossil deposits. Read them and save them for reference.

LUNCHEON NOTES FOR THURSDAY, JULY 15, 1943.

An attendance of an even two dozen is not bad for a midsummer luncheon meeting when many organizations are compelled to camouflage their members' lack of interest under the guise of "vacation".....In the absence of President Ruff, the business of the meeting was handled by Vice-President Barr.....E. N. Bates, in an effort to "get his name in the paper", perhaps, tried to be the last arrival at the meeting, but he stands no chance at all against the seasoned group of frequently mentioned gentlemen who are either very busy at the noon hour, or have their appetites under better control than he, for more than twenty-five percent of the group arrived after Mr. Bates was busily engaged with his meal.....Specimens were not plentiful, but those brought by Miss Henley were outstanding. She had a box containing nine cabochons from her brother's collection of about nine hundred specimens. These included vesuvianite (California jade), rhodonite, fluorescent onyx, orbicular jasper, and petrified oak. There were two specimens of several of these stones, varying in color..... Mr. Minar exhibited a slab of soft sandstone from the vicinity of Brownsville, Oregon, such as is largely used for trim on buildings. "It can be cut with a hand-saw", said Mr. Minar, "if you don't care much about your hand-saw"..... O.E.Stanley had a copy of the Pemex Travel Club Bulletin containing five pages of illustrations and story about the Paracutin volcano in the state of Michoacan, Mexico, telling how the tourist can get near enough to this interesting phenomenon to get the thrill of seeing (and we quote) "All Hell let loose." The story ends: (and again we quote) "And that, gentle reader, is something worth seeing." (Unquote; and adios.)

O.E.S.

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LUNCHEON NOTES FOR THURSDAY, JULY 22, 1943.

Dr. W. H. Twenhofel, Chairman of the Department of Geology, University of Wisconsin was present at the G.S.O.C. luncheon on July 22 as the guest of Earl K. Nixon who had just returned from Cuba and other points east and southeast. Dr. Twenhofel has been engaged by the State Department of Geology and Mineral Industries to make a study of the black sands of the Oregon coast. Twenty-three more or less regular habitues of the luncheon meetings made up the rest of the group.....A. D. Vance was back from the Warm Springs minus the lameness in his shoulder and with a fair-sized collection of agates and some chipped spots in his spectacles, the result of being struck by flying fragments of nodules..... Franklin L. Davis made a brief appearance. He brought some photographs of a fossil found at Fossil Lake, and said that although he had repeatedly sworn to never visit that place again, these pictures were weakening his resolution..... Dr. Warren D. Smith had a specimen of a Placuna Placenta shell, or "window shell" from the Philippines. We noticed that it was plainly marked with the letter "V". ....Dr. Courtland L. Booth arrived in time to call the attention of the group to the "Icescapades". The doctor was naturally interested in the fluorescent effects (as a geologist) and (as a doctor) in the amazingly healthy specimens of femininity in the cast.....Miss Fowler was so desperate for picnic ideas that she even asked the reporter if he had any, and received a negative reply. If a person had original ideas he would not have to be a reporter, would he?..... O. E. Stanley had a specimen of "mineral wool" (on his office desk) such as is used in insulating some of the ships being built in Portland. Perhaps he may remember to bring it to a luncheon meeting one of these days.....Vice-President Barr presided.

O.E.S.

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THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

Part 1.

History of the Rectangular System of Surveying.

Every one who has had dealings in land in the states of Oregon and Washington has read the terms section, township and range, and the Willamette Meridian and Base Line somewhere in the legal description of each tract. Technical papers on geology, mineralogy, and paleontology use the terms to locate such localities in a manner that they can be readily found by others. We have been asked to use the same method of location for finds made by our own society. Few people using these terms know how this system of land surveying came into use, or have seen the stone monument that now marks the intersection of the Willamette Meridian and the Base Line for the point of origin for these surveys.

The need of surveys and methods of marking land boundaries has been recognized since the beginning of history. The Bible says "Thou shalt not remove thy neighbor's landmark, which they of old time have set". Natural boundaries such as rivers, large lakes and seas, the oceans and mountain ranges served all the needs of early man. But as man progressed he began using artificial boundaries which could only be held by erecting some sort of sign or monument. The Great Wall of China is man's greatest attempt to mark a boundary. Surveys for boundary lines began on this continent with the landing of the white men who received grants of land from the kings of Europe. All have heard of the Mason-Dixon Line.

The owners of these grants, as a rule, gave little attention to the surveying of the small tracts given to settlers. Land was plentiful and the settlers were few in number. The farmer picked his tract with an eye to easy clearing and cultivation. He ran his fences to meet these conditions. If another settler liked the land adjoining the first man, some of the fence became a common boundary between the two. If the first man occupied all the good land at that location, the second man might go some distance away to pick his tract, and the land between the two might remain unoccupied for a long time. In the eastern states where this occurred, a map of the farms looks like a crazy quilt.

The Colony of Massachusetts attempted to dispose of its land in rectangular parcels. In 1634 a law was passed authorizing the making of grants, known as "towns", to individuals and groups to be settled as self-governing colonies. These "towns" were to contain about thirty-six square miles of area. Chelmsford, the first incorporation under this law, was laid out as a rectangle in 1652. The first square tract was incorporated as the town of Marlborough in 1656, although it was not laid out to the cardinal points of the compass. Here again, it is evident that a crazy-quilt pattern was being developed in the small tracts.

This was still the condition at the end of the Revolutionary War. Much unsettled land lay outside the borders of the original thirteen states. The fundamental necessity of Federal ownership of lands not included within the boundaries of the several States was early recognized in the establishment of our Government and took form under a resolution of Congress passed October 10, 1780, providing for the reception and care of such unappropriated lands as might be ceded by the States to the United States, and for the disposition of such lands for the common benefit of the United States. Seven states turned over an area amounting to nearly 260 million acres of such land. This made the new nation quite a land owner. But it did not stop there.

By treaty or purchase the public domain was pushed westward to the Pacific, and included a land surface of an estimated 1,442,200,320 acres. From this vast domain thirty-five new States were carved.

It must be remembered that this land was to be disposed of for the common good of all. Some of the first acquirements were turned over to the officers and men of the Revolutionary Army for wages in lieu of money. But the primary conception of Congress in dealing with the public lands was the realization of the largest possible cash return for their sale to meet the immediate necessities of national enterprise. So Uncle Sam became the world's greatest realtor. If he was going to sell tracts in such a vast area, he had to have some way of designating them so that he would not resell the same piece or make others overlap it. Out of this need has developed the most thorough and effective system of land identification ever devised by man.

First steps towards legislation for methods of surveying and designating these tracts began on May 7, 1784, when a committee, of which Thomas Jefferson was chairman, reported to the Continental Congress "an ordinance for ascertaining the mode of locating and disposing of lands in the western territory and for other purposes therein mentioned." Under this ordinance the land would have been laid out in joining blocks ten miles square, each block being divided into 100 lots, each one mile square. It is believed that Jefferson was the sole author of this bill. Soon after it was introduced, Jefferson was sent to Europe, and without his backing it did not become a law.

A committee headed by William Grayson, Delegate from Virginia, revised the plan and introduced a new ordinance on April 14, 1785. This plan made the large block seven miles square and gave it the name township. The 49 mile-square lots were called sections. After much debate the township was reduced to a six-mile square, as it is today. Under this law only the boundary lines of the townships were to be surveyed by the government. It became a law on May 20, 1785. We see the influence of the old Massachusetts "town" in making the size and giving the name to the township.

The new law lacked many things which became apparent as the surveys in Ohio progressed. There were no base lines or meridians to control the work and the convergence of the meridians had not been considered. Neither did it provide the order in which the sections were to be numbered.

In 1796 President Washington appointed General Rufus Putnam to the newly created office of Surveyor General of the United States, and in which office he served for seven years. He introduced the present system of numbering the sections and had the corners of the sections set as part of the survey of the township. He also devised the system of throwing the errors of surveying the sections into the north and west tiers of sections within each township. He introduced the use of "bearing trees" as a means of preserving and identifying the corners.

Jared Mansfield became Surveyor General in 1803. He saw that the surveys still lacked control and devised the system of base lines and principal meridians for use in the surveying of the Territory of Indiana. The Indiana base line was carried westward for the work in the Territory of Illinois. But even Mansfield did not give a great deal of attention to the convergence of the meridians, probably because he did not carry his surveys far north of his base line.

Edward Tiffin, who had previously served as the first Commissioner of the General Land Office, succeeded Mansfield in 1812. As he carried the surveys

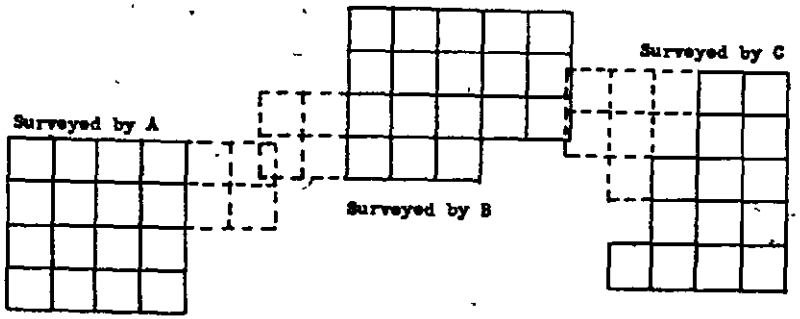

Fig. 1. Surveys under the Law of May 20, 1785 were made without Base Lines or Guide Meridians. Conditions such as the above soon arose as the Townships laid out by one surveyor were extended to those of another.

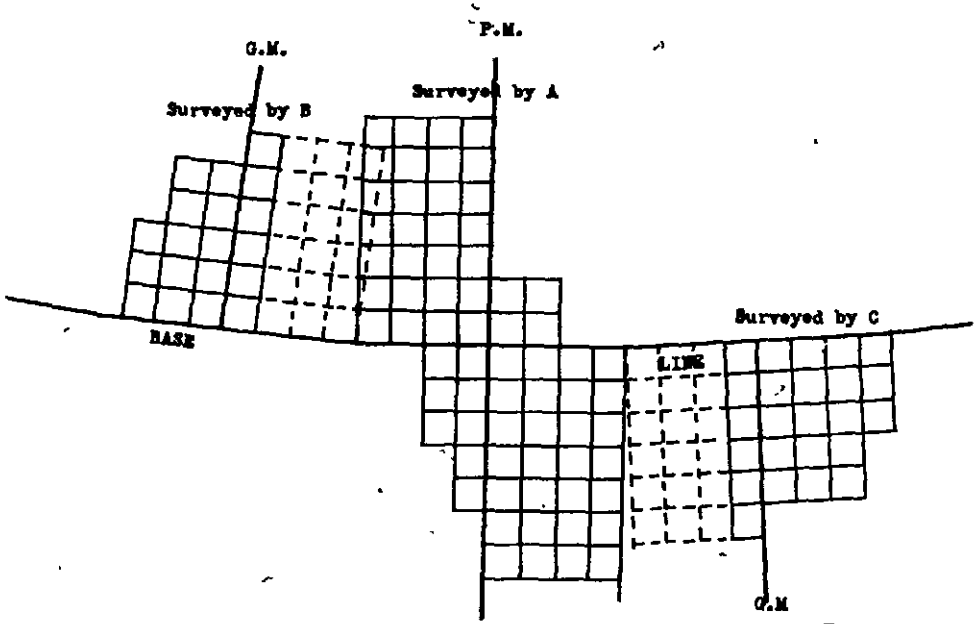

Fig. 2. Townships laid out with Base Line, Principal Meridian and Guide Meridians for control but ignoring the convergence of the meridians.

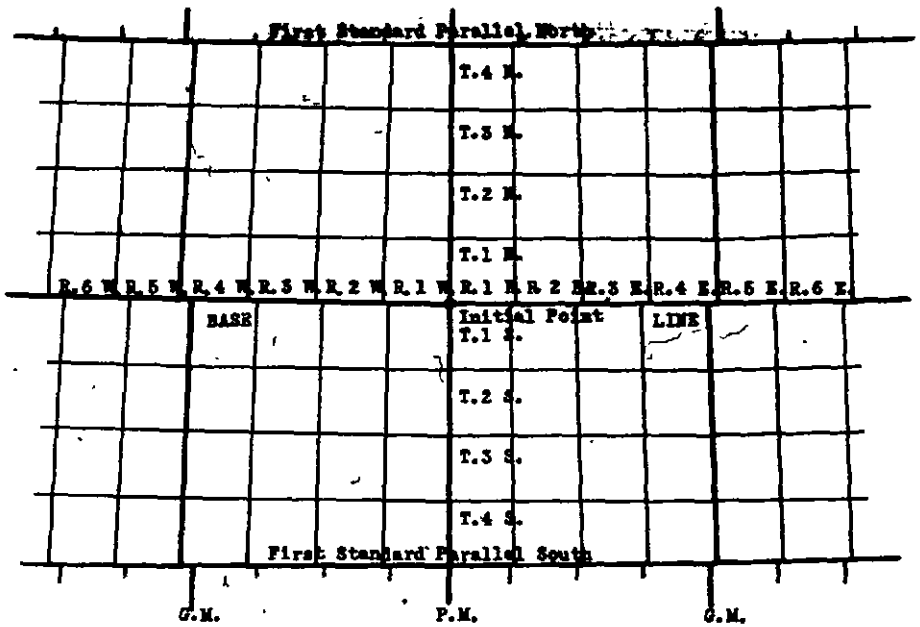

Fig. 3. The Rectangular System of surveying according to standards in use today. Standard Parallels and Guide Meridians are run as controls for each block of four Townships.

Note: P.M.= Principal Meridian.
G.M.= Guide Meridian.

northward in Indiana and Illinois, he soon discovered that his townships were becoming far short of six miles in width east and west. So he established a second base line parallel to the original one and began a new series of townships from it. This was the final touch that was needed to make the system perfect in principle, for now there was complete control of surveys from a base line and standard parallels, and a principal meridian and guide meridians which were all to be established at stated intervals as the surveys were extended in any direction. The effect of the convergence of the meridians had been eliminated in a practical manner.

Figures 1, 2 and 3 will serve to illustrate the growth of the main features of the system. Convergence of the meridians is exaggerated in these sketches.

Bibliography

Public Land System of the United States; Historical Outline by S.V.Proudfoot; The Rectangular System of Surveying by Frank M. Johnson; General Land Office, Washington, D.C., 1924.

To Be Continued.

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WE ARE WHAT WE EAT - OR ARE WE?

The shortage of beef in the Portland markets had a decided effect upon the doings of the Stanley family recently.

It seems that Mrs. Stanley had planned to have a pot roast for the Sunday dinner, but after trying at several markets to buy the coveted piece of beef, she compromised on pork. And with what a result! Instead of "beefing" around the house about this and that for the rest of the day, the so-called head of the house went into the yard and rooted up a quantity of weeds that had survived last year's onslaught which gave rise to the deathless (?) bit of prose on "War, Weeds, and the Waistline."

It is hoped that the attributes assimilated from the purchase will not run the entire gamut of porcine peculiarities resulting in complete loss of waistline and the assumption of general laissez aller, (or even worse).

O.E.S.

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NEWS OF MEMBERS

Word comes from Salem that Carl Richards is under doctors' orders to take several weeks of complete rest. This is due to the development of a lung infection which, tho' not serious, needs to be watched carefully. He is not seeing visitors for the present.

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Fat Pedestrian (knocked down by a car): "Couldn't you have gone around me?"
Motorist: "I wasn't sure whether I had enough gasoline left."

The Pasadenan.

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Simon, Lotus	7006 S.E.21st Avenue	

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THE GUM-CHEWING GIRL.

At the luncheon meeting on July 1, Miss Henley read a bit of a rhyme that clears up an important matter for a few of us. Here it is.

"The gum-chewing girl
And the cud-chewing cow
Are something alike
But differ somehow.

"The difference? Oh, yes,
I have it now.
It's the intelligent look
On the face of the cow."

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(Excerpt from letter written by Miss Hughes from Grimsby, Ontario, June 10, 1943)

"Recently I had an opportunity to attend two nice functions at my Alma Mater, the Mack Training School for Nurses of St. Catherine's General Hospital in St. Catherine's, Ontario. At the annual dinner I responded to the toast to our school. It gave me a chance to impress on the graduating class of 1943 their cause for pride in their school and their responsibility in upholding its traditions, as it is the oldest school for nurses in Canada and one of the oldest on the American continent. The physician who founded the school secured two of Miss Nightingale's graduates from London, England, to assist him in organizing the Mack Training School and that is why it is often called the "Nightingale School of America." On the 28th, the evening I was missing our GSOC banquet, I was attending the graduating exercises of the school and had the honor of presenting the General Efficiency Medal given by our Alumnae. That privilege came to me because I organized the Alumnae in 1901 - gave up a vacation to do the work."

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LUNCHEON NOTES FOR THURSDAY, JULY 29, 1943

Twenty-four assorted geologists, including Dr. Courtland L. Booth, were busily engaged with their luncheons when the meeting was interrupted by the entrance of the luncheon reporter scoring his "first" as the last arrival at a meeting. He said that he was fresh from a hard-rock job in Sellwood, bearing as evidence a small piece of a boulder, showing, as President Ruff said, results of the activities of "basalt worms". He also had a copy of the Cedar Falls, Iowa, "Citizen" containing a photograph of a spotted lamb, to quiet all doubters in the matter of there being such animals. He is indebted to Fred Reimers for the paper containing this valuable evidence. He also brought that piece of mineral wool about which he had been talking. This caused E. N. Bates to ask if it had been sheared from a hydraulic ram.....Carol Ann Schminky exhibited a collection of about twenty sea shells, all neatly labeled, and a pair of pretty little sea horses which brought forth the inquiry from Mr. Bates: "Since a sea is much larger than a bay, why is it that a sea horse is so much smaller than a bay horse?" Carol Ann was not able to explain.....Mr. Bates had brought for inspection a copy of "Development of Resources and of Economic Opportunity in the Pacific Northwest" being the October 1942 report of the National Resources Planning Board.....There was some discussion of the picnic, and since the chairman, Miss Fowler, appeared to be in a cheerful frame of mind, we assume that plans are progressing satisfactorily. The date is August 13.....President Ruff announced that Dr. Adams had furnished the tables he had promised and that the work room is now equipped with table space for all comers.

O.E.S.

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LUNCHEON NOTES FOR THURSDAY, AUGUST 5, 1943

An attendance of THIRTY! And as frequently happens when the record curve takes an upward turn, Dr. Courtland L. Booth brought several guests. In this case they were his son, Charles Frazer Booth of the Army Air Corps, and his two daughters, Mrs. King and Mrs. Wharton.....The contest for latest arrival grows exciting. Dr. Booth looked in and saw that he was too early, then returned later with his guests. Then came C. L. Phillips, a many-times winner. He was followed by Leo Simon who has quite a record, but he lost to Dr. Mattern who followed Huff and Robinson. The reporter had already marked up the record for Dr. Mattern when he had to change it to Dr. J. C. Stevens who was number thirty..... Dr. and Mrs. Harrison looked at the crowd and went elsewhere, pleading lack of time to wait for another table to be set.....Earl W. Minar had a sample of "Bur-Rose Quartzite", a pink sandstone quarried in the Cumberland Mountains of Tennessee. He also had a folder illustrating many decorative uses for the stone. .....A. D. Vance brought several specimens that he had found on his vacation trip to the hot springs in search of health and agates.....Mrs. Stockwell had a box of pebbles from Whiffen Spit, Sooke Harbor, Vancouver Island, where she had spent a part of her vacation.....E. N. Bates remarked that "this man Whiffen must have been 'some guy' to spit such large pebbles."....Dr. E. T. Hodge had a copy of "Mesozoic and Cenozoic Arcidae from the Pacific Slope of North America" by Philip W. Reinhart, being Special Paper No. 47 of the Geological Society of North America, 419 West 117th St., New York. It is nicely illustrated and well worth owning by anyone interested in the fossils of this region.....Miss Fowler had a piece of pink sandstone from India, and a nicely carved piece of white stone from the same country. She also had several photographs of the Taj Mahal and its environs.....A. D. Vance mentioned that his son Albert has had a chance to inspect the Taj Mahal at close range. How these boys do get around!.....Mrs. James presented her guest, Edna Miller, a schoolmate of Ellen James, to the group. O.E.S.

GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 16 PORTLAND, OREGON August 25, 1943

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STATE DEP'T OF GEOLOGY &
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THE GEOLOGICAL NEWS-LETTER
Official publication of the
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Mrs. Elizabeth Barr	Vice-president	5417 S. E. 99th Ave.
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Raymond L. Baldwin	Business Manager	4804 S. W. Laurelwood

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Edwin T. Hodge	Ray C. Treasher	John Eliot Allen
H. B. Schminky	O. E. Stanley	J. C. Stevens

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Yearly subscription: $2.00 Single copies: $0.15
Communications and material for publication should be sent to the Editor. Change of address and subscriptions are required 30 days in advance of date of change, and should be sent to Emily M. Moltzner, Morgan Building.

MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

SOCIETY ACTIVITIES

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

TRIPS: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place opposite Public Market, S. W. Front Ave. and Yamhill St.

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 sixty cents.

MEETING ANNOUNCEMENTS

Friday August 27 — Dr. Edwin T. Hodge will speak on the subject: "A Geologist Views the Industrial Future of the Northwest."

Friday Sept. 10 — Dr. Robert L. Nichols will speak on "Alumina, Aluminum, and Northwest Clays."

FIELD TRIP TO OREGON CITY, SUNDAY, AUGUST 29, 1943

Chairman Earl Minar and J. Dean Butler have arranged a trip to Oregon City for Sunday, August 29, leaving the meeting place at S. W. Front Avenue at S. W. Yamhill Street (across Front Avenue from the Public Market) at or before 9:30 a.m. and re-assembling in Oregon City at the Butler Building just south of the Court House at as nearly 10:00 a.m. as possible. Points of historical and geological interest in Oregon City will be visited. It is probable that a trip through one of the pulp or paper mills will be a part of the program, and if boats can be secured, there will be a trip to the fish-ladders. It is important to know as nearly as possible the number who will make the trip. Please notify Mr. Minar or Mr. Butler as early as Friday evening if you plan to make this trip. In case there are not enough automobiles for all who wish to go, the rest may take the interurban train at S. W. Washington and S. W. First on the even, and half, hours. The train trip takes 48 minutes.

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CORRECTIONS IN THE MEMBERSHIP LIST

It has been called to our attention that the names of Dr. and Mrs. Alfred E. Mattern, 2214 N.E. 39th Avenue, Portland, Garfield 0511, had been omitted from the published list. The business manager asks forgiveness for this omission..... Also, but this time not the responsibility of the business manager, the list should read: "Priestaf, Sgt. and Mrs. Robert".....One too many "e's" appeared in the name Lawrence.....If there are other errors, please inform the business manager or the editor. Also, please make the above changes in your copy of the list so that your Christmas cards may be properly addressed.

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Business Manager Raymond L. Baldwin was absent from his usual chair at the luncheon on August 19. Mr. Bates reported that the usually jovial B. M. had suffered the loss of several teeth at the hands of a dentist. We wish him a speedy recovery and as little inconvenience as possible during the transition period.

****

LUNCHEON NOTES FOR THURSDAY, AUGUST 12, 1943

Treasurer Leo Simon trailed into the luncheon room some minutes after Dr. W. Claude Adams, Clarence D. Phillips AND Dr. Courtland L. Booth, his competitors for the doubtful honor of being the last arrival, had been seated for some minutes. Leo edged up to the reporter after the meeting and confided that it was just twenty-five years ago that he was given "a life sentence" by Judge Tazwell, and you'll have to admit that the twenty-fifth anniversary of almost anything is a good excuse. He said that both he and Mrs. Simon are so busy that they have had to forego any elaborate celebration of their silver wedding anniversary. "Just a quiet evening picking berries at Emma Nordgren's and a simple supper with a cake from the bakery," said Leo, "will have to do this time." The Geological News-Letter wishes them many happy and prosperous years of their "life sentence", and a rousing Golden Wedding celebration on August 12, 1968.....Miss McNeil of Salem was the guest of her sister, Vice-President Barr.....Miss Hughes presented fossils from Beamer's Falls near Lake Ontario, and others from near Port Maitland, Ontario, to members who wished to add them to their collections. She also had some small, carved souvenirs made of material from the White Cliffs of Dover which she distributed as far as the supply lasted.....Dr. Courtland L. Booth exhibited a large chart depicting the history of life on the Earth from the earliest living thing to the present development of man. Several members ordered copies for their own edification.

O.E.S.

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LUNCHEON NOTES FOR THURSDAY, AUGUST 19, 1943

There were but twenty-one members at the luncheon meeting in the Winter Garden restaurant on August 19. To the absent ones we will say that they not only missed an excellent luncheon, but an interesting event.....Mr. Miller had brought some pieces of steel from the ship-yard showing how accurately it can be cut along straight or curved lines, with apparently little regard for the thickness of the piece.....O. E. Stanley showed some photographs of the picnickers. So far as he has yet been informed, no suits for libel have been filed against him by those who saw themselves as the camera saw them.....
H. Bruce Schminky brought quite a collection of specimens which he had gathered on his trip to the warm springs a few weeks ago. His geological explanation of them went way over the head of the reporter, but it is hoped that Mr. Schminky will take time to write a story about the trip for the News-Letter.....In the copy of the Desert Magazine which Miss Henley brought there was a poem by J. L. Kraft who recently was a guest of Dr. Courtland L. Booth at one of our luncheon meetings. The poem was called "Desert Jewels".....F. W. Libbey had a sample of stibnite.....A. D. Vance announced that space had been obtained in the Municipal Auditorium building by the Battleship Oregon Commission for museum purposes, and that a part of the space had been granted to the G.S.O.C. at the request of Dr. J. C. Stevens, for geological and mineral specimens.....In the absence of the president and vice-president, Treasurer Leo Simon held the reins at this meeting.....E. N. Bates made an eloquent plea for more geological articles for the News-Letter. It is hoped that he will get them. He is deserving of all the assistance in his new task that the membership can give him.

O.E.S.

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THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

Part 2

The Surveyor General Comes to the Oregon Country

No public land surveys were made in the Oregon Country prior to 1851. However, there must have been a few private surveyors working here before that time for many of the early settlers filed descriptions of their lands with the Provisional and Territorial governments that could have only been written by a surveyor. Most of the Americans, that came to the Oregon Country before the claim of the United States to the region was finally settled and the Oregon Territory was created, took up land in units of 320 or 640 acres just as if they were in the States. Their farms were made to take in natural clearings, so their boundary lines did not always follow the cardinal points of the compass. When the descriptions of these parcels were filed, their boundaries were usually described in courses and distances from some tree, stone or stake for a beginning point. But no one knew where these beginning points were unless they were viewed on the property described.

After the Territory of Oregon had been created, one of the first laws passed by Congress pertaining to the new country was "AN ACT OF CONGRESS Creating the office of Surveyor General of the Public Lands in Oregon, and to provide for the survey, and to make donations to settlers of said Public Lands." His duties were to be the same as those required in the survey of lands northwest of the Ohio. His office was to be located within the Territory at such place as shall be designated by the President of the United States. His salary was set at $2500 per year, to be paid quarterly, with $4000 per year allotted for help and office expenses. It provided further that "it shall be the duty of said Surveyor General to cause a base line and meridian to be surveyed marked and established in the usual manner, at or near the mouth of the Wallamet river; and he shall also cause to be surveyed in the usual manner and accordance with the laws of the United States which may be in force, the district of country lying between the summit of the Cascade mountains and the Pacific ocean, and south and north of the Columbia river; provided however that none other than township lines shall be run where the land is deemed unfit for cultivation; that no deputy surveyor shall charge for any line except such as may be actually run and marked, nor for any line not necessary to be run; and that the whole cost of surveying shall not exceed the rate of eight dollars per mile, for every mile and part of mile actually surveyed and marked."

This act also provided that every white American citizen, American half-breed Indians included, over the age of 18 was entitled to take up a land grant of 320 acres, and a man and wife together could take 640 acres. Aliens who had declared their intention of becoming citizens prior to certain dates were also entitled to these grants.

John B. Preston was appointed as first Surveyor General of Oregon under this act. Local records do not include his appointment, but take up his journey to the Oregon Country with a letter written to his superior from Panama as follows:

" Department of the Interior
General Land Office
Panama N. G. (New Granada)
March 31, 1851

Hon. J. Butterfield
Coms. General Land Office
Washington
Sir:

I have the honor to inform you that I arrived at this place last Thursday. All of the Instruments and Stationary have also arrived and I believe without

accident except the breaking of one Barometer which was occasioned by the falling of a mule. I hand you herewith a/c of monies expended for Instruments and Stationary for use in my office, also by Deputy Surveyors in Oregon.

There are one or two bills that are not included, small in amount. The amount paid per a/c herewith and vouchers #1 to 11 inclusive is $3879.94, leaving in my hands of the amount received for the purchase of Instruments etc. - $56.06 unexpended.

It is my expectation to leave this place for San Francisco on Apr. 2nd on the "Steamer California".

Thus far myself and party have been well excepting the usual amount of seasickness. Hoping you will find the a/c and vouchers all correct and satisfactory, I remain

Your obt. servant
Jno. B. Preston
Surveyor General "

Nothing about his trip to San Francisco, and then to Oregon, seems to have found its way into local records. Neither is it clear about the number in his party, as he called it in the above letter. Information appearing in sources other than those used in this paper, make it appear that at least two of his deputy surveyors accompanied him from the East. These were Jas. E. Freeman and William Ives, who will be mentioned later in connection with the first surveys. Based on the date of the following letter, he arrived in Oregon City on April 30, 1851.

" Dept. of the Interior
Genl. Land Office
Oregon City, May 5,1851

Hon. Justin Butterfield
Coms. Genl. Land Office
Washington

Sir:

I have the honor of informing you that I arrived in this City last Wednesday in good health and without accident, have had an unusually pleasant trip. I find a large proportion of the Oregon people have gone to the Klammath mines, a portion of them are in the S. part of Oregon, but mostly in California.

Reports are quite favorable of their success. This state of things causes wages and the necessaries of life to be exorbitantly high. Laboring men $75 to $100 per month and found, Carpenters $8 per day, Flour $15 per bbl., Pork $25 per bbl., Beef 18¢ per lb., Potatoes $2 to $2.50 per bu., Butter 75¢ per lb., Wood $8 per cd., and other things in proportion.

There will be much difficulty in getting competent men to aid Deputy Sur. in running lines owing to the scarcity and high wages paid here.

Owing to the uncertain information about the position of the Columbia River, it will be necessary for me to go to the Cascade mts., and have a random line run from the most southerly point in the river west to the Meridian Line (or random from the mouth of the Willamette) to enable me to designate the starting point for the Base and Meridian lines. The face of the country along the Columbia River is exceedingly rough and broken, covered with heavy timber and thick undergrowth.

Along the Willamette to this place the banks are not as high and the timber smaller than on the Columbia. All of it will be slow and difficult surveying.

I have rented a building for an office at the rate of $50.00 per mo.

Very Res. your obt. servant
Jno. B. Preston
Sur. Genl. of Oregon "

The Oregon City Spectator, in its issue of Thursday, May 8, 1851, heralded his arrival in the following manner:

"The Surveyor General has made his headquarters at Oregon City. He will set about the work of his mission in a few days. He purposes visiting the Cascades, and near that point ascend the Cascade mountains, from which he will make a commencement."

Bibliography

Records of the Territorial Government in the Office of the Secretary of State, Salem.
The Oregon Code, Multnomah County Law Library, Portland.
Letters F 6, 10- 1 and F 6, 10- 2, Oregon Historical Society, Portland.
The Oregon City Spectator, May 8, 1851, Oregon Historical Society, Portland.

H.B.S.

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THE ANNUAL PICNIC AT MT. TABOR PARK

Nearly a hundred hungry geologists swarmed up the wooded slopes of Mt. Tabor Friday evening, August 13, to attack a picnic dinner in the grove and a program in the crater of the extinct volcano.

Miss Myrtice E. Fowler and her able committee had arrived early in the afternoon to start the fires and make the coffee. And such coffee. The first cup was accepted with some twinges of conscience, and the full knowledge that sleep would be wooed in vain. The cup was refilled with a devil-may-care air and with the line from Lord Byron's "Childe Harold's Pilgrimage", "Let joy be unconfined; no sleep till morn", running through my brain. The third cup was drained in the spirit that drains many a cup of more potent beverage: "The good die young, and I'll never be younger". Strange to relate, I slept like a child from the moment that my head touched the pillow! You never can tell how these things will work.

It is safe to say that no one left the tables with an unsatiated appetite, since many of the picnickers are ardent Victory gardeners and brought the fruits of their toil in the soil to demonstrate their prowess. To dwell too strongly on the subject of food might lead to the erroneous impression that the reporter lives to eat instead of merely eating to live so that he can write. However it is true that the eating process, on this occasion, was not entirely boring.

Then came the call: "On to the Crater!" and the tables were hastily cleared by the women while some of the men carried benches to the crater. The crowd calmly submitted to the promiscuous snap-shooting by Stanley, well knowing that he was wasting his time and his film in the semi-darkness.

Clarence D. Phillips was master of ceremonies and Dr. W. Claude Adams led the community singing, easily keeping one to one and a half beats ahead of the

folks in the far corner of the group. Mrs. Adams accompanied the singers on a portable organ.

Mr. Phillips made some announcements, and A. D. Vance read parts of a letter from Dr. and Mrs. Arthur C. Jones, expressing the wish that they might take part in the festivities of the evening, and telling some things about his work in the Letterman General Hospital.

The group of serious souls who haunt President Ruff's basement on Sunday evenings to paste up paper crystal shapes and split geodes to see how they are put together (and can never get them together again as they were before) gathered around the table in front of the rows of benches and put on a reasonable facsimile of a "work night" with A. D. Vance as leader. A. W. Hancock and Mrs. James after much patient effort got an octahedral crystal of mammoth dimensions nicely pasted together, only to find that they must open it to remove Hancock's agate and the collection box.

Dr. Robert Nichols of the U. S. Geological Survey gave a very inspiring talk on the national parks and the part that they play in the well being of the people of the United States. He particularly emphasized the desirability of setting aside an area surrounding the Newberry Crater as a national park or a national monument. He thought that the Geological Society of the Oregon Country would be a good organization to work for such a result.

Dr. Edwin T. Hodge read an interesting account of a trip to Africa which kept his hearers "in stitches" as the saying is. If Africa is anything like it was painted by the learned doctor we may look for a mass migration of our soldiers who are now fighting in that land, after they are released from the army.

E. N. Bates entertained and instructed the group with a bit from the life history of Jonah, beginning in an ordinary conversational manner, then as the spirit of the theme took hold on him, he swung into the sing-song of the old-time preachers, and finally soared away on the wings of song to the delight of his hearers.

Under the head of "The Good of the Order" J. Dean Butler had much to say and said it in a very interesting manner. He somewhat politely bawled out the chairman of the membership committee, A. W. Hancock, and others including the erstwhile editor of the News-Letter who has been prone to fill the paper with personal experiences in plumbing, gardening, etc., and even attributed St. Peter's refusal to allow Mrs. Stanley to pass through the Pearly Gates to the fact that she was the wife of the News-Letter editor. Possibly if the audience had known what Mr. Butler had passed through during the day, his rather pessimistic views would have been more fully understood, and more readily forgiven. On meeting him earlier in the evening, I had remarked:

"You look some what fed up, Mr. Butler."

"Yes, I've had a trying day." he replied. "My office boy tried that old gag about wanting the day off to attend his grandmother's funeral. I thought I'd teach him a lesson, so I said I'd go with him."

"Not a bad idea," I volunteered. "Wasn't it a good baseball game?"

"It wasn't a baseball game," replied Mr. Butler gloomily, "It was his grandmother's funeral."

A. W. Hancock related the story of an interesting trip to the Pearly Gates (which he discovered are of gem quality jasper) and painted the picture in such a manner that all geologists will ask to be allowed to carry their picks with them when they cross the River Styx. A further plea was made by Mr. Flood for the Society to take up the matter of asking that the Newberry Crater area be made a National Park; then the crowd dissolved into the darkness. O.E.S.

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Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

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MEETING ANNOUNCEMENTS

The lecture by Dr. Robert L. Nichols on "Alumina, Aluminum, and Northwest Clays" has been postponed.

FIELD TRIP, SUNDAY, SEPTEMBER 12, 1943

The field trip for Sunday, September 12, 1943, has not yet been outlined.

The Oregon City trip scheduled for August 29th was postponed on account of rain.

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CORRECTIONS IN THE MEMBERSHIP LIST

Jennison, Harry L., 1561 S. E. Linn Street La. 5594

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NEWS OF MEMBERS

Lewis H. Irving (Member G.S.O.C.) Sells Grain Warehouses

Madras, Oregon - The Deschutes Grain & Feed Co. of Redmond has purchased the five Grain Warehouses owned by Lewis H. Irving. These include two local warehouses, one at Culver, one at Metolius, and one at Paxton. Mr. Irving was a member of the Geological Society for many years.

From The Grain Dealers Journal, August 11, 1943.

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WATER-SUPPLY PAPER 916

Summary of records of surface waters of upper Columbia River Basin in Montana and Idaho, 1898-1938, by A.H.Tuttle and T.R.Newell. 1943. iv, 216pp. Price, 30 cents.

Records of stream flow collected by the Geological Survey in the upper Columbia River Basin in Montana and Idaho are scattered through 45 reports, many of which are out of print. This report brings together in one volume in the form of summaries of monthly discharge all records of stream flow collected in the upper Columbia River Basin in Montana and Idaho prior to October 1, 1938. The summaries present figures of maximum and minimum daily discharge and monthly mean discharge and run-off for 113 river-measurement stations. The report also includes a bibliography of all Geological Survey publications containing records of flow of the upper Columbia River Basin in Montana and Idaho. The report was prepared in cooperation with the States of Montana and Idaho.

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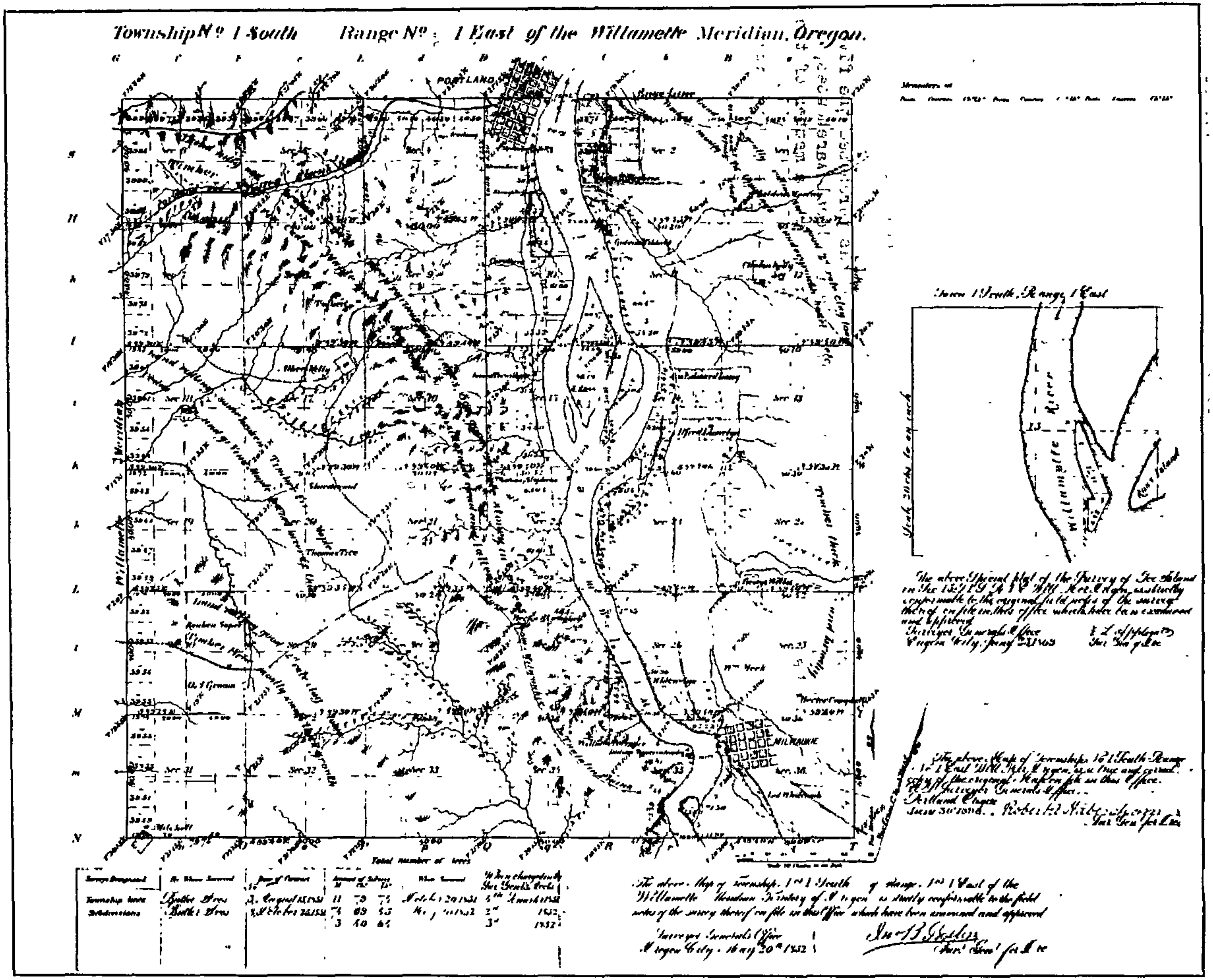
Township No 1 South Range No 1 East of the Willamette Meridian, Oregon.
PORTLAND
MILWAUKIE
Willamette River
Town 1 South, Range 1 East
Willamette Meridian
Total number of acres

THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

Part 3

Surveying the Wilderness

The Surveyor General did not waste any time in setting "about the work of his mission". Prior to his leaving the East, the General Land Office had issued a special manual titled "Instructions To The Surveyor General Of Oregon; Being A Manual For Field Operations", which had been prepared for his "own government and that of the Deputy Surveyors whom you may employ in the surveying service". His work was to first establish a base line and principal meridian, and standard parallels run at stated intervals parallel to the base line as preliminary to the surveying of the townships. Next was the "division of the country into townships of six miles square, of 23,040 acres, 'as nearly as may be.' And such division has to be effected in reference to the true meridian, by methods which keep in view the convergency on their north of the meridional lines." And last was the division of the townships into sections and quarter sections. Great stress was laid on methods for insuring the permanency of the corners that were set. "Thus the place of a township or section boundary POST, must be evidenced by four 'bearing trees', if to be had, (one in each adjoining township or section, as the case may be,) whose course and distance, kind and diameter, all are to be given in the notes." A system of mounds and pits was also given for marking corners in treeless country.

