

P. O. Box 417

July 19, 1977

John E. Johnson
1732 Stardust Court
Santa Clara, California 95050

Dear Mr. Johnson:

Your letter requesting information about Fossil Lake, Oregon has been passed to me.

The fossils there (Pleistocene) have been known for a long time and were described in detail in the late 1800's.

The following references should get you started on learning about the fossils and geology of the area:

- Elftman, H. L., 1931, Pleistocene mammals of Fossil Lake, Oregon: American Museum of Natural History, American Museum Novitates, no. 481, 21 p.
- Hampton, E. R., 1964, Geologic factors that control the occurrence and availability of ground water in the Fort Rock Basin, Lake County, Oregon: U.S. Geol. Survey Prof. Paper 383-B.
- Merriam, J. C., 1918, Evidence of mammalian paleontology relating to the age of Lake Lahontan: Univ. of California, Dept. of Geol. Bull., vol. 10, no. 25, pp. 517-521.
- Miller, L. H., 1911, Additions to the Avifauna of the Pleistocene deposits at Fossil Lake, Oregon: Univ. Cal., Dept of Geol., Bull., vol 6, no. 4, pp 79-87. (also see vol. 7, no. 5, p. 64).
- Shufeldt, R. W., 1891, On a collection of fossil birds from the Equus beds of Oregon: American Naturalist, vol. 25, pp. 359-362.

Sincerely,

Norman V. Peterson

NVP:rep

Lake County Fossil
Localities

March 10, 1960

Mr. L. R. Hoxie
Route 1 Box 261
La Grande, Oregon

Dear Mr. Hoxie:

I am sorry I was not in when you called at our office yesterday. I would like to have talked to you about the fossil flora of Central Oregon.

I have only a slight knowledge of fossil floras but I realize their importance in dating and am constantly on the lookout for them.

So far the localities that I have found do not contain a great variety nor are they too well preserved, nevertheless I will tell you where they are and how to get there in case you should want to look at them.

- No. 1 Thomas Creek -- In the extreme southwest corner of Sec. 27, T. 37 S., R. 18 E. On the northeast facing slope southwest of Thomas Creek. There are about 100' of reddish-brown tuffaceous sediments exposed about 200 feet above the stream. At least 5 species occur in various thin beds about midway in the exposed section. At this locality I also found a rhino tooth that has been dated as John Day equivalent (lower Miocene). Both deciduous and conifer material is present in these beds. They are possibly the oldest rocks present in this area.
- No. 2 Close by in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 34, T. 37 S., R. 18 E., just west of the Mesman Creek access road in a shallow bulldozer cut. Here one species identified as Trapa americana Knowlton was found in a light tan fine-grained tuff. Good specimens of these are rather abundant here. The bulldozer cut is located at the east end of a low basalt capped ridge.
- No. 3 Poorly preserved specimens are found in thin to thick beds of gray tuffaceous sandstone and shaly material in Sec. 7, T. 36 S., R. 18 E., in a road cut on the south side of Dairy Creek, just west of Dairy Creek Guard Station. I believe several species have been collected here.

No. 4 In the NW $\frac{1}{4}$ of Sec. 7, T. 36 S., R. 18 E., on the southeast flank of Drum Hill. Leaves were found near the base of prominent cliffs made up of thin tuffaceous sedimentary beds. Several hundred feet of these beds are exposed here. The exact location of the leaves here may be difficult to find as the beds are thin and most are barren. Within this section large tree cast holes are abundant in places. Some carbonized wood remains but in most cases the wood has not been preserved. The leaves are not well preserved but several deciduous species were recognized.

The above localities are the only ones where I have collected but I have reports of abundant leaves and wood, some petrified (opaline) in the area to the south of Quartz Mountain particularly in and near Barnes Valley, Arkansas Flat, Lapham Reservoir.

I hope this information will be of interest to you and if you have any specific questions I would be glad to try to answer them for you.

Sincerely yours,

Norman V. Peterson
Geologist

NVP:amj

UNIVERSITY OF OREGON
Museum of Natural History
Eugene, Oregon

July 28, 1958

Mr. Norm Peterson

Box 417

Grants Pass, Oregon

Dear Norm:

The tooth you sent from Thomas Creek is apparently an upper premolar of Diceratherium