The closing paragraph of the introduction to the manual is rather interesting even though it was not put into general practice:

"A suggestion will be found, under the appropriate head, that, at MOUND CORNERS, at least, the seeds of fruit trees might be planted, with the hope that, in a few brief years, fruit bearing trees may mark the place of the corner; and, indeed, the same might be done with advantage at all other corners. Your surveying corps will travel over some fields rarely, if ever before, trodden by the white man; and to the extent that such experiment could be made, successfully, in advance of the progressing settlements, would be to confer a benefit to civilization whilst performing a professional duty; and those engaged in the work might, themselves, not unreasonably, expect to reap some of its acceptable results."

The manual was a complete book of directions for the methods of running all necessary lines, together with specimen notes to be used by the surveyors in recording their work. Being dated March 3, 1851, it must have been off the press but a short time before Preston had to leave the East. The introduction says "it is particularly regretted that, for want of time, the illustrative diagrams could not be lithographed to accompany it."

Between the 5th of May and the 28th of May, Preston had made his visit to the Cascades and determined the point that would be used for the initial point for the surveys, for on the latter date he gave the first two contracts for the work.

The Portland Oregonian, dated Saturday, June 7, 1851, has this to say about the undertaking:

"J. B. Preston, Surveyor General, commenced his labors on Wednesday, last, about 3 miles west of Portland, where the starting stake has been driven. The base line will run directly through our city from east to west. Mr. Preston informed us that the four parties would be in the field in a few days. If energy, industry, and

perseverance will forward the survey, we are quite sure the work will speedily be accomplished. The people should remember, however, that this is a herculean task, requiring time for its accomplishment. A little of that virtue which Job possessed will be required before all interests will be served. Mr. Preston will do all in his power, to complete the survey at the earliest possible moment."

Preston's own report of his activities is rather interesting, for it shows that he had given his work serious attention following his arrival at Oregon City.

"Sur. Genl. Office
Ore. City, Ore., June 14th, 1851

Hon. J. Butterfield,
Coms. Genl. Land Office.

Sir:

I have the honor to transmit herewith a contract made with Jas. E. Freeman, Esq., for surveying the Willamette Meridian from the Base line south to the Umpqua valley, and a copy of the special instructions given him. I also transmit a contract made with Wm. Ives, Esq., for the survey of the Willamette Meridian north of the Base Line to Puget Sound and the Base Line from the Pacific coast to the summit of the Cascade mountains, and a copy of the special instructions given him.

Previous to making these contracts, I organized a party and visited the Columbia river and found it necessary, to go as far east as the Cascade mountains in order to determine the point to start the Base Line so as to "avoid its most southerly bend." After determining this, I made a partial examination of the country near the mouth of the Willamette to find a proper point to cross with the Meridian line. In the examination I found that there was one small lake that would interfere, but considered this much less of an obstacle than the broken country the line would have to pass over if thrown west to the lower mouth of the Willamette near St. Helens, also believing that if the line was changed to the east there would be great danger in running into the broken country at the foot of the Cascade mountains, determined to locate the line on the point designated in the map accompanying your instructions. (This map was probably one made by Lt. Charles Wilkes following his visit to the Oregon Country in 1838-41, and containing a rather detailed survey of the Columbia river. Author)

The point of intersection of the Base and Meridian line is $3\frac{1}{2}$ miles west of Portland. The Base Line will run through Portland on the Willamette, and Hillsborough in the Tualitin Plains $15\frac{1}{2}$ miles west of Portland. The Meridian will run about 5 miles west of Oregon City.

The Deputy Surveyors find difficulty in getting men to assist them. The farmers are now offering $5 to $6 per day for men to assist in the harvesting.

In order to advance the surveys, it will be necessary to give out some contracts for surveying township lines before the survey of the Base and Meridian lines are completed. I have, therefore, desired the Deputies on these lines to return their notes after they have surveyed 75 miles each. After these notes have been approved, will give out contracts for surveying 25 township lines.

Very Res. Your obt. servant
Jno. B. Preston
Sur. Genl. of Oregon

H.B.S.

****

AGATE AND MINERAL SOCIETY PICNIC

Some sixty members and friends of the Agate and Mineral Society attended a picnic at the home of Mr. and Mrs. R. W. Hancock August 20th. Picnic baskets were opened at about 6:30 P. M. After all possible food had been stowed away, the group gathered around the big outdoor fireplace for an interesting program. Hancock in his own inimitable way acted as M. C. Wm. V. Horton opened the program with an original poem about various members of the society. The three Rice sisters rendered several numbers on their accordions which were highly applauded by the group. Bruce Schminky showed his pictures of the Steens mountain country. The evening ended with a tour of Hancock's basement museum.

R. B. S.

****

AN APOLOGY TO MRS. JAMES.

Mrs. James does not wish to be called a "grandmother's funeral". She says that Mr. Butler spent the afternoon before the annual picnic with her, and not, as the News - Letter erroneously reported, at the funeral of his office boy's grandmother.

It would be rather difficult to explain how this error in reporting came about except that the reporter's desk is usually in such a state of disarray that it is quite possible the funeral joke got mixed up with the notes for the picnic, and the reporter in his haste to get the copy to the printers on time, mistook it for the notes of the conversation that he and Mr. Butler had while his mind was more fully occupied with thoughts of food than with what he was being told.

At any rate, the reporter is starting soon on a rather extended vacation so the News - Letter will be free from such glaring inaccuracies for a while, at least.

O. E. S.

****

"Thompson Falls, Montana
Sept. 2, 1943

Dear Gsocs:

It's beginning to look like we're the forgotten party or something. It seems that we haven't seen enough of the State of Washington. The lower Pend Oreille and the Columbia Rivers are calling. Hope to see Portland by Sept. 15th, tho. The ducks and geese are flying in this country already.

I know I should have written sooner but the days - including Sundays - are not long enough. We have covered pretty much the same territory as last year.

Western Montana is still the land of ripple-marks - even the paved highways have them now! The other day we visited Camas Prairie near Perma and saw Pardee's giant ripple-marks. Some sight - hope the pictures show something.

I hear the picnic was a large success. Sorry to have missed it.

Will see you one of these days if you haven't elected a new President yet.
(CENSORED)

Sincerely, L.L.Ruff."

****

O. E. STANLEY TO HAVE VACATION

This society is most fortunate in having among its members a natural born editor like Mr. Stanley. His long experience in the editing and writing profession has brought to the News - Letter in the past two years the full play of his wit and wisdom which has contributed so largely to our appreciation and enjoyment of the News - Letter.

Now Mr. Stanley with his family is taking a month's vacation. He has planned to wander about the Pacific Northwest as the unrationed "spirits" happen to move him.

We shall look forward with interest to seeing the photographic beauties and geologic trophies he is sure to collect on this nomadic outing as well as hearing of the droll situations and exciting verbal encounters with his fellowmen (and women) which O.E. is sure to have when he goes abroad.

The best wishes of all of us go with you and your family, Mr. Stanley. We hope that your vacation may rest you and cheer you and fill your mental file with happy memories for your future writings and our great appreciation and pleasure.

Alas! What will happen to the Geological News - Letter in your absence? There is no one to do the fine job you have been doing for the Society. The only thing that remains for us to do is for every one of us who has an idea that can be developed into an article for the News - Letter to get right busy and write it and send it to E. N. Bates, temporarily in charge, 345 U. S. Court House, Portland 5, Oregon. Don't put this matter off for material is needed immediately. If you (and I do mean YOU) will each cooperate and we can show Mr. Stanley a bulging file of fifteen or twenty good new articles, all in the News - Letter bag when he returns, I am sure it will be the finest welcome back home that we can possibly give him. Will you help? P L E A S E.

E. N. Bates.

****

FRIDAY EVENING MEETING

August 28, 1943

In the absence of President Ruff the meeting was called to order by Vice-President Barr who thanked the picnic committee for its efficient work in preparing the very entertaining program and making the coffee for the annual picnic. Myrtice Fowler, chairman of the committee was ably assisted by Almeda Smith and Kate L. Rosa.

Trip and Program announcements were made by the chairmen of the committees, supplemented by Mr. Butler's comments on the probable extent of the field trip to Oregon City.

Dr. Edwin T. Hodge spoke at length on the subject "A Geologist Views the Industrial Future of the Northwest." He called attention to some of the predictions that he had made in the past which had proved the accuracy of his foresight, and ventured to forecast the future, basing his predictions upon his experience as an economic geologist and upon his observations of world conditions.

Dr.J.C.Stevens, when asked to tell about the new museum, prefaced his remarks by stating that he agreed with most of what Dr. Hodge had said; then he urged everyone to go to the City Auditorium and look at the geological exhibits.

O. E. S.

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 18 PORTLAND, OREGON September 25, 1943

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STATE DEP'T OF GEOLOGY &
MINERAL INDUSTRIES

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GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Edwin T. Hodge	Ray C. Treasher	John Eliot Allen
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Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place opposite Public Market, S. W. Front Avenue and Yamhill St.

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 sixty cents.

MEETING ANNOUNCEMENTS

FRIDAY Sept. 24 Watch your daily papers for announcement of speaker for the evening.

FIELD TRIP

Final date has not been set for Oregon City trip.

****

CORRECTIONS IN THE MEMBERSHIP LIST

We regret that the names of Mr. & Mrs. E.C.Johnson were inadvertently left off the list of members of the Society published in the News-Letter.

Mr. & Mrs. E. C. Johnson, Route 9, Box 2160, Portland 16, Oregon
Dr. Warren D. Smith, 1941 University St., Eugene, Oregon. Phone 1334 W.
Mr. & Mrs. Stuart N. Twiss, Route 8, Box 1853, Portland 1, Oregon. CHerry 3442.
Mr. & Mrs. Carl P. Richards, 530 N. 19th St., Salem, Oregon. Phone 4315.

In a letter giving us this correction of their address, Carl said he was improving but his recovery is slow, and he was still completely out of circulation. The S.G.S. is still going strong, and Carl misses being present at its various activities.

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NEWS OF MEMBERS

Mr. Hanz Honald, shipyard worker at Swan Island, painted a portrait of Miss Ellen James. The portrait was exhibited at Multnomah County Fair where it was awarded second prize in competition with Oregon artists.

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SPECIAL NOTICE

Assistant Editor's Note: I wish to call the attention of the membership to the fifth paragraph of page 110 of Vol. 9, No. 17 of the News-Letter. For the next couple of weeks I am more interested in articles to be used immediately rather than the fifteen or twenty articles for Mr. Stanley. The membership has never let me down yet - so let me have news items, please. This is a plea of the assistant to the Acting Editor, Mr. Bates. Address all communications to Raymond L. Baldwin, 345 U.S. Courthouse Bldg., Portland 5, Oregon.

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LUNCHEON NOTES FOR THURSDAY, AUGUST 26, 1943

Perhaps the most outstanding feature of the luncheon meeting of the G.S.O.C. at the Winter Garden restaurant on August 26 was the appearance of Kenneth N. Phillips with a box of geological specimens from Hobart Butte, about fourteen miles south of Cottage Grove, Oregon. In the box were samples of aluminum ore, realgar, scorodite, orpiment, and carbonized wood. The scorodite is a very rare arsenic mineral which is deposited by warm, percolating water..... Mrs. Barr had four nice arrow heads which she had picked up on Sauvies Island..... Miss Hughes had a specimen from Grants Pass that she brought for identification..... Mrs. Stockwell read a short article from a magazine published by the Kalamazoo Vegetable Parchment Co. telling of paper made from the wrappings of Egyptian mummies, each of which was said to have been wrapped in about thirty pounds of cloth. The paper manufacturer said that his only competitor in the bidding for the mummies was an Egyptian railroad which had used the mummies for fuel in its locomotives..... Dr. J. C. Stevens gave a further account of the museum and the part the geologists plan to take in its development. He also gave some hints as to the post-war development program in which he is vitally interested as chairman of the Works Programming Committee. ..... We nearly forgot to mention the large green stone that Ellen James is wearing, and the argument as to whether it is genuine beer bottle material or some imitation, such as emerald. Anyhow, it is a beautiful stone, and Ellen wears it without undue ostentation.....Nineteen members were present.

O.E.S.

LUNCHEON NOTES FOR THURSDAY, SEPTEMBER 2, 1943

With tables set for twenty in a small room at the Winter Garden restaurant, thirty geologists assembled for the meeting. The latecomers had a table set for them outside the door and came into the main room after they had finished eating and some of the earlier arrivals had hurried away to earn their next meal. The distinguished group at the special table consisted of Miss Hughes, Leo Simon, and J. Martin Weber..... Mr. Minar had a specimen of ore which he thought might contain zinc. Experts decided that there might be some zinc in it but that the greater part was galena..... Miss Henley brought two slabs cut from a geode which she had found. Her brother had cut the stone, and the pieces exhibited were polished by Tom Carney. .... A. D. Vance had a small piece of magnesium which failed to make the complete circuit of the tables and was found after much inquiry and diligent search on the floor back of Mr. Miller and Mr. Bates..... Mr. Kimbrell called attention to an article in a copy of Scientific Monthly he had just received illustrating many of the natural bridges of the United States..... Mr. Bates exhibited a piece of weaving done by Mrs. Stockwell -- the first piece of work from her new loom..... F. W. Libbey mentioned the exploratory borings for coal that are being made in the Coos Bay area under the direction of John Allen. He suggested that the coal might possibly be mined by the stripping method..... Mr. Bates made a rather impassioned plea for contributions to the Geological News-Letter of which he is assuming (a little reluctantly) the editorship. It is hoped that his plea may be more effective than the prayers of former editors..... It was learned by the grapevine route that Miss Henley will report the luncheon meetings in the future. Both of these changes in personnel will naturally result in marked improvement in the contents of our favorite magazine.

O.E.S. (Signing Off)

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THE MILKY WAY

by

J. Hugh Pruett
Astronomer, Oregon General Extension Division

Have you ever watched for the first delicate strokes of the invisible hand of deepening night as it paints across the moonless August and September skies the barely perceptible wisps of the Milky Way? There is poetic delight in these first glimpses of the brighter, isolated portions, faintly luminous in a very clear, deep blue sky.

As the background darkens, the misty band is intensified and drawn across the entire heavens, a white pathway extending from the twinkling stars of Perseus in the far north-northeast across the entire heavens to the mysterious region of Sagittarius low in the south.

When twilight has faded entirely from the evening sky, the band of the Milky Way appears far from uniform in brightness and outline. Throughout a great part of its length there are dark, irregular rifts that divide it roughly into two parallel bands of cloud. Far down in the south it seems to be thickly massed nebulosity.

The late Professor Barnard of Yerkes observatory described a most striking view of a part of this delicate band when, on a heavily-clouded, moonless night, a sudden rift in the earth's clouds revealed to him these cosmic clouds in the rich regions of the south. "They piled up in great cumulus masses like summer clouds. They appeared very bright as if an illumination far greater than the Milky Way was shining through."

The nature of this nebulous band was long a mystery. Some of the ancients said it was the dust of heaven stirred up by the feet of Perseus as he hurried to rescue the chained Andromeda from the threatening sea monster. It was sometimes referred to as the highway to heaven, a highway among the stars traveled by souls of the departed. It was said by another to be a vast assemblage of lights held by angels to guide men along the way to heaven.

This beautiful band has often been the inspiration of poets. In Milton's "Paradise Lost" we read:

"Abroad and ample road whose dust is gold
And pavement stars as stars to thee appear
Seen in the Galaxy, that Milky Way
Which nightly as a circling zone thou seest
Powdered with stars."

In his "Hiawatha," Longfellow referred to the Milky Way as

".....the broad white way to heaven.....
Running straight across the heavens
To the kingdom of Ponemah,
To the land of the hereafter."

But throughout the ages there have been men more realistic than the mythologists and poets. Even in ancient times, there were serious students of nature who tried to find reasonable, scientific explanations of this delicate band of light across the sky.

One of these students of the skies considered it was a zone of stars, the light of which was somewhat obscured by the earth's shadow. Another, that in this part of the sky there were such multitudes of tiny stars crowded together that they illuminated each other. Others thought that it was a mixture of dense and rare atmosphere; or the path of the sun among the stars; or a fire less dense but more luminous then the stars.

Theophrastus had a very queer opinion of the Architect of the Universe. He believed that the two halves of the sphere of heaven had been joined together and that it had been so badly done that at the junction "some of the light supposed to exist behind the solid sky was visible through the cracks."

The noted Aristotle considered the Milky Way a vast mass of glowing gas which was nearer the earth than are the planets. Pythagoras, who lived around 550 B.C., believed that this hazy belt was a "vast assemblage of very distant stars."

Finally, one night in the year 1610, this great puzzle of the ages was solved when Galileo, the noted Italian astronomer, turned his newly invented telescope on the Milky Way. Would that the ancient Greek Pythagoras could have been present with Galileo that night to see his opinion verified after 2000 years.

Galileo's little telescope broke up the hazy band into countless points of starry light, each point too dim to be detected individually without this optical aid. But let us tell it in Galileo's own words:

> "The next object which I observed was the essence or substance of the Milky Way. By the aid of the telescope any one may behold this in a manner which so distinctly appeals to the senses that all the disputes which have tormented philosophers through so many ages are exploded at once by the irrefutable evidence of our eyes, and we are freed from wordy arguments upon this subject, for the Milky Way is nothing else than a mass of innumerable stars planted together in clusters.
>
> "Upon whatever part of it you direct the telescope, straightway a vast crowd of stars presents itself to view; many of them are tolerably large and extremely bright, but the number of small ones is quite beyond determination."

Some of Galileo's contemporaries were so sure that his telescope was an instrument of the devil that they refused to look through it, or, if they did look, insisted that what they saw was a diabolical delusion. But to the open-minded, the proof of the nature of the Milky Way was thoroughly convincing. The myriads of tiny stars, seemingly closely packed, so blend their light that they produce the white cloudy form seen by the unaided eye.

When we view the Milky Way on these late summer nights, we are really seeing only half of the great band, for it extends below the horizon in either direction and encircles our entire sky. Most of that part now invisible will come into view during the winter nights. However, there is a small segment so far to the south that it is never visible from our latitude.

During the evenings of late spring this nebulous band is hardly noticeable for it lies almost along the horizon; in late autumn, it extends approximately from east to west.

After the nature of the Milky Way was fully revealed, it was questioned why there should be such a ribbon of faint stars extending around the entire sky.

Sir William Herschel, the English astronomer who did his most important work about 150 years ago, developed from his study of stars of various apparent sizes a theory that still stands as correct. According to this theory the billions of stars in our huge star system - also known as our galaxy - are clustered into an immense disk, shaped something like a watch. All these stars are blazing hot suns. Our own sun and its retinue of planets occupy a most inconspicuous space in this entire immense galaxy and are approximately together.

This disk or star system is thought to be so wide across that 100,000 years are required for light to travel from any place on the rim across to a point on the opposite side of the rim. This distance we call 100,000 light years. But the distance through this disk - as through the watch from the face to back - is 10,000 light years, or only one-tenth as great as across the disk.

Our sun and its planets are thought to be some distance from the center of this galaxy. But for simplicity of illustration let us suppose that we are within this watch-shaped disk, at its exact center.

Now when we look out from the center of our disk toward the rim, we have to look ten times farther to see the most distant stars on this rim than to see the most distant stars above or below us, as - in our illustration - on the face or back of the watch.

Thus, through this greater distance looking toward the far away rim, we see a multitude more of stars than when we look skyward in the direction of the thin part of the disc. As a result, the visible stars seem many times more abundant in a band entirely around the sky than elsewhere. And in addition, there are the countless numbers that are so distant they cannot be seen individually by the unaided eye, but, because they are so numerous, their combined light gives us the white band. This explains the superabundance of visible stars in and near the Milky Way, and explains the Milky Way itself.

The dark rifts in this celestial path are not thought to be vacant spaces among the distant stars, but rather are produced by non-luminous dust, only a few hundred light years from us, obscuring parts of the band of light. Doubtless if some mythical "wind of heaven" could blow this dust away, the Milky Way would become more nearly uniform in appearance.

Viewed through a modern telescope equipped with a low-power eyepiece, this heavenly pathway is a treat not to be forgotten. In the circular field of the instrument the white band becomes a multitude of little stars: some fairly bright; others, dim; still others, the merest pinpoints of light which almost elude your eye. Double stars of about equal size, seeming almost to touch, are abundant. Colored celestial star-jewels adorn the scene here and there with their reds and greens and blues.

And still the background is a cloudy will-o'-the-wisp! Luring you on and on to more powerful telescopes that will reach farther and farther into the mysteries of our great galaxy and reveal myriads of other starry points set in an elusive mist. Truly, this is a highway in heaven, white with star-dust, "studded with stars."

****

LUNCHEON NOTES FOR THURSDAY, SEPTEMBER 16, 1943

School days have again depleted our ranks. An attendance of nineteen, with Leo Simon carrying off the honors as the last arrival. Dr. Booth was with us again, after an absence of several weeks. Mr. Stanley dropped in, so to speak, in an unofficial capacity, between vacation trips. He reports a paucity of agates at Depoe Bay but a pleasant week with Mrs. Stanley and their son and his family. The only untoward incident was a near encounter with a fierce detachment of WAGS - the dogs of war - who actually moved the plywood houses to which they were chained, straining at their leashes to be "up and at 'em."

Mr. Bates leaves on the 18th for San Francisco on business for the Department of Agriculture which he represents, to be gone for three weeks. Mr. Baldwin will carry on as editor during his absence.

Some attractive specimens were shown - a fragment of oolitic limestone from Indiana by Mrs. Barr; Mr. Twiss brought a bit of Cambrian shale containing fossils, a specimen of agatized wood from Roosevelt, Washington, and a beautiful piece of malachite which, he said, he had "picked up on the Belgian Congo" - just like that - some twelve years ago. We'd like to do a little picking in those parts. The outstanding rock was the magnificent boulder of jasper from the vicinity of Lebanon, Oregon, brought by Mr. Minar, which, fortunately for the crockery of the Winter Garden, was not passed around the table, as it weighs at least 35 pounds. Mr. Minar also presented as his guest his brother, a member of the Salem Geological Society.

A.H.

****

Schofield, Stuart J.

Coast Range Composite Batholith of British Columbia.

(abst. Geological Society of America, Proceedings for 1935, p. 102, June, 1936)

1. The sedimentary rocks on both flanks of the Coast Range are progressively older as one goes from S. to N. The oldest known rocks to the south, in the vicinity of Vancouver Is., are Jurassic, with a possibility of Carboniferous, on the Ballinac Is., and in the panhandle of Alaska, rocks of Ordovician age are present. On the E. flank to the south, the oldest known rocks are Carboniferous, while in the Wheaton district of the Yukon, rocks of pre-Cambrian age have been described.

2. The Coast Range batholith consists of a central irregular mass of granodiorite with a peripheral phase of diorite almost universally present.

3. The Coast Range batholith as revealed by its satellitic intrusions, was intruded during pre-Cambrian, Jurassic, Eocene, Oligocene, and post-Miocene times.

4. The batholith was intruded by stoping as well as displacement of the bedded rocks by pressure from below in such a way as to cause the formations to correspond in strike with the borders of the batholith.

5. The pre-Cretaceous sedimentary series were derived from an old landmass, Cascadia, which was gradually submerged beneath the waters of the Pacific Ocean.

6. The through valleys of the Coast Range are antecedent valleys.

R.C.T.

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MEETING ANNOUNCEMENTS

FRIDAY Oct. 8 — A treat is in store for GSOC members on October 8th. Our guest speaker will be an authority on Indian Affairs. Watch the daily papers for further information.

FIELD TRIP

Field Trip to Oregon City, Sunday, October 10, 1943

Chairman Earl Minar and J. Dean Butler have arranged a trip to Oregon City for Sunday, October 10, leaving the meeting place at S. W. Front Avenue at S.W.Yamhill St. (across Front Ave. from the Public Market) at or before 9:30 a.m. and re-assembling in Oregon City at the Butler Building just south of the Court House at as nearly 10:00 a.m. as possible. Points of historical and geological interest in Oregon City will be visited. It is probable that a trip through one of the pulp or paper mills will be a part of the program, and if boats can be secured , there will be a trip to the fish-ladders. It is important to know as nearly as possible the number who will make the trip. Please notify Mr. Minar or Mr. Butler as early as Friday evening if you plan to make this trip. In case there are not enough automobiles for all who wish to go, the rest may take the interurban train at S.W.Washington and S.W.First Ave. on the even and half hours. The train trip takes 48 minutes.

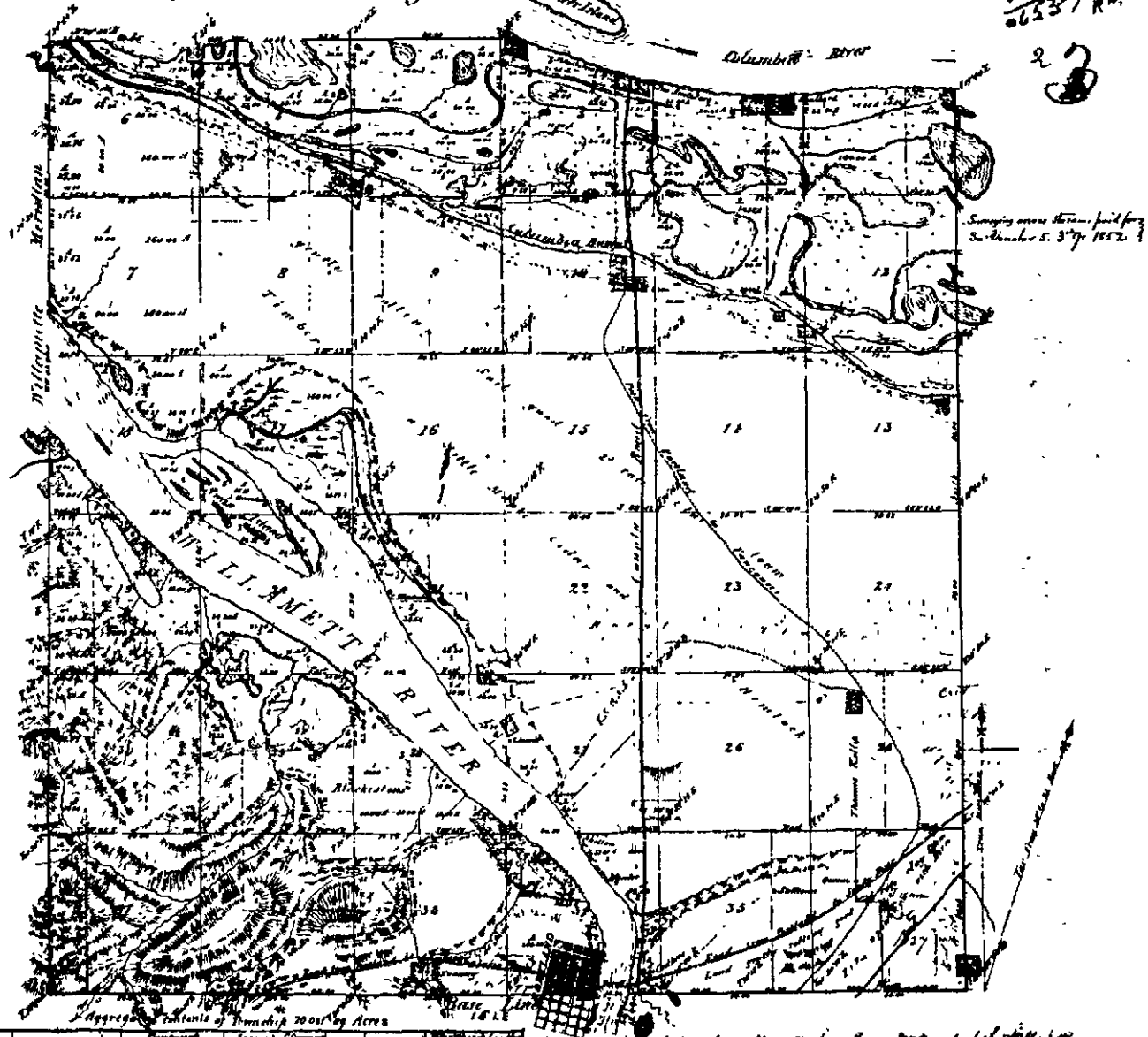
LUNCHEON NOTES FOR THURSDAY, SEPTEMBER 9, 1943

When I walked into the Victory Room for the luncheon, I thought that it was ladies' day. I inquired around, however, and found out that they weren't giving nylons away. The men were just late. Tsk! Tsk! I thought that was a woman's privilege. Of course Mrs. Minar came in about one-half hour after the luncheon had started, but she just wanted her name in the bulletin...There were two guests present at the luncheon. Miss Hughes presented her niece, Miss Margaret Hughes. Mr. Stevens had as his guest, Mr. Christenson, who is the director of the museum we've been hearing so much about...It seemed very nice to have Mr. and Mrs. John Allen back with us. (Incidentally John, we think that the mustache is really something.) The Allens are going to be with us for a few days and then are going back to Marshfield. John passed around a map of the area in which he is working. It showed the areas where there was coal and where coal has been mined out...The only geological specimen present was owned by Mr. Bates. He said that it was part of the Roman Wall built near London. It didn't look like part of a wall to me, but then Mr. Bates ought to know!..Mrs. Barr read a letter written to the G.S.O.C. by our president, Lloyd Ruff. We enjoyed the letter very much. Mrs. Barr thought that it was just part of his letter and had to be informed that there wasn't any more...Mr. Libbey read part of a letter from Mr. Hy Wood. He is a Chief Gunner's Mate. We gathered from his letter that he is dealing in explosives and setting prairies on fire. Oh Well, I always knew that geologists were queer people.

E.J.

****

Township No 1 N. Range No 1 E. Willamette Meridian



Aggregate Contents of Township 70 08/100 Acres

Number of Sections	By whom Surveyed	Date of Contract	Date of Return	Number of Miles Exterior	Number of Miles Interior	Number of Miles Total	When Approved	Remarks

The above Map of Township No 1 North of Range No 1 East of the Willamette Meridian Territory of Oregon is strictly conformable to the Field Notes of the Survey thereof on file in this Office, which have been examined and approved

Surveyor General's Office

THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

Part III (Cont.)

SURVEYING THE WILDERNESS

Besides the record of their surveys, each Deputy was required to note the types of soil, the kinds of timber, salt springs, visible mineral deposits, topography, roads and trails, and the houses and clearings of settlers. The field notes of these early surveys are therefore a mine of historical information. They were written in what is known as the "narrative" style, in which the surveyor gave a sort of running story of his work, such as

> "(Wednesday) June 4, 1851.
> Willamette Meridian - North of Base Line.
> Field notes of the survey of the Willamette Meridian, in the Territory of Oregon by William Ives, Deputy Surveyor, under his Contract No. 2, bearing the date the 28th of May, 1851-
>
> Commenced at the intersection of the Willamette Meridian with the Base Line in Latitude 45° 30' North (by solar compass) where is set a white cedar post, from which
>
> a fir 18" diam. bears N 62° E, 28 links distance
> a fir 18" diam. bears S 55° E, 34 links distance
> a fir 15" diam. bears S 27° W, 31 links distance
> a fir 16" diam. bears N 29° W, 27 links distance "

a little later he records, as he extends his line northward,

> " a stream 3 links wide, course East"

as he approaches the bottom lands along the Willamette he says

> "descend a short distance over the outcrop of Trap rocks"

while down in the bottoms he records a settlers home as follows

> "940 links on last course to the northeast corner of Milton Dones (Doanes) log house filled with his wife and children"

Following the notes of the Base Line east from the Meridian we soon come

> "to a Road from Portland to Tualatin Plains, course S 45°W and N 60°E. It is on a ridge and curving."

and near the present Vista Ave. bridge he came to the

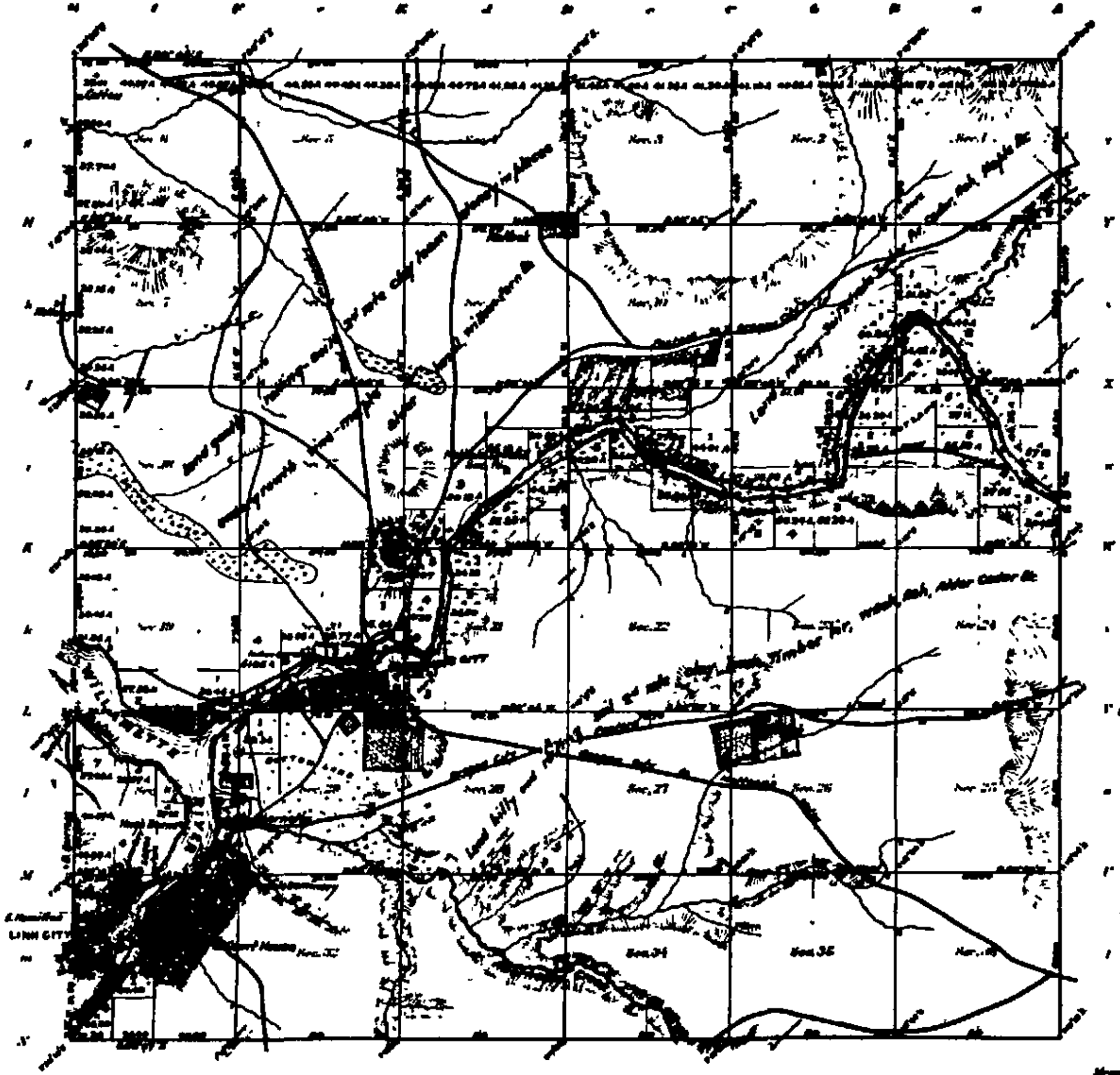
> "new road from Portland to Tualatin Plains, course W by S and ESE" (an approach to the present Canyon Road coming in from the north from Morrison St.)

while at the ¼ section post the third mile he noted -

> "north about 15 chains to a log dwelling house with a clearing of about 10 acres around it. There is a tannery a few chains east of it. It is claimed by Amos King." (present site of Multnomah Stadium)

(1-4756)

Township No. 2 South Range No. 2 East Willamette Meridian.



I certify this to be a correct copy of the Original Plat on file in this Office.
U.S. Surveyor General's Office
Portland, Oregon
Surveyor General

Areas in Acres

Public Land	
Indian Reservation	
Indian Allotments	
Mineral Claims	
Water Surface	
Total Area	

Scale 40 Chains to an inch

Mean Magnetic Declination

Surveys Designated	By Whom Surveyed	No.	Contract Date	Amount of Surveys Mls.	Chs.	Lks.	When Surveyed	
Township Lines	Joseph Hunt	16	March 20th 1852	12	1	36	[illegible]	[illegible]
Subdivisions	Joseph Hunt	17	May 13th 1852	60	16	67	[illegible]	[illegible]
				1	30	22		[illegible]

(2)

The above map of Township No. 2 South Range No. 2 East of the Willamette Meridian Territory of Oregon is strictly conformable to the field notes of the survey thereof on file in this office which have been examined and approved.

Surveyor General's Office
Oregon City June 30th 1852

(Signed) Jn. B. Preston
Sur. Genl.

and one chain east of the section corner set for the end of the 3rd mile he crosses

"a road, course WNW and ESE" (S.W. Yamhill St. near 10th Ave.)

at 26 chains from this corner -

"intersect the suburbs of Portland, course not defineable" (S.W. 4th Ave.)

at 40 chains -

"¼ sec. Cor. in a chicken house, NW cor. of which is 9 links N 45°W" (this was near the middle of the block between Front and First Aves. about 50 feet south of the south line of Stark St.)

while at 42 chains and 25 links he came

"to the middle of Front St., course S 22°W and N 22°E"

and at 44 chains -

"intersect the Willamette River and set meander post from which a white oak 12 in. diam. bears N 6 W 158 links, the NE cor. of C.Hortons Storehouse bears S 37°W 67 links, course of river N 20°E and S 20°W"

He made the river 18 chains and 92 links wide between meander posts. The low bottom land between the river bank and what is now the intersection of S.E. Union Ave. and Stark St., where he set the section corner for the 4th mile, was a series of sloughs or ponds.

"Corner of sections 34, 35, 2 and 3 in pond which is mostly caused by high water in the Willamette River."

As he worked eastward he passed the homes of a number of settlers and crossed several roads or trails leading from Portland to Vancouver or to the mouth of the Sandy River. But after passing the summit of Mt.Tabor, which he recorded 20 chains east of the corner set at the end of the 7th mile as

"summit of a rounded hill,"

he entered unsettled country. He camped for the night at S.E.112th Ave. and Stark St., where he set a ¼ sec. cor., adding this note to its description

"July 3rd, Camped without water."

His next reference to the works of man came 2 chains and 40 links before he set the post for the end of the 12th mile, and corner for townships 2 and 3 east, when he came

"to a wagon road from Oregon City to the road that leads from Portland to the mouth of the Sandy River,"

One could go on indefinitely quoting interesting references from each of the section lines or the meander lines along the rivers. Locations of Indian Villages and cemeteries could be found by following some of the notes. It was once proposed to restore the Champoeg settlement from the notes in the government land survey.

Work progressed rapidly after the start on June 4th. The survey for the Meridian south of the Base Line began June 11th, that on the Base Line to the west on June 15th, and the Base Line to the east was started July 1st. Running the township lines and the subdivision of the townships into sections followed as rapidly thereafter as possible. Butler Ives received contract No. 3 on Aug. 15th, for the establishment of the "Exterior lines of Township 1 North, Range 1 East, and 1-2-3-4 and 5 South, Range 1 East." Contract No. 4, for the survey of "Part of 1st Standard Parallel South and Exterior lines of Townships 6-7 and 8 South, Ranges 2-3 and 4 West",was let to William Ives on Sept. 10th. On Sept. 17, James E. Freeman received contract No. 5 for running "Part of 2nd Standard Parallel South, and Exterior lines of Townships 6-7-8-9 and 10 South, Range 1 West, and 9 and 10 South, Ranges 2-3 and 4 West". Geo. W. Hyde drew contract No. 6 on Oct. 13th for the "Subdivision of Townships 6-7 and 8 South, Range 1 West, and 6 and 7 South, Range 2 West". Contract No. 7 was let Oct. 13th to Joseph Hunt for the "Exterior lines of Township 1 North, Ranges 1-2 and 3 West." This called for nearly 1200 miles of line according to Preston's first annual report, dated Oct. 20, 1851.

(To be Cont.) H.B.S.

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NEWS OF MEMBERS

F. W. Libbey has received an interesting letter from Hi Wood, part of which is as follows:

"Two weeks ago this Sunday I visited Captain and Mrs. Jones at their Mill Valley home. It couldn't have been a more enjoyable Sunday. A Miss Agnes Jones from Portland was also visiting the Joneses so we almost had a GSOC meeting. They drove us up Mt. Tamalpais, then to Stinson Beach, then to Muir Woods National Monument (Redwoods), and back to Mill Valley. It was a wonderful trip and Mrs. Jones is an excellent and plentiful cook. We geologized a little, but mainly enjoyed the scenery....."

"Oh yes, the commission proceedings are progressing slowly as predicted. On September the 2nd I took another physical examination and passed it; however, I don't think the Admiral will call me in for an interview for another week. Then after the interview and his questionable sanction, the papers will go to Washington D.C. and join the hull-a-balloo there; then maybe, that's right I mean maybe, the official commission will come thru about the end of the year.

"In the meantime I'm learning more about explosives and tricks in the trade. About three weeks ago, while using that new primacord I started a prairie fire, and they had to call all the wagons in the area out to fight it. That special valley needed to be burnt off so we would have a place to work in without having to be so careful. The officers asked for an explanation; I told them just how it happened; and they haven't bothered me since. On the side I do a little experimenting of my own, when no one is around. Then when I make statements I know they will work. Don't let any salesman ever tell you that primacord won't burn from a lighted match, and isn't a fire hazard when it explodes. However it is a useful explosive and cheap, costing us only 3½ cents a foot. For experimentation and training I keep a stock of 6 different kinds of explosives namely TNT, Nitrostarch, Nitroglycerine Dynamite, 40% gel. dynamite, 60% gel. dynamite, and 40% Herculite (Ammonium Nitrate Cratering Charge). Considering the fact that we don't have but a few boulders to work on I try to give the men the most practical problems that I can, working mostly in adobe clay.

"My regards to one and all in the department and of course the GSOC members.

"Sincerely, Hi Wood."

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

VOL. 9 NO. 20 PORTLAND, OREGON October 25, 1943

GEOLOGICAL NEWS-LETTER
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MINERAL INDUSTRIES

THE GEOLOGICAL NEWS-LETTER
Official publication of the
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

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Communications and material for publication should be sent to the Editor. Change of address and subscriptions are required 30 days in advance of date of change, and should be sent to Emily M. Moltzner, Morgan Building.

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GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I,. . . . . (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place opposite Public Market, S.W. Front Avenue and Yamhill St.

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 sixty cents.

MEETING ANNOUNCEMENTS

Friday Oct.22 — Dr. E. L. Packard, Dean, Department of Geology, Oregon State College, will address the Geological Society of the Oregon Country, Friday evening October 22 at 8 o'clock. The subject will be "The Elephant Comes to Oregon". Dr. Packard has given this subject considerable study of late, and some excellent specimens of the Pleistocene elephant have been found in Oregon. Dr. Packard will have some slides and Mr. A. W. Hancock will have a display of specimens which will be of interest to all who attend.

FIELD TRIP FOR OCTOBER 24, 1943

A trip will be available up the Barnes Road to the Willamette Stone marking the intersection of the Willamette Meridian and the base line, if sufficient interest is shown in such a trip at the October 22nd meeting. Mr. Schminky will lead the trip.

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BLESSED EVENT

Newest member of the G.S.O.C. is David Allan Ruff, born to Mrs. Lloyd L. Ruff, on the morning of Friday, October 15, 1943. Congratulations, President and Mrs. Ruff!

****

LUNCHEON NOTES FOR THURSDAY, SEPTEMBER 23, 1943

President Ruff presided, having returned from his activities in Montana. He brought with him two unique specimens - a bit of franklinite and zincite from New Jersey, mounted in the center of a cylindrical section of red bakelite, smoothly polished, and a crystal of dogtooth spar similarly mounted in transparent lucite. Most attractive. These were made by Dr. Wayne Lowell, formerly of the Oregon State Department of Geology and Mineral Industries, now professor of geology at the University of Montana. Two faces not often seen in the luncheon group were those of Dr. Dake and Lincoln Doney. The latter reported having spent some time on his farm. Miss Hughes showed some interesting photographic views of the elaborately constructed rock garden and pool of Rasmus Peterson near Redmond. A specimen of zeolite containing tactile scheelite, epidote, pyrrhotite, sphalerite and clinozoisite, from northern California, was shown by Mr. Libbey, and some quartz crystals by Dr. Adams. Franklin Davis exhibited a book on the paleontology of Ohio, the home state of Dr. Booth, written in 1875. When asked if he had perused this weighty and impressive-looking volume, he replied solemnly, - but with fingers carefully crossed - "I have." Tut, tut!

A.H.

****

LUNCHEON NOTES FOR THURSDAY, SEPTEMBER 30, 1943

Page the officers! The chairs at the head of the table were conspicuously empty, but Florence Iverson saved the day, presiding gracefully. One lone specimen went the rounds, a rock picked up on Vancouver Island between Victoria and Sooke by Mr. Stanley, who requested that it be identified, but it left the table nameless as it came. Clarence Phillips also has been a recent visitor to British Columbia and told of seeing the Museum at Victoria and, among other things, a Kermode, the only white bear of its kind. One guest was introduced, by Mr. Vance - Mr. Ben S. Smith of the Department of Public Works. A first luncheon attendant was Mr. J.J.C.Quinn, a new member. The Engineering & Mining Journal, containing an article on Oregon chrome plants, was shown by Mr. Libbey.

A.H.

LUNCHEON NOTES FOR THURSDAY, OCTOBER 7, 1943

Again the GSOC's were shunted to the outer confines of the Winter Garden, giving place to the ladies of the T.P.A. Now what do they have that we haven't got? However, a small (but oh, very select) group of 16 was presided over by Mr. Ruff, lately returned with a fresh coat of tan from a "thousand-mile jaunt" in the Snake River country. How that man does get around. Says he saw one coyote and thousands of geese. He brought back an unusual arrowhead, made of iron, from the Ice Harbor area about ten miles from the mouth of the Snake River; quite different from those ordinarily found, and said to be one that was probably traded to the Indians by the Hudson's Bay Company in the early days.....Leo Simon spent Sunday at Depoe Bay and reports that the Spouting Horn is still in working order and ready and willing to drench any unwary sightseers. He showed a piece of carbonized petrified wood from that area, which brought on a discussion as to which process took place first - petrifaction or carbonization. Mr. Ruff says if the wood was liberated in a lava flow it had a good chance of being carbonized first, but this did not necessarily need to be the case; that it probably undergoes the same process as the formation of coal.....Mr. Minar exhibited a flat strip of "camm wood" about 8 inches long, 3/4 inches wide, pointed at one end, which stone-cutters use to draw lines in their work. This wood comes from Africa and is the only material known to the trade which does not crumble or break off when used for this purpose.....Three agatized fossil shells from Newport were shown, of which two were gastropods, the other we can't spell, but it belongs to the clam family.....Mr. Stanley gave some good advice to camera owners. Should your camera become wet with salt water, rush it to the nearest faucet or fresh water and flush it thoroughly. This will save resultant damage and expense for repairs. Mr. Stanley speaks from experience.....Ellen James made her final appearance before returning to Oregon State to continue her studies preparatory to becoming a professional geologist - more power to her.

A.H.

****

CHANGE OF ADDRESS

Mr. & Mrs. Earl M. Minar,	1403 S.W.Fourth Avenue,	SU. 7693
Miss Ellen James,	Jameson, 8, Park Terrace, Corvallis, Oregon	
Sgt. & Mrs. Robert C. Priestaf,	45 S.W.Richardson Court,	BR. 2276

****

Did you know that glaciation on a large scale, especially in the southern hemisphere, was a main event of Permian time?

****

INDIAN SUMMER

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

"There I lingered all October through
In that sweet atmosphere of hazy blue."

Indian summer, that delightful season of autumn with its unmistakable haziness and warmth and light, is beginning to scatter its beneficent spell over our northwest country, adding zest to the tasks that daily await us. Its charming days can scarcely fail to make the heart beat more strongly in the mere joy of living, and bring renewed hope even to those hearts too heavy with care.

For days the traditional characteristics of Indian summer have been distinctly evident. Ideal temperature imparting unusual enthusiasm to outdoor activities; strolls into the fields and woods, and the more active exercise of hill climbing are accomplished with a minimum of fatigue. A fantastic haze, lying lazily along the horizon, veils distant objects and imparts a softness to the early morning and late afternoon sunlight. At night the low-lying stars twinkle rather feebly. That essential touch of faint smokiness is present, giving a dark crimson complexion to the benignant faces of the setting sun and the rising moon.

Confusion often exists regarding the meaning of Indian summer and the time of year it is supposed to be with us. It is a condition rather than a definite period of autumn, though there is a general idea that this second summer follows shortly after the "mythical" equinoctial storms have cleared away. We usually think of October as the month for this mild summer-like weather, but it sometimes comes in late September or lingers on in early November. Occasionally two or three distinct Indian summers occur in one autumn.

It is fairly certain that the term does not denote a definite, never-failing season which every year is very distinctive. Dr. Milham in his Meteorology writes, "If Indian summer is defined as a spell of peculiar weather in the autumn, characterized by great warmth, smokiness and haziness, and lasting for several weeks, then it seldom occurs. If, however, it is defined as a few days of slightly greater warmth and haziness, which only serve to emphasize our otherwise delightful autumn weather, then Indian summer nearly always occurs."

This season undoubtedly first got its present name shortly before the year 1800. Over 40 years ago, Albert Matthews, in an exhaustive study of the American and European writings on weather, found no mention of this term anywhere until 1794 when Major Denny of Pennsylvania recorded in his journal, "Pleasant weather. Indian summer is here."

Webster's dictionaries of 1806 and 1828 had not yet acquired the term, but, by the time the 1841 edition appeared, Indian summer was given a place which it has since retained.

Of course it is true that many very early references to weather in America seem to describe perfectly our Indian summer, yet the term itself was not used. A writer in 1705 said of Virginia that the fall affords as pleasant weather as ever Mohamet promised for his Paradise. Seventy years later another wrote that in mid-September "the mornings and evenings begin to grow cool, and, from that time to the beginning of the winter season, the climate is heavenly."

Soon after 1800 the term, Indian summer, was often used, indicating that once introduced it was readily accepted as describing a delightful season well known to the people. In 1817, the English traveler, John Bradbury, wrote this of the Missouri territory and the Ohio river:

"About the beginning or middle of October the Indian summer commences, and is immediately known by the change which takes place in the atmosphere, as it now becomes hazy, or what they call smoky. This gives the sun a red appearance and takes away the glare of light so that all day, excepting a few hours around noon, he may be looked at with the naked eye without pain. The air is perfectly quiescent and all is stillness, as if nature, after her exertions during the summer, were now at rest."

John Howison in 1821 thus extolled this pleasant season: "The atmosphere has a haziness and smokiness which makes distant objects appear indistinct and undefined, and a halo often encircles the sun. At the same time a genial warmth prevails, and there is seldom any wind. The Indian summer is so delightful that one would almost suppose the country where it takes place to be transported for a season to some celestial clime where the elements ever existed in harmony and acted in unison."

A little later William Tudor remarked that though this seems something like mild summer, yet, since the sun is getting low in the south, there is a marked difference. His descriptions close with the following, "This singular occurrence in our climate seems to be to summer what the vivid recollection of past joys is to reality."

By 1830, the English writers began to use the new term. In that year De Quincy penned these words, "An Indian summer crept stealthily....a summer less gaudy than the mighty summer of the solstice, but sweet, golden, silent; happy though sad.....This sweet mimickry of summer....a spiritual or fairy echo of a mighty music that had departed, as frail and transitory as it is solemn, quiet and lovely."

In 1835, Latrobe, an English traveler, offered these vivid pictures: "To what shall we compare the Indian summer? To the last bright and unexpected flare of a dying candle, or to the last warm, transient, but rosy glow which will often steal over the distant Alps, after the sun is far below the Jura, and after they have been seen rearing themselves for a while, cold and ghastly white, over the horizon?

"During Indian summer the air is calm. Glistening strings of gossamer, woven by the aeronaut spider, stream across the landscape. All nearer objects are seen through a dreamy atmosphere filled with a rich golden haze, while the distance melts away in violet and purple."

The Europeans have long had names for this late season. Some called it "Go-summer," others, "Saint Martin's Summer," "Saint Luke's little summer," "The summer of Saint Theresa."

Interesting quotations could be continued to great length, but let us turn to the derivation of the name, "Indian summer." It has been suggested that the term may have originated from unpleasant circumstances. When the weather was fine the frontier settlers were greatly annoyed by the Indians. Consequently, the coming of winter was heartily welcomed for it gave the white man a long and certain relief from these depredations. To some extent early fall rains brought the same respite. But when a mild October offered a second summer, the Indians were again out marauding. However, this explanation of Indian summer seems rather uncertain.

Others suggest that this favorable season, fine weather and abundant game, was chosen by the Indians for their fall hunting. The haziness and obscurity of the atmosphere favored a near approach to the game. But others who were well acquainted with the Indians' habits said they did less hunting then than at any other time of year.

In 1842, J. F. Watson offered the theory that Indian summer was simply a slightly changed term for Indian harvest. He said that this spell of fine weather in the autumn found the Indians busy gathering their crops of maize, or Indian corn. Others thought it applied to the time of harvesting the Indian corn by the white settlers as well as the natives.

There is no doubt that during the dry stretches of fall the Indians used to burn dead grass from the open ranges to be used as pastures for their stock the following year, both to have the ground clear and for the fertilizing ashes. Also, they were said to have burned the underbrush at this time in order to drive the game out into the open. This, of course, caused great smokiness in the air. Extreme haziness, often mistaken for smoke, added its touch of atmosphere.

Even Indian legends have been recalled by some in order to find the origin of the name, Indian Summer. Shawondasse, ruler of the South Wind, was supposed to sit quietly with his eyes constantly toward the north. "When he sighs in autumn, we have those balmy southern airs which communicate warmth and delight over the northern hemisphere, and make Indian summer."

In his Hiawatha, Longfellow wrote of this Shawondasse:

"Shawondasse, fat and lazy,
Had his dwelling far to southward
In the drowsy, dreamy sunshine,
In the never-ending summer.....

From his pipe the smoke ascending
Filled the sky with smoke and vapor,
Filled the air with dreamy softness,
Gave a twinkle to the water,
Touched the rugged hills with smoothness,
Brought the tender Indian summer."

The origin of the name thus seems to be hopelessly obscured and the solution possibly hindered rather than helped by the many explanations.

But the beauty and romance remain for all who delight in the hazy autumn days of Indian summer, or its mild, dreamy nights under starry skies. Emerson wrote of it that this is a season of serenity when even "the cattle that lie on the ground seem to have great and tranquil thoughts."

****

GEOLOGIST'S REPORT WORTH MANY TIMES ITS COST

Cambridge, Mass., needing to increase its water supply, received an offer from a well drilling concern to obtain 5 to 6 million gallons daily from wells. A geologist's report, costing $450.00 stated that the underground stream from which these wells would draw would flow by gravity into Fresh Pond, from which the city drew part of its supply, if they lowered the level of the pond a few feet. This they did in 1941 and since then have obtained from the pond five million gallons daily more than formerly, at no additional cost.

....Journal, American Water Works Association, August 1943.

O.E.S.

REFERENCES OF INTEREST

Fairbanks, Harold W.: Oscillations of the Coast of California During the Pliocene and Pleistocene, American Geologist, vol. 20, page 245, 1897.

The more important movements of the coast during the time under discussion are believed to have been as follows:

(1) Post-Miocene disturbance, resulting in an elevation much greater than the present, and outlining during the resulting erosion many of the present land features and originating or enlarging some of the marine valleys.

(2) Pliocene depression and accompanying sedimentation in favored localities.

(3) Post-Pliocene disturbance accompanied with folding, faulting and upheaval to a greater elevation than the present; a movement probably felt in the Sierra Nevadas and resulting finally in the glaciation of that region. During the erosion of this early Pleistocene the existing valleys of the Coast region were wholly or partly re-excavated in conjunction with the present marine ones. During the period of elevation, probably not later than the middle Pleistocene, the mammoth and other extinct mammals occupied the Pacific coast and spread over what are now known as the Santa Barbara islands.

(4) After a comparatively brief period as shown by the steepness of the submerged valleys a downward movement began and continued until the land was at 1200 to 1500 feet below the present.

(5) In the recovery from this sunken condition the terraces were formed and an elevation reached which was somewhat greater than that now shown.

(6) Last of all took place the subsidence recognized by Mr. Diller in Oregon, by Professor Lawson at the Golden Gate and by the writer along the coast to the south.

A present discussion of this subject must be far from exhaustive and future study may bring out modifications of the above outline, but it is hoped that some permanent addition has been made to the knowledge of the history of this region.

R.C.T.

* * * * *

Merriam, John Campbell: The Story of a Leaf (The Living Past, Charles Scribner's Sons, New York, pp. 41-54, 2 pl., 1930).

A delightful article built around the finding of a fossil gingko leaf in the Columbia Gorge at Tanner Creek. Describes the conditions under which the leaf was found, and the comparison which was made later, with a living gingko leaf in Washington, D.C. Finds they are identical. Shows how flora has shifted from one part of the world to another according to changing conditions.

This book "The Living Past" is very beautifully written. Dr. Merriam is one of the country's foremost paleontologists and he also has the happy faculty of being able to write this technical material in a manner that is interesting and readable to amateur geologists. It is highly recommended to anyone interested in this subject.

R.C.T.

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Did you know that Europe also has occurrences of Permian "red-beds"?

GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

VOL. 9 NO. 21 PORTLAND, OREGON November 10, 1943

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STATE DEP'T OF GEOLOGY &
MINERAL INDUSTRIES.

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Mrs. Amza Barr	Vice-president	5417 S. E. 99th Ave.
Miss Florence Iverson	Secretary	5125 N. E. Couch St.
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Board of Directors

Earl K. Nixon (1944) Dr. Courtland L. Booth (1945) H. Bruce Schminky (1945)
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Date . . . . . .

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Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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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 sixty cents.

MEETING ANNOUNCEMENTS

Friday Nov.12 Mr. Ralph Mason, mining engineer with the State Department of Geology and Mineral Industries, will give us a talk on "Some of the Potentialities of the Coos Bay Coals".

Mr. Mason has been making recent studies of these coal deposits for the State Department, and is well qualified to tell us how important a part they may play in the economic and industrial future of Oregon.

Be sure to come and bring a friend.

Auditorium - Public Service Building - 8:00 p.m., - November 12th.

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Harry N. Schminky, father of Bruce Schminky, passed away October 27th. The sympathy of the society is extended to the family.

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LUNCHEON NOTES FOR THURSDAY, OCTOBER 14, 1943

Though no specimens were shown today, two publications of local interest were brought to our attention, one by Mr. Vance, entitled "The Pacific Northwest", by Otis W. Freeman of the Eastern Washington College of Education and Howard H. Martin of the University of Washington. One chapter in the book was contributed by Dr. Warren D. Smith and one by Dr. Hodge. The "Physical and Economic Geography of Oregon," put out by the Oregon State Board of Higher Education, was shown by Mr. Schminky. Both volumes should be well worth dipping into.....Mr. Vance also had two snapshots of beach scenes, sent by Mrs. Jones, showing Dr. Jones and Hi Wood, both in uniform. Some outstanding work in roadbuilding has been done by the men from Hy's camp, five miles of road having been completed in four days.....Mr. Bates, returned from his trip to California, didn't get around to calling on the hospitable Jones family, but did run across Dr. Francis Jones at Albany, California, where he is engaged in research, particularly in connection with the polarity of light. Incidentally, he is known there as "Oregon Jones." Good advertising for Oregon, we'd say. He took Mr. Bates through his excellent laboratory and into the "cold room" where the temperature is ten degrees below zero. Mr. Bates also called on R.F.Henley in San Francisco to see his collection of some 1500 cabochons, all polished, mounted and classified, and was given a number of specimens. We have hopes of seeing the "loot" in the near future.....Mr. Kenneth Hamblen was the guest of Mr. Libbey. We recall Mr. Hamblen's interesting account of his work in Alaska, given at a luncheon meeting a year or two past. It was reported that Mrs. Barr and Dr. Adams who have been in the hospital are on the road to recovery.

A.H.

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LUNCHEON NOTES FOR THURSDAY, OCTOBER 21, 1943

The attendance only reached the total of sixteen with the somewhat late arrival of Dr. A.E.Mattern who has to come from the distant Morgan Building, and is not as regular in his attendance as he was when the meetings were held on Broadway.....President Lloyd L. Ruff was all smiles; the reason being the safe arrival of a very young son.....A.D.Vance had a pretty piece of fossil coral which had been given to him by a friend.....R.L.Baldwin showed a photograph (made and attested by E.N.Bates) of himself on a high ladder picking blackberries. He claims to have picked a bushel of the berries out of one tree. (Who knows how many blackberries there are in a bushel, or even how big a bushel is?) Most of us pick our blackberries from bushes, but Baldwin, being a geologist, knows that blackberries and gold are where you find them.....Mr. Baldwin also had an article on "Fossil Plants Dispute Evolution" which had been handed to him by his pastor.....Mr. and Mrs. Fred Gustafson who have been in Montana in connection with chrome mining were present. Mrs. Gustafson, formerly Jean Bowman, was at one time employed by the State Department of Geology and Mineral Industries.....Mr. Ruff, who had only recently returned from an inspection trip to the Dorena damsite, reported that the workmen had uncovered a lens of sandstone containing prints of marine fossils. He said that the location had been formerly thought to be entirely of volcanic origin..... Earl K. Nixon, the energetic chief of the State Department of Geology and Mineral Industries, reported the beginning of drilling operations on a large well in the Marshfield district by the Phillips Drilling Corporation. He also said that his department is about to begin work on a geological map of Oregon. Much of the work on this map will likely be done by Ray C. Treasher who has been in charge of the Grants Pass office of the Department since leaving Portland.....Mr. Nixon who is a member of the postwar planning commission is enthusiastic about the use of Oregon materials - particularly building stones - in Oregon buildings. Not a bad idea at that.

O.E.S.

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REFERENCES OF INTEREST

Flint, Richard Foster: Pleistocene Drift Border in Eastern Washington (Abst. Geological Society of America, Proceedings for 1935, p.77, June, 1936).

The glaciation of N.E. Wash. and N.W. Idaho is attributed to a piedmont glacier, fed by many valley glaciers chiefly in B. C., and somewhat lobate at its southern margin opposite the Rathdrum, Little Spokane, Colville, Columbia, Sanpoil, and Okanogan valleys. The tops of the intervening ranges were not glaciated. All the lobes except the Sanpoil lobe emerged from the highland onto the Columbia Plateau. Viewed broadly, the drift border is bi-convex, indicating that piedmont ice was fed laterally from Rockies & Cascades, rather than by direct precipitation upon its own surface. Measurement of drift border along ice-free mountain ranges shows that upper surface of ice was concave-up along N-S profiles, supporting the same conclusion. The "old till" of Spokane dist. consists of fresh & weathered foreign stones in a matrix of reworked "Palouse soil". Hitherto it has been considered old because of the weathered matrix. The weathering, however, is pre-till, and this drift is correlated with the last glaciation of this dist. The ice on the Plateau advanced over an irregular surface on weak material, modifying the topog. but little. Relation of drift border to scabland on Plateau indicates a modification of the catastrophic view of scabland origin.

R.C.T.

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THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

by

H.B. Schminky

Surveying the Wilderness
Part 3 (Cont.)

At the time of this report, the survey of the Willamette Meridian and the Base Line had "been completed so far as practicable and the field notes accepted."

He goes on to say -

"Three fourths of the Willamette Meridian Line north of the Base Line to Puget Sound passes through a country that is generally rough, broken and heavily timbered, and with the exception of the settlements on the Willamette, Columbia, and Cowlitz Rivers, and a small settlement at Puget Sound is unclaimed.

"The Base Line east of the Meridian to the summit of the Cascade Mountains passes over a heavy timbered country, the last 20 miles is quite rough and unsettled west of the Willamette Meridian along the Base Line the land is mostly occupied for twenty miles, which includes the Tuality Plains, one of the oldest settlements in the Territory - west of the Tuality plains the country is exceedingly rough and heavily timbered - Mr. Ives extended the Line 37 miles west of the Meridian, where he was compelled to abandon the line, it being impracticable to extend the line farther towards the Pacific. The country along the Base Line west of the Tuality Plains is represented as unfit for settlement or cultivation.

"The Willamette Meridian south of the Base Line runs through a fine country, principally timbered and generally settled to the 2nd Standard Parallel (60 miles), for the next 20 miles the surface is very rough, passing over spurs of the Cascade Mountains to the Calapooya Creek, south of the Calapooya Creek the mountains were found to be impassable and impracticable to extend the line over them. An offset of 18 miles west was made to avoid them. From the offset the line was extended 54 miles south where it was found necessary to make another offset of 4 miles west to find a pass through the Calapooya Mountains, which extend from the Cascade Mountains to the Coast Range at the head of the Willamette Valley.

"The line was extended from this point 46½ miles south to the Umpqua Mountains which form the southern boundary of the Umpqua Valley. Most of the country south of the Calapooya and east of the line that was run is too rough and broken for settlement, being part of the Cascade Mountains that bear west towards the Coast. The settled portions of the Willamette and Umpqua Valley are mostly west of the line that was extended.

"Owing to the roughness of the country and the thick and heavy timber along the Base and Meridian Lines, the Deputy Surveyors were not able to make the Geodetic Notes as full as was anticipated.

"There is considerable local attraction found to exist throughout the whole country, so much that the magnetic needle cannot be depended upon in making the surveys. Burts Improved Solar Compass has been used on all the lines that have been run and are being surveyed, and found to be an admirable instrument, in fact the only one that can be used to advantage in the surveys on this coast.

"Owing to the exceeding roughness of the country between the Willamette Valley and Pacific coast, the large extent of country occupied by the coast

mountains which now appear unfit for settlement, it seems desirable to extend the standard parallels to the coast, and from them extend Meridian lines north and south on the west side of the coast mountains, so that the Townships that border the coast can be surveyed.

"Considerable attention is now being given by emigrants to the country north of the Columbia River on the Cowlitz and Chichules Rivers, as well as Pugets Sound, little is known of this country back of the settlements, if the 1st - 3rd and 4th standard parallels north of the Base Line were extended to the Pacific, it would be of great advantage in acquiring a knowledge of the Country for future surveys and for the enterprising emigrant whose scarcity of means after the long and tedious journey over the Plains will not enable them to acquire by personal explorations."

Preston had been given special instructions to survey the Oregon City Claim which was the townsite laid out by John McLoughlin after he left the employ of the Hudson Bay Company. Dr. McLoughlin had sold many lots prior to the time that the laws of the United States applied to the Oregon Country. Only citizens of the United States could take up lands under the Land Laws, and as Dr. McLoughlin never became a citizen, he lost all right to his lands, and the titles that he had given were worthless. To protect these purchasers, they were allowed to acquire their lots the same as a homesteader would acquire 320 or more acres of land. Preston writes the following in his report:

"I gave notice to the purchasers domes or their assignes of all lots or parts of lots in the "Oregon City Claim" that were sold or granted by Doct. John McLoughlin previous to the fourth of March, 1849, to present the evidence of their title at this Office that would enable me to survey said lots and certify their title to the Commissioner of the General Land Office that patents may be issued to them in accordance with the provisions of the Act of Congress of 29th of September, 1850. Title papers pertaining to the title of 195 lots and parts of lots have been filed in this Office for which receipts have been given to the persons depositing them. The title papers are being examined and copied preparatory to making certificates of title.

"I appointed a Deputy Surveyor to make a survey of the lots and parts of lots. The owners of the lots agreeing to pay the expense of the survey as no appropriation was made by Congress for that purpose."

At the time of this report, Freeman had completed 206½ miles of line on the Meridian south of the Base line, under contract No. 1, and Wm. Ives had completed, under contract No. 2, 182½ miles of the Base Line and the Meridian north. No completed work was reported for the other contracts. But in place of the rate of $8 per mile that the Law of 1850 said was to be paid, the various contracts were running at $24, $20, $18, and $10 per mile.

Each succeeding year saw the network of townships and sections expanding with the spread of the settlements. The work had to be carried on east of the Cascade Mountains, from separate guide meridians, in order to reach settlements on the Burnt, the Powder, the Grande Ronde, the Umatilla, and the Walla-Walla valleys. At times the surveyors had to fight the Indians as well as the hardships of the country to get their lines through. Each succeeding Surveyor General faced the same conditions of too little allowed per mile for carrying on the work. When the Territory of Washington was created in 1853, the work of the Surveyor General for Oregon was limited to the country south of the Columbia. In 1859 his territory was limited to the present state boundaries.

Washington continued using the same Base Line and Meridian. But when Idaho became a Territory, it was easier to establish a new Base Line and Meridian in the Snake River region, in the southern part of the Territory where the settlements were, than continue the Oregon Base and run a new guide meridian. So the first base line to be established for the Oregon Country was prevented from reaching the Rocky Mountains as was originally planned.

Bibliography

Portland Oregonian, June 7, 1851, Oregon Historical Society, Portland.

Letter F 6, 10-3, Oregon Historical Society, Portland.

Survey field notes and maps of the original surveys in the Office of the Cadastral Engineer, 619 Post Office Bldg., Portland.

Copy of Preston's First Annual Report, Office of the Cadastral Engineer.

Instructions to the Surveyor General of Oregon; being a Manual for Field Operations, 1851, owned by Mr. Henry G. Richardson, Chief Surveyor, City of Portland, Oregon.

Maps

The map of Township 1 North, Range 1 East is from a photostat copy of the original map filed in Washington, D. C.

Township 1 South, Range 1 East and Township 2 South, Range 2 East are copies of the original maps in the Office of the Cadastral Engineer, Portland.

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DR. HODGE VIEWS POST-WAR CONDITIONS

"The west has many natural resources - oil, forests, coal and water power" said Dr. Edwin T. Hodge in his lecture: "A Geologist Views the Industrial Future of the Northwest" before the Geological Society of the Oregon Country at its semi-monthly meeting in the Auditorium of the Public Service building Friday evening August 27th. He also said that the largest of the world's markets will eventually be nearer to us than to other ports explaining that by the great-circle route to Asia, Seattle and Portland will be closer to the market than cities which are farther south along the coast.

Dr. Hodge who has spent the greater part of his professional career as an economic geologist, and has forecast many processes that have made great changes in the economic welfare of the country, ventured still further with his prognostications. "As a prophet," he said, "I predict the end of war; - sometime; then the ratio of the world's minerals will be: United States 42%, United Kingdom 27%, Russia 22%, and Japan 4% as against the present ratios of 22% for Japan and more than 25% for Germany .

"Mineral resources are exhaustible. The U.S.Geological Survey predicts that the oil supply of this country will be entirely exhausted in twelve years. Wells will be deeper and the quality of the oil will be better. A higher quality of gasoline will be made and many new uses for petroleum in addition to the present ones will be developed."

Dr. Hodge stressed the growing importance of the electro-chemical industry which he believes will not only extract from petroleum more of the values it possesses, but will transform the timber industry from making boards to the manufacture of plastics. He said, "Man constantly finds substitutes for the things that are being exhausted. He can make a gallon of oil do what it never did before.

He can get '100 plus' octane gasoline and more rubber-substitute than we can use. The iron ore in the Mesabi range will be exhausted, but aluminum is taking the place of steel. It is probable that the ninety million tons of steel produced next year will be more than our needs, and although man invents new uses for materials, these new uses do not do away with the old ones. Magnesium and aluminum will be made to do many things now done by steel, but the more things a man can do the more he wants to do.

"Coking coal is not available in the northwest but a new process of making coke from wood has been used in Europe and demonstrated in this country," said Dr. Hodge, "and the Northwest has lots of wood which can also be used to produce alcohol for motor fuel.

"We are a mineral area - this Northwest," continued the doctor. "We have one fourth of the lead in the country, one third of the silver, one sixth of the copper, one twentieth of the gold and nine tenths of the mercury. Political and commercial attitudes have delayed zinc production as well as advancement in many other directions. We must quit bickering as to whether Washington or Oregon will have certain developments and speak of the two states as the Northwest region if we do not want California to continue to take the industries that are first offered to us."

Dr. Hodge called attention to the immense supplies of various minerals which can be processed in the Northwest by using electricity produced by water power. He suggested that the 100,000 tons of tin plate used in canning the annual output of fish, fruits, and vegetables of this territory should be made here instead of shipping the tin from the Malay peninsula past our doors to the east and shipping the tin plate back to the west coast. There is sulphur available from the Gulf of Mexico, manganese from the Philippines, high alumina clay in Oregon and Washington, phosphate rock in Idaho (readily shipped to Portland by barges after the Columbia and Snake rivers shall have been canalized) and wood - two thirds of the forests in the United States are in the Northwest - besides soybeans from China, to be carried as a return cargo by our merchant marine which has delivered loads of our manufactured products. After the war the Chinese will have more money to spend than the European nations, Dr. Hodge believes. India will also be a large and wealthy market for the products of this region, he argued, and added that 55% of the population of the world lives in Asia while Europe has but 25%. This should shift the bulk of sea-borne traffic from the Atlantic to the Pacific coast of our nation.

The Northwest has 28% of all available damsites (529 of them) in the United States. The power which can be developed by hydro-electric plants located here, together with the raw materials readily available, and the electro-chemical processes that have been, and are being, perfected should enable the northwest to manufacture and sell an enormous volume of products to the 300 million inhabitants of India and the 500 million Chinese who are now becoming industrialized and are making more money than ever before and who are on the great circle route from our docks.

But we will have to canalize our rivers, rebuild our railroads, straighter and with lighter gradients, and work together as a Northwest unit if we are to capitalize on our possibilities.

"And", Dr. Hodge concluded, "Remember that the hen is the only creature that can produce a profit sitting down".

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GEOLOGICAL NEWS LETTER

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MEETING ANNOUNCEMENTS

Friday Nov.26 — No meeting.

Friday Dec.10 — The Friday Evening Meeting will be held as usual. Arrangements for a speaker have not been completed at this time. Watch your newspaper for further announcement.

Friday Dec.24 — No meeting.

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LUNCHEON NOTES FOR THURSDAY, OCTOBER 28, 1943

We were thirteen at table and shivering with apprehension until Leo Simon finally arrived and dispelled the jinx, and also presided, the officers' chairs again being conspicuously empty. Mr. Stanley, however, did come straggling in at the last minute, but as yet has presented no alibi. These late arrivals seem to come in with a blare of trumpets, so to speak. We'll try it sometime..... The only specimens shown today were those collected from the collection of R.F.Henley in San Francisco by Mr. Bates - some ten or twelve, including a slab of aragonite, cut pieces of rhodonite, onyx, labradorite, a bit of fluorescent gypsum crystals, and two polished cabochons of orbicular jasper, one heart-shaped and one large pendant..... True to his promise of some weeks ago, Mr. Calef brought a box of leaves from a tree called Cathedral Bells, which he obtained originally in Florida, an ample supply for everyone present. Each leaf when hung on a curtain will in the fullness of time, he says, produce fine hairlike roots and eventually a plant. The tree in its native element grows to a height of three feet and blooms at Christmas time..... In this climate it may be set outdoors when the weather warms up, about July. We await developments with bated breath..... A neat little booklet containing a reprint of the article entitled "A Comet Strikes the Earth," from the Desert Magazine, the story of the Arizona comet, was circulated by Mr. Baldwin..... To Dr. Booth goes the credit for getting us a bargain, from "Portland's Own Store". The chart entitled "The History of Evolution" for which some eight or ten of us signed up some time ago, he was informed by letter, could not be obtained from the publishers to whom he wrote, so, nothing daunted, the Doctor unearthed from the aforesaid department store a half dozen copies, slightly shopworn but quite intact, at the special price of 39¢ each. It isn't always the women who find the bargains..... Dr. Harrison was asked to report on the meeting of the Oregon Academy of Science and spoke so interestingly on the subject that, with the discussion and questions which followed, we were all late getting back to work. Temporary officers were elected; dues are $2.00 a year, and membership open to anyone interested in science. It is hoped that someone will write up the meeting in greater detail than is possible to do here.

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LUNCHEON NOTES FOR THURSDAY, NOVEMBER 4, 1943

Twenty-one places were laid in the smaller room adjoining our regular meeting place - again taken over by the ladies' group - and twenty-one chairs were occupied. For once, no vacant chairs and no overflow. It was a pleasant surprise to have Rose Jenning with us again, looking very fit. Mrs. Geary Kimbrell was also present as the guest of her husband. Lloyd Ruff presided and promises to stay around town for a while. He brought several specimens; an impure belt limestone from Montana, and from Glacier National Park a rock showing well-developed ripple marks, and a reddish slab with mud cracks, suggesting a piece of tiled floor. (And was asked by Mr. Vance if he had removed it from some hotel floor.)..... An attractive agate as large and nearly as round as an apple, with one side highly polished, was shown by Mr. Minar, who said it was ground down by the same system as used in polishing granite. Mr. Bates produced a very beautiful polished slice of geode which he said he had "picked up" in a gift shop. Mr. Miller showed a fragment of some kind of stone which he also had "picked up" from the tire of his car - to the detriment of the tire..... Two cores were brought by Mr. Calef, one from a depth of 11,226 feet, the other 1084 feet, the latter showing traces of baculite shells. He also brought a twist of tobacco leaves illustrating how this product is marketed commercially..... Also shown was a group of quartz crystals found by Mr. Arnold H. Brandis in the Olympics, where he spends his vacations. Mr. Brandis, a lumberman of Taft, Oregon, is a recent subscriber to the News - Letter, to which he was attracted by being shown Bruce Schminky's first article on "The Public Land Survey in the Oregon Country." It pays to advertise..... Mr. Ruff read a communication from the Mazamas announcing the observance of their fiftieth anniversary Jubilee banquet to be held at the Neighbors of Woodcraft Hall on Saturday, December 11, at 7:00 p.m., with December 5 the deadline for securing tickets, at $2.00 each. Frank Branch Riley will be the principal speaker, and this feature alone, comments Mr. Stevens, will be worth the price of admission. ....Mr. Ruff announced that the work nights would be resumed as soon as possible and renewed his cordial invitation to attend these sessions, offering the hospitality of his home on the first floor as well as the basement to those who prefer to "bring their knitting."....Albert D. Vance, Jr., now with the Air Transport Command in India, writes his father that now that the monsoons are over they are having their "dry" season, which is "typical Oregon winter weather." Incidentally, Mr. Vance informs us why there are no more sheeted ghosts, in case anyone has missed them: they can't get their sheets back from the laundry. (Another reason why war is what Sherman said it was.)

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LIBRARY NOTES

The need of additional shelf space for the library was directed to the attention of our society in the Library Notes of June 10, 1943. It is a pleasure to report that a bookcase has been purchased and installed.

The library has received:

From - Oregon State Department of Geology and Mineral Industries.

Bulletins.

No.	Year.	
14,	1943	Oregon Metal Mines Handbook, Jackson County, Bulletin No. 14-C, Vol.II, Sec.2. By the staff.

(To be cont. in a later issue)

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THE PUBLIC LAND SURVEY IN THE OREGON COUNTRY

by

H. Bruce Schminky

Part 4

The Willamette Stone

As stated before, the first marker set at the intersection of the Willamette Meridian and the Base Line was a white cedar post. With the passing years the rotting of this important monument began to give concern to surveyors, and action was taken to preserve its location. As a result the following entry appears in the Journal of the County Court of the State of Oregon for the County of Multnomah:

"Whereupon a term of said Court is begun and holden on Wednesday the 8th day of July A.D. 1885, the same being the 3rd Juditial Day of said term and among other proceedings the following was had towit:

"In the matter of a monument at the intersection of the Base Line with the Willamette Meridian.

"At this time it appearing to the Court that the corner post at the intersection of the Base Line with the Willamette Meridian is rotten and will soon be lost, it is here ordered that a stone monument be procured, suitably inscribed, and that the County Surveyor and D.W.Taylor, a competent surveyor, together with the County Surveyor of Washington County place said monument where said corner post was placed and that they make report of their doings to this Court.

"Order that the Court adjourn until tomorrow at 10 o'clock A.M.

J.C.Moreland, Judge"

D.W.Taylor was at this time the ex-city surveyor of the City of Portland, and it is probable that he was one of the main factors in creating sentiment for the preservation of the initial point of the land surveys.

The monument was set on July 25th with apparently little fan-fare. The only record of the event is in the County Surveyor's Records for the two counties. It is interesting to compare these records.

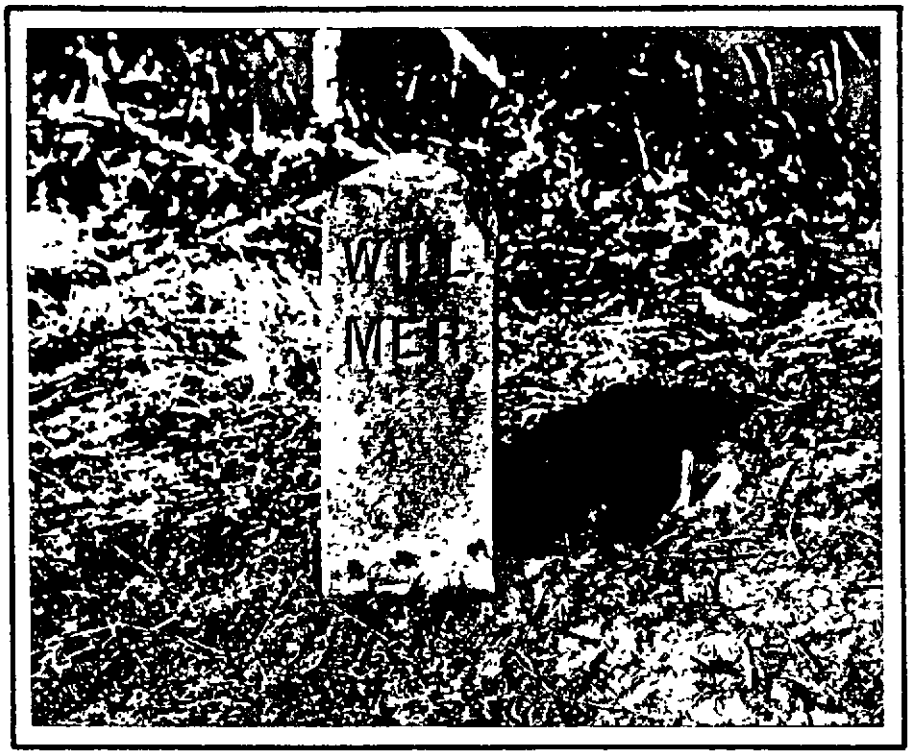
"Intersection Willamette Meridian with the Base Line.

"Notes of a Survey made July 25th, 1885.
At the request of County Court of Multnomah County State of Ogn.
For the purpose of establishing a stone monument at the intersection of the Base Line with the Willamette Meridian.
Set stone monument in ground the same being 4' in length by 8" sqr. with the letters B and W marked thereon.
From which the following trees bear witness
a fir balsome tree 5" dia brs S $33\frac{1}{2}^{0}$ E 33-1/3 lks
a fir balsome tree 5 dia brs N 76^{0} E $28\frac{1}{2}$ lks
a fir balsome tree 6" dia brs N $57\frac{1}{2}^{0}$ W 33 lks

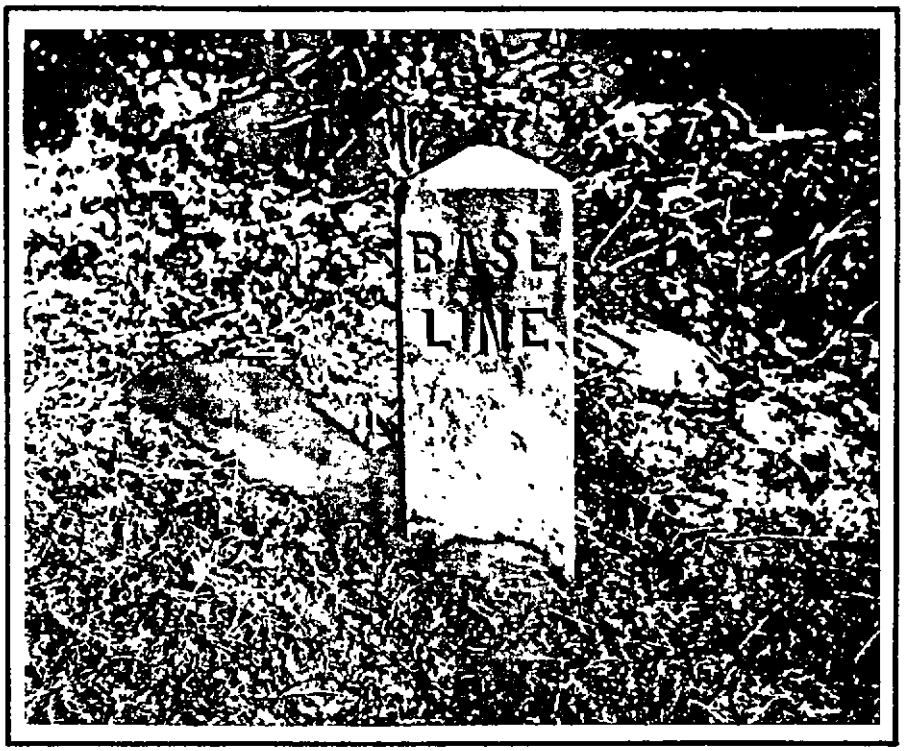
"Present: D.W.Taylor, Ex. City Surv. of Portland; Walker, County Surveyor, Washington Co.; H.Ranft; Von Schmeeden; William Barnes.

W.B.Marye, County Surveyor, Multnomah County, Ogn."

MONUMENT AT THE INTERSECTION
OF THE
WILLAMETTE MERIDIAN AND BASE LINE



Looking north on the Willamette Meridian



Looking east on the Base Line

The Washington County record reads as follows:

"July 25, 1885. Reestablished the intersection of the Base Line and Willamette Meridian. Gov't Bearing trees all cut down but stumps remain. Set a large stone, about 36 in. long and 10" x 10" at foot, marked Base Line on E & W face and Will. Mer. on N & S face. Marked new trees as follows

"Fir 4 in. diam. bears S 30° W 32½ lks dist.
Fir 5 in. diam. bears S 33½° E 33-1/3 lks dist.
Fir 5 in. diam. bears N 76° E 28½ lks dist.
Fir 6 in. diam. bears N 57½° W 33 lks dist.

"Present: W.B.Marye, County Surveyor of Multnomah Co.; D.W.Taylor, Civil Engineer; A.M.Austin: P. Von Schneider; H. Ranft; and ---- Barnes.

L.C.Walker, C.S."

The Court was satisfied with the manner in which the work had been performed for at its regular sessions on 5th and 6th of August it ordered the Clerk to issue warrants to the various men for the part they took in setting the monument. D.W.Taylor received $5.00; W.B.Marye, $12.00; the two chainmen, A.M.Austin and Van Schmeden, $2.80 each; the axeman, Henry Ranft, $2.80; and a James Campbell was given $5.00 for taking the monument to the Meridian, making a total of $30.40 paid out by Multnomah County for the preservation of a point which the late George Shepherd called the "place where the West begins". There is no record of payment for the stone or for its cutting and lettering.

Bibliography

County Surveyors records of Multnomah and Washington Counties.
Records of Multnomah County Court, Journal No. 12, Page 357 and Journal No. 13, pages 35 and 38.

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GOLD IS WHERE (and if) YOU FIND IT

by

A. D. Vance

When Acting Editor Bates was looking over the editorial page of the Oregon Journal for pointers on running a good publication, his eyes fell on the following item under the heading of "30 years ago."

"August 30, 1913 - 30 Years Ago

"Gold has been discovered at Mount Tabor Park, according to a report made to Superintendent of Parks Mische."

Visions of unlimited wealth may have appeared before his mind's eye, or perhaps his only thought was that here might be a source of funds to finance a geological museum. At any rate, he called your inquiring reporter and sent us out to get the facts. Admittedly infused with some of the Acting Editor's excitement, we rushed to the city hall to interview C.P.Keyser, Superintendent of Parks, to get the story behind the story.

Following an impatient wait for Mr. Keyser to return from his annual vacation, we finally were acquainted with the facts and our hopes of wealth faded away, but the real story is worth telling for the human interest even if we can't suggest to you a place to dig for gold. I set it down as I remember it but accept no responsibility for the details which were vague in the minds of my informants.

It seems that in 1913 a certain Mr. Mische was Superintendent of City Parks - an excellent park director but withal a tenderfoot when it comes to mining. Serving as foreman for Mt. Tabor Park was an uncertain Irishman named Tom Tanna - uncertain because an Irishman's moods are never predictable, but far from being a tenderfoot he was an old-time miner from Cripple Creek, Goldfield, Tonapah, and way points. Such a combination sooner or later is bound to produce something.

The combination clicked when workmen building a road in the park uncovered for the first time cinders of the now famous Mt. Tabor Volcano.

Superintendent Mische was intrigued, to say the least. Could this indicate the presence of some rare mineral deposit? Foreman Tanna's eyes twinkled and he thought, begorra, that it could! In fact, after reaching into his pocket for a specimen from his Cripple Creek days, he leaned over behind Mr. Mische and picked up a high-grade sample of gold ore, which he excitedly showed to his superintendent.

"Look what oi picked up right ferninst the two feet of yez, Mr.Mische", he said. Even a tenderfoot could see the gold running through the quartz, and Mr.Mische swallowed the bait, hook, line, and sinker. The excavation for the new road picked up speed and the workmen watched the ground expectantly, but without result. In fact, only one other piece was ever reported found, and, by strange coincident, Tom Tanna also found this piece when no one was around, and he told Mr. Mische that the specimen had been sent to Cripple Creek to be assayed. In due time Tom confidentially showed the assay to Mr. Mische. Gold worth $1500.00 a ton was the report. Superintendent Mische passed the good news on to the newspapers without taking note that the paper on which the assay was reported was old, that the folds were almost worn through and that a careless blot covered the date.

After a time Tom Tanna told his boss what he had done, and Mr. Mische was good enough sport not to kill or discharge the foreman on Mt. Tabor but he did stop talking about gold in a city park. It took a little longer, I am told, to quiet the newspapers

Both Tom Tanna and Superintendent Mische have passed on; we hope to the land where gold is used for paving blocks and where it is safe to believe what the eyes see.

****

NEWS OF MEMBERS

Ray Treasher Takes New Job: Fellow member and former president of the Society Ray Treasher has resigned his position with the State Department of Geology and Mineral Industries to become geologist with the Sacramento District U.S.Army Engineers. For a number of years, Mr. Treasher has been field geologist for the Department with headquarters at Grants Pass. He leaves December 1 to take over the new job. His new address will be P.O.Box 1773, Sacramento, 1, California.

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Note: The Art Museum through the month of November is featuring the work of twelve Oreg artists. "In a class by themselves are three works in tempora by Charles Heaney called 'Before Adam', 'Ancestor', and 'Cleft for me'. They are compositions in terra cotta an clay tones of fossils in rocks."

Oregon Journal, November 14, 1943.

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GEOLOGICAL NEWS LETTER

OFFICIAL PUBLICATION OF THE

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Official publication of the
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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place opposite Public Market, SW. Front Ave. and Yamhill St.

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 sixty cents.

MEETING ANNOUNCEMENTS

Friday Dec.10 — Mr. John Robinson of the U. S. Geol. Survey, Ground Water Division, will give a talk on the Olympic Mountains.

Friday Dec.24 — No meeting, Christmas Eve.

WORK NIGHT

Sunday Dec.12 — Sunday - December 12 - 5 to 9 P.M. in the Ruff basement, 3105 N.E. 45th Avenue (corner of N.E. 45th and Siskiyou - basement entrance on Siskiyou).

Work night will consist of identification of rocks and minerals, informal discussion and exchange of specimens from 5 to 7. The last half of the session will be devoted to isometric crystal system. Bring your isometric crystals for display and study. Exchange specimens of rocks, minerals, and fossils will be welcomed now that our collecting opportunities are limited.

NOMINATING COMMITTEE

The following members were appointed by the executive committee to serve on the nominating committee: Chairman F. L. Davis, Rose Jennings, Ada Henley, Clarence Phillips, and M. H. Calef.

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LUNCHEON NOTES FOR THURSDAY, NOVEMBER 11, 1943

Absence was noted on this Armistice Day of many of the city and state employees who are regular attendants, but as the U. S. Government employees get NO holidays for the duration (except Christmas Day), Lloyd Ruff was there to preside, with our secretary lending moral support. An attendance of eleven. It was rumored that Mr. Vance, now that his Victory garden is harvested, had scraped up enough gas to go to the beach for the day. Fossil-hunting, perhaps?.....The only specimens shown were some sent to Dr. Booth by his son when at Yale, part of a lot discarded from the collection of that University. These included pale rose quartz, a muscovite mica flecked with tiny garnets, a tourmaline and feldspar, and a cone-in-cone limestone. The Doctor considered the entire lot sent him well worth the $6.50 freight bill.....It was good news to hear through a letter to Mr. Bates from Carl Richards that Carl is improving in health and is

now permitted to use the typewriter in a limited way.....Miss Hughes passed around copies of Mineral Notes and News, the monthly publication of the California Federation of Mineralogical Societies which our library will receive from now on. The News - Letter has permission, through Miss Hughes' effort, to publish Dr. George F. Beck's article in the September issue entitled "Notes on the Fossil Woods of California." ..:...P.S. Later report has it that the Vances went to Longview to visit their one grandson and incidentally his parents - much more interesting than fossil hunting.

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LUNCHEON NOTES FOR THURSDAY, NOVEMBER 18, 1943

A lively and interesting session. It is regrettable that more of our members cannot attend these luncheons - especially the "better halves." The ladies, however, are making a better showing now that Mrs. Barr, Mrs. Stockwell, and Rose Jennings are regular attendants. Mrs. Barr was in her accustomed place, looking none the worse for her recent illness, and Mrs. Vance was an always welcome visitor.....Specimens were many and varied. Another piece of jasper of good size from Albany was shown by Mr. Minar, as well as a geode containing quartz crystals; a cut section of chalcopyrite in surrounding magnetite by Mr. Libbey. Mrs. Barr brought a piece of pre-Cambrian pink granite from Wyoming, and Mr. Schminky a specimen of quartzite, darker-colored than usually seen, found at Garden Home.... Dr. Booth brought several more specimens from the Yale collection for identification. Selecting one of these, an innocent looking rock, he offered a prize - a beautiful group of fluorite crystals from Clay Center, Ohio - to anyone present who could correctly name its component minerals, the contest open to amateurs only. Some interesting answers were written on the slips passed around, including "Rock of Ages" by Rose Jennings. Correct answers - quartz, mica, and feldspar - were given by Mr. Ed Minar of Salem, the guest of his brother, and Bruce Schminky, who drew lots for the prize, Mr. Minar being the winner.....Dr. Adams is reported to be at home again from the hospital and getting along satisfactorily.

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LIBRARY NOTES

The library has received:

From - Oregon State Department of Geology and Mineral Industries:

G.M.I. Short Papers.

No.	Year.	
10	1943	An investigation of the Tyrrell manganese deposit and other similar properties in the Lake Creek district, Oregon. by Wallace D. Lowry.
11	1943	Notes on some mineral deposits in the area surrounding the junction of the Snake and Imnaha rivers in Oregon. by F. W. Libbey.

From - Geological Society of Oregon Country:

Vol.	Year	
VIII	1942	Geological News-Letter. Two volumes - one for circulation and one to be used in library (reference copy).

From - Ward's Natural Science Institute, Rochester, N.Y.

Vol.	Year	
XVI	1942-43	Natural Science Bulletin.

LECTURE ON ANTHROPOLOGY OF THE AMERICAN INDIAN

By C. E. Roblin

That Portland residents have a live interest in the anthropology of the American Indian was amply proved by the number of members and guests of the Geological Society of the Oregon Country who gathered at the Public Service Auditorium Friday evening, October 8th, to hear Mr. C. E. Roblin, president of the Salem Geological Society lecture on that subject.

Mr. Roblin stated that there is no accurate estimate of the number of Indians in the Americas at the time the country was discovered by Columbus but that later estimates set the figures at 8,650,000 in 1823 and 11,014,710 in 1863.

He believes that the Indians are indigenous to the soil and are not descendants of races from other continents. Evidences of early human habitation in California have been found in the deep placers of river beds which have been filled with successive layers of gravel and lava and have later been cut through by the river. At least one human skull, and many artifacts have been found there. Evidences that large mammals such as mastodons lived there at about the same time have been found.

Along the coast lines of North and South America are found shell heaps, the relics of perhaps the earliest Americans.

The mound builders were perhaps the next and more advanced race on the continent, and Mr. Roblin believes that they were not related to the coast tribes. Mounds are found in greatest numbers in Ohio and Michigan, with many in Illinois and some as far south as Alabama. At least one mound has been located near Olympia, according to Mr. Roblin. The fact that no mounds have been found north of the southern shore of Lake Superior would indicate that these people were on the continent during the ice age, and that their northern migration was limited by the southerly edge of the ice sheet.

The largest mound of all (if we omit those of Mexico which were not mentioned by Mr. Roblin) is at Cahokia, Illinois, near East St. Louis. It is 500 feet by 720 feet and is 90 feet high, rising in a series of four terraces to the top which is 146 feet by 370 feet. A small mound which was built on the top of this large one has been entirely destroyed by archeologists who have found many implements of copper, bone, and pottery there. This large mound is surrounded by 60 other mounds from 30 feet to 60 feet in height. Some of these are riprapped on the side exposed to prevailing winds, with a two foot layer of sundried bricks. That the burial places show an advancing culture is taken as evidence that the mound builders' occupancy extended over several centuries. Since the more primitive peoples built only temporary residences, there are no ruins of their homes to be found.

There is a legend that the Algonquins and Iroquois Indians overran the territory occupied by the mound builders, destroying the people and their culture.

In the Southwest the Pueblos, Incas, Mayas, and Aztecs were preceded by the Cliff Dwellers who came, probably, from the northeast, and may have been the remnants of the Mound Builders. The Cliff Dwellers took advantage of the geological phenomenon of soft layers of rock which had been eroded in river bluffs between layers of harder material. Some of these caves reached as far back as seventy

feet and were from 500 to 600 feet long. These were cleaned out and houses were built on them by the Cliff Dwellers.

Smaller caves were occupied by another group who became known as Cave Dwellers, while a third section of these people settled on the flat lands and built houses with no outside openings on the ground floor. These houses were entered by means of ladders to the roof of the first story from which the people entered through the doors in the sides of the second story. A few of these houses had as many as 800 rooms, some of which were for storage. These larger houses were built in sections with no openings between them, indicating that they were occupied by different clans.

Nearly all of the Pueblos had kivas which were usually circular, and from 15 feet to 20 feet in diameter. Where possible they were dug down 15 to 20 feet and the roofs were level with the ground. Otherwise they were entered through a hole in the roof after climbing up the outside with a ladder. These kivas were for religious ceremonies, and today when the Indians are preparing for their snake dances, the preliminaries are carried on in the kivas. The roofs were supported by beams laid on the tops of walls as chords of the arcs - the smaller kivas having six chords, but one large kiva 67 feet in diameter had 15 chords - the lengths being limited by the longest timber available in the section where the kiva was built.

In Central and South America the Indians had attained a high civilization before the Spaniards invaded the country. They had passed through the hunting, fishing and grazing stages; through the period of temporary houses to those of more permanent construction, and had built stone monuments commemorating events.

At the same time that civilizations were developing in North America another race in the Caribbeans, as far south as the mouth of the Amazon, was being developed (about the same time as the Mound Builders). And farther south were the Brazilians, not so far advanced as the others but quite high. Some of them are the Patagonians, the tallest race in the world, averaging seven feet in height. Still south of the Patagonians are the Tierra del Fuegoans, the lowest race in the world in development.

"In all these races religion has developed," said Mr. Roblin, and explained at some length how earliest man probably worshipped a body of water, then fire and the sun; many of them later taking an animal as the embodiment of their deity.

Languages have developed slowly from grunts and signs to spoken words and writing by means of symbols or ideographs, beyond which no Indians have developed.

Mr. Roblin had several beautiful Navajo blankets, some small totem poles, stone war clubs, and an Indian doll on display. His explanation of the method of weaving the blankets tells why there are never any two just alike.

The lecture was a great treat to the many members and guests who were able to be present.

O.E.S.

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Did you know that the beautiful little 5-sided blastoids developed rapidly during the Devonian period, reached their climax during Mississippian, and then died out completely by the end of the Paleozoic era?

"THE ELEPHANT COMES TO OREGON"

The lecture by Dr. E. L. Packard, Dean, Department of Geology, Oregon State College, on Friday evening, October 23rd, brought out a crowd of nearly 75 interested Portlanders to hear about the ancient days when proboscidians roamed the territory that now is the United States and left their bones from Oregon to Alabama to tell modern scientists of their development and their wanderings.

Mr. Hancock had a display of mastodon, mammoth and elephant teeth which Dr. Packard used in explaining the evolution of these mammals as he told of their origin and distribution. One of these teeth was found at the edge of the town of Tualatin, another came from the Vale-Burns highway near Juntura, and a smaller and later one from Alaska. In Mr. Hancock's collection were also some bones from elephant feet, some fossil crinoids, or sea lilies, from near Mist, Oregon, and some star fish, a sea urchin, and a crab from the same locality.

Dr. Packard said that the earliest elephant, which lived in Africa, was not equipped with a proboscis, and was only about 30 inches high, and that the evolution was slow, extending through three or more geological eras. The earliest of the proboscidians lived at a time when the Himalayas were below sea level, persisted for a few million years and disappeared. Dr. Packard thinks that this early proboscidian was too specialized to have been the ancestor of the elephants, but was merely an offshoot. A little later, in that same general location the dinothere appeared. These were elephantine in their characteristics and lived in Western Europe in Pliocene time and wandered into Asia where they became larger and were classed as "gigantea" and "gigantissina"; the latter reaching a height of 12 feet. They were also distinguished by the fact that their tusks bent down.

Something like twenty-five different kinds of proboscidians radiated from a common center and drifted to various localities where they became adapted in feet and teeth to the places where they found themselves; there was less variation in the feet than the teeth. One species of this great family experimented with a dental equipment that might well have been universally adopted. Their teeth developed in the back part of the jaw and gradually moved forward into the proper location for chewing the food, then as they wore down to uselessness the front part chipped off and was discarded as new teeth developed and pushed them forward in the properly slotted jaw bones.

Dr. Packard had an immense volume by Osborne about elephants, mastodons and mammoths to which you are referred for further information than can be included in this brief review of the lecture.

Osborne confines the word mastodon to three classes, distinguished by differences in the shape of their tusks which are simply over-developed teeth. Some of the earlier mastodons retained the tooth structure of the tusks to the extent of the enamel coating. The type which lived in the Rockies had an enamel band which spiraled around the tusk. In the evolution of these animals there was little, if any, change in the number of bones; most of the variation being in the teeth.

In Oregon a single tooth of the Mio-mastodon was found by Dr. Merriam in the Rattlesnake formation. The head found by Mr. Hancock is of this species and is a remarkably fine specimen. Specimens are found all over the United States in the Pleistocene rock.

Mr. Buchanan discovered a mound in Fossil Lake and found in it what was probably the entire front limb of an elephant. Later Dr. Packard and Dr. Allison found in the same place an entire hind limb of which Dr. Packard showed several photographs.

In speaking of the fossils of crinoids which Mr. Hancock had on display, Dr. Packard said that until this locality at Mist was found no fossils of crinoid heads had been discovered in Oregon, only stems.

As usual, the group disintegrated so slowly as to be the customary annoyance to the elevator operator, who carried the members down singly or only a few at a time.

O.E.S.

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Taylor, Frank B.

BEARING OF DISTRIBUTION OF EARTHQUAKES AND VOLCANOES ON THEIR ORIGIN

Geological Society of America, Bulletin No. 39, Page 174, 1928.

Many maps have been published in the last thirty or forty years showing the distribution of earthquakes and volcanoes. All show a marked tendency for both classes of phenomena to concentrate in or near to the "young" or so-called Tertiary Mountain belt. The belt as a whole is characterized by "chronic and acute seismicity." But a large proportion of the major or world-shaking earthquakes have their epicenters not within the belt, as it is generally mapped, but on its submerged frontal slope, especially on its basal parts. Many also occur farther out on the ocean floor, and some far away from all others. Reed's map of major epicenters for 1899-1911, inclusive, shows a remarkable distribution. More than two-thirds out of a total of 276 are in the western one-third of the Pacific Ocean, mostly on the ocean floor.

If the mountain ranges of the Tertiary belt are being made by a sliding of the continental crust sheets from high toward lower latitudes it is easy to see how stresses would be set up in the compression belt, and would cause earthquakes when they were relieved by sudden fracture or slipping. The whole mass of North America north and northeast of the Pacific ranges is sliding constantly southward and southwestward, without perceptible jar, on a deep seated basal film or layer of rock which is made potentially viscous by great vertical pressure and by heat, but is made actually viscous only in a relatively thin layer by the tremendous power of the added horizontal stress arising from the main crustal movement. This viscous layer is the equivalent of Daly's basal layer of viscous basaltic glass.

Where the basal thrust-planes emerge in the ocean bed beyond the shore of the front range, suboceanic earthquakes are produced. Nearly all major earthquakes are caused in these ways. Only a few are caused by sudden fracture and relief of tension in high latitudes. The process is the same in all of the moving continents; the body of the continent slides constantly and without a jar. Earthquakes occur only where the basal planes emerge through the non-viscous, fracturable crust.

Some of the conditions of volcanic action, and of the formation of subterranean igneous bodies seem as yet largely obscure. Probably the welling up of the great plateau basalts is relatively the simplest process, and marks the climax or most rapid stage of crustal movements.

R.C.T.

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MEMBERSHIP APPLICATION
GEOLOGICAL SOCIETY OF THE OREGON COUNTRY

Qualifications and Dues: Applicant must be sponsored by a member and recommended by the Membership Committee. A knowledge of geology is not a requisite. There is no initiation fee. A Member shall be over 21 years of age; or a husband and wife and all children under 18 years of age. The dues are $3.50 per year, payable in advance, which includes one subscription to the Geological News-Letter. A Junior is an individual between the ages of 18 and 21. Dues are $1.50 per year, payable in advance, and include one subscription to the Geological News-Letter.

Date . . . . . .

I, ... (please print full name) do hereby apply for membership (junior membership) in the Geological Society of the Oregon Country, subject to the provisions of the By-Laws.

Home address. . . . . Phone . . . . . .

Business address. . . . . Phone . . . . . .

Occupation. . . . . Hobbies . . . . . .

I am particularly interested in the following branches of geology:. . . . . .

. . . . . .

I enclose $ . . . for the year's dues, March 1 to March 1. (Checks payable to the Society).

. . . . . Sponsored by. . . . . .
(signature) (member)

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 Avenue at 8:00 p.m.

TRIPS: On Sundays following the lecture meetings, or as otherwise arranged. Meeting place opposite Public Market, SW. Front Ave. and Yamhill St.

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 sixty cents.

MEETING ANNOUNCEMENTS

Friday Dec.24 — No meeting, Christmas Eve.

CHRISTMAS GREETINGS

To the members of the Geological Society of the Oregon Country - greeting from its officers and directors. To this let me add the personal greetings and best wishes of your president and his family. Although we may not observe this holiday season to the full measure that is traditional, we must keep alive the spirit of Christmas for the day not too far distant when it can be realized in its fullest significance. Again let me say a Merry Christmas and the best of the New Year, 1944.

Lloyd L. Ruff
President

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REPORT OF THE NOMINATING COMMITTEE

December 10, 1943

Dear Mr. Ruff:

The following have been placed in nomination for officers of the Society for the ensuing year by the Nominating Committee:

President	Mr. E. N. Bates
Vice President	Mrs. Mildred P. James
Secretary	Miss Ada Henley
Treasurer	Mrs. Mildred Stockwell
Board Member-at-Large	Mr. Leo Simon

Respectfully submitted,

M. H. Calef — Rose H. Jennings
Ada Henley — Clarence Phillips
F. L. Davis, Chairman

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Editor's Note: It has been reported that in the midst of the deliberations of the august nominating committee, after all nominees but the secretary had been chosen, the committee by a four to one vote declared that Miss Ada Henley should be deemed disqualified for further committee work and was forthwith removed therefrom. Later it was accidently discovered that the same Miss Henley did have the qualifications of a secretary and was placed on the ticket for that office. We have it from the best legal authority of the Oregon Country, who fortunately

was a member of this committee that the action was in accordance with the constitution and by-laws of the society and regular. Therefore this action should not in any way prejudice the electors in the case of Miss Henley for the office of secretary. Furthermore any similarity between the committee action and political collusion to the benefit of the committee members in disposing of this high salaried office is purely coincidental.

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LUNCHEON NOTES FOR THURSDAY, DECEMBER 9, 1943

Today's outstanding event was the surprise appearance of Dr. Arthur Jones, here on a flying visit. He was the center of attraction and was kept busy telling of his work and answering questions; says he has been "starved for geology" ever since leaving Portland, with little chance to do any geologizing, after having exhausted the possibilities around the Presidio, where he says there are traces of submergence and also emergence. On a trip to Mt. Tamalpais (which means, incidentally, "the country of the Tamal Indians") he secured some interesting specimens on the brow of the mountain, apparently intrusions, resembling gabbro. On this trip may be seen interesting cross-sections of formations, with intrusion of igneous dikes, from the Cretaceous down through the Jurassic. Asked about his medical work, he says malaria is the oustanding tropical disease they have to treat, about half of the cases being of this type. Most of the wounded men coming back have had quite extensive care before arriving as they come now from longer distances. One officer had been in New Guinea the week before. Speaking of prisoners, he reports those brought into Topeka a couple months ago said they did not believe they had been brought into the port of New York because it had been "bombed out of existence," also Chicago and St. Louis. Some recent prisoners admit things are not as they should be and that they have not been told all the truth. The Doctor is on duty all night every other night. His brother Francis is working six full days a week. The four Jones brothers are now in the service.....The only specimens shown today were a group of iron pyrites in quartz and pyrrhotite with iridescent coloring from southern Oregon, brought by Mr. Carney.....Mr. Schminky exhibited a section of photostat showing Fremont's journey through Oregon just 100 years ago. As he was in the Hart Mountain country at Christmas time he named the lake there Christmas Lake, now changed to Hart Lake.....The question of coal in the Wilhoit country was brought up and Mr. Libbey reported that ten or fifteen truckloads of bituminous coal had been sold from this region.

O.E.S.

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LIBRARY NOTES

The library has received:

From - Ward's Natural Science Institute, Rochester, N.Y.

No. 431 1943 Trade Catalog - Minerals for the collectors.
No. 433 1943 Trade Catalog - Collections of minerals, rocks and fossils.

Books:

From - Edwin T. Hodge.

Geology of North Central Oregon, by Edwin T. Hodge, 1942. Oregon State College, Corvallis.

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"The Star in the East"—by H. Warren

THE BETHLEHEM STAR

by J. Hugh Pruett

"We have seen His star in the East
And are come to worship Him."

Across the expanse of the ages, the beautiful story has come to us. From the blue of that ancient sky there shone a star, so unusual that the watchers of the night were filled with wonder. Diligent search of the records of the past revealed to them no similar appearance. Surely somewhere an event of profound significance was at hand.

Down through the centuries following this matchless wonder in the sky, the story of long ago has often been the fabric for literature, the inspiration for great art and our religion and song.

The single biblical account of the star offers no explanation of its nature. This one brief mention is found in the book of Matthew. The only other possible reference known is a vague statement in Chinese annals regarding an unusual star seen at about that same time. Since neither the Chinese narrative nor our gospel record describes at all the nature and appearance of the star, our generally accepted ideas evidently are highly colored by artists of later times.

Three distinct tendencies of thought seem to exist concerning the Star. At one extreme are those who place no credence whatever in unusual tales of any sort which come to us out of the distant past. Knowing the tendencies of ancient writers of all nations to emphasize strongly the supernatural, these extremists feel that the story of the star is merely a "pious myth," beautiful to be sure, but not to be thought of as an historical fact.

In marked contrast are those who believe the occurrence was purely supernatural, surely no ordinary event governed by natural laws. In fact, to them, the star may even have had no material existence, but shone only in the souls and minds of those so inspired as to understand its divine portent. Heralding the birth of a god-like teacher, very fittingly should it be outside the realm of the ordinary rules of nature. Even though the star had a material body somewhere out in space, still mankind must not speculate about its location and characteristics.

Between these extremes stands a large body of earnest seekers-of-the-truth who believe it possible that there was an unusual manifestation in the heavens at about the time of the birth of Christ, but a manifestation which can be explained fully by astronomical processes. None of the divine significance need be lost even though natural phenomena played an important role.

Most students of nature give very little, if any, place to the supernatural. The Ruler of the Universe - God, to many of us - manages his inconceivably immense creation in a most orderly fashion. If to us anything seems outside the control of natural law, it is surely because we do not understand all the rules. Henry Drummond, the noted writer, believed that the laws of the spiritual world are natural laws. A century ago surely it would have been "supernatural" to transfer a human voice one hundred miles over ether waves.

The ancient magicians and wise men, profound students of the stars and planetary motions, were primarily astrologers rather than astronomers. They believed that any unusual arrangement of the planets, the appearance of comets, the flight of flaming meteors, or the upward streaming of the delicate fingers of the Northern Lights, foretold imminent and momentous events.

Many and varied are the attempted explanations of Bethlehem's star. Some think it was the return of Halley's comet in 11 B.C. - the exact year of Jesus' birth is very uncertain. Or perhaps it was an even more spectacular comet which has otherwise escaped the records of the past. Since works of art usually give the star the appearance of Venus, that most brilliant of all planets, some believe we have the solution there. But surely the sight of Venus, however brightly it might have shone, would not have inspired those planet-wise Magi of the East to undertake a long and uncertain journey.

It is now well known that a star sometimes blazes out in great splendor in a part of the sky where no stellar object was previously noted. This nova, or "new star," sometimes remains bright for several weeks or months before fading into invisibility. Astronomical photographs often reveal that a very dim star did exist previously in this locality but attracted no attention until some unknown cause, internal or external, had brought about a stupendous flare-up.

In 1934 we had a Christmas star, Nova Herculis, which had increased rapidly into naked-eye brilliancy shortly before December 25. A much brighter nova appeared in June 1918. The most spectacular in recorded history blazed out in the star-group, Cassiopeia, in 1572 A.D. When brightest, it was plainly visible in full sunlight. The Danish astronomer, Tycho Brahe, observed it carefully and left us the following record:

"On the 11th of November when I was contemplating the stars in a clear sky, I noticed that a new and unusual star, surpassing the other stars in brilliancy, was shining directly above my head.....I was so astonished at this sight that I was not ashamed to doubt the trustworthiness of my own eyes. But when I found that others too could see that there was really a star there, I felt no further doubts. A miracle indeed, either the greatest of all that have occurred in the whole range of nature since the beginning of the world, or one certainly that is to be classed with those attested by holy oracles."

After weeks of careful observations and measurements with delicate instruments, Tycho proved that the new star was not in our atmosphere, nor in the region of the moon; not even at the great distance of Saturn, the most distant of the planets then known. But the nova was among the fixed stars, inconceivably far away.

If the Star of Bethlehem did appear as it is usually pictured and if it had a material existence, surely it had all the characteristics of brilliant novas which have shone forth occasionally in the world's history.

But whatever the explanation, it is now quite definitely known that a very unusual sight did appear in the sky in the year 6 B.C. This time is quite likely near the date of the birth of Jesus, for the death of Herod the Great, from whom Joseph fled into Egypt, occurred in 4 B.C.

In 1610 A.D., the German astronomer Kepler observed Jupiter, Saturn, and Mars so closely grouped that they presented a very striking spectacle. By mathematical calculation, he showed that similar combinations of these planets

had previously occurred in 6 B.C. and in 799 A.D. At the earlier date the planets were seen in the western evening sky in the spring. Kepler suggested that this might be the explanation of the Star of Bethlehem.

Those familiar with Dr. Henry Van Dyke's story, "The Other Wise Man," will recall that the author weaves beautifully this theory of Kepler's into his tale. May we quote:

"Where the distant peaks of Zagros serrated the western horizon, the sky was clear. Jupiter and Saturn rolled together like drops of lambent flame about to blend into one. As Artaban watched them, a steel-blue spark was born out of the darkness beneath, rounding upwards through rays of saffron and orange into a white radiance. Tiny and infinitely remote, yet perfect in every part, it pulsated in the enormous vault as if the three jewels of the Magian's girdle had mingled and been transformed into a living heart of light.

"Artaban bowed his head. He covered his brow with his hands. 'It is the sign,' he said, 'The King is coming and I will go and meet Him.'"

Since the rather recent installation of Zeiss planetaria in various cities of the world - five are in America - Kepler's computations have been amply verified by mechanical means. On the inside of the spacious dome above the auditorium, pictures are projected which appear almost as natural as the actual starry heavens. The intricate machinery reproduces the positions of the planets among the stars as they were thousands of years ago, and with an accuracy almost equal to that of mathematical calculation.

The re-enactment of these ancient skies is the aim of the directors of the planetaria in their pre-Christmas programs. Sky pictures are usually started with the year 8 B.C. At first nothing striking appears. A few bright planets are scattered among the stars. The projector is run rapidly and the planets appear to move along their natural paths.

With this speeding of time a year soon passes. 7 B.C. finds Jupiter and Saturn very close to each other. Drawing still nearer together in 6 B.C., Mars also moves rapidly toward them. Finally they are grouped only about one degree apart in the corners of an almost perfect equilateral triangle, thus forming a glorious spectacle. "They almost seem to shine as one star instead of three."

Was this the Star of Bethlehem? Says Dr. Clyde Fisher, formerly of the Hayden Planetarium of New York, "In the face of this wondrous event, natural science stands offering possible solutions, but not dogmatically proclaiming to have plumbed the depths of the subject."

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Somewhere in Iran (Persia) from a soldier's letter dated November 15, 1943:

"Saw the Star of Bethlehem and was amazed at its beauty and clarity - seems to be alive while all the other stars and the moon are just dead light. Can understand the compulsion the three wise men felt to follow it. Must be that this is an ideal spot and time to watch it. Have never tired of watching it. The only time it is visible is early in the morning and due to my reluctance to quit my warm bed, see it seldom. May be why it still overawes me." (Quoted through the kindness of a friend who received this letter - Editor.)

LUNCHEON NOTES FOR THURSDAY, DECEMBER 2, 1943

Not the blare of trumpets but a resounding bang announced the last minute arrival of Dr. Stevens - a neat little stunt put on by the chairs at the Winter Garden, which have a disconcerting trick of collapsing noisily just as one is about to be seated. The Doctor's poise, however, was unruffled.....A by-product of the Thanksgiving holiday was a handful of pumice pebbles, a few of the many found floating in pools and along the beach where the Schminky family spent the holiday. Query: Where did these pebbles originate? (And where did Bruce Schminky get the gas?).....Shown by Mr. Minar was a sandblast nozzle, made in Sweden and guaranteed for 500 hours, but used at least 1000 hours. Another guaranteed for 1000 hours is being installed, both at a cost of $35. Those made in this country last about 20 or 30 minutes!.....A blueprint of the chart used by the Salem group showing in elaborate detail what they are doing on their work nights was exhibited by Mrs. Rockwell - an ambition looking program..... From far away Newfoundland came the four specimens shown by Mr. Stanley and tentatively identified by Lloyd Ruff as hornfels (metamorphosed shale), mica gneiss, bull quartz, and graphite in quartz. These were brought to Mr. Stanley by his son Howard, a first lieutenant in the Air Corps.....Geary Kimbrell presented as his guest Mr. Christenson, the curator of the City Museum, who is at present working on models of new bridge approaches, the current project being the east approach of the Hawthorne Bridge.....Speaking of museums, Dr. Stevens says Congressman Homer Angell has introduced a bill to establish a museum for the relics, mementoes, etc., formerly contained in the Battleship Oregon, together with other things of historical interest. Dr. Stevens wrote Mr. Angell requesting that the bill be amended to include articles of science and industry as well, and Mr. Angell promised to see that the bill was so amended. In this connection, Dr. Warren Smith will prepare a paper on the needs of this country for a museum, which will appear in the Sunday Oregonian in the near future.....Tom Carney made his first appearance since his return from his activities in Hanford, Washington. He gave a glowing account of the possibilities for a future week end trip in that vicinity when Hitler and Hirohito have been satisfactorily disposed of, saying there is much of interest for the geologist and mineralogist, an untouched field, including selenite crystals, fine agates, petrified wood and fossils. Lloyd Ruff suggested that Mr. Carney be then and there appointed leader for such a trip. Speed the day!.....A most attractive door prize was presented by Dr. Booth, a polished section of San Rafael nodule containing pink chalcedony, for which lots were drawn. Again the winner was the one guest present, Mr. Christenson.....Off the record: In the private rose contest being conducted by Geary Kimbrell and O. E. Stanley, the former, wearing a flame colored bud, seems to have the honors, as O.E.S. was unadorned.

A.H.

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NEWS OF MEMBERS

Lloyd L. Ruff, President of the Geological Society of the Oregon Country, told Professional Engineers of Oregon about trips through the canyon of the Snake River, and showed two reels of colored motion pictures of those trips at the biweekly luncheon meeting of that organization at the Heathman Hotel Wednesday, December 15.

O.E.S.

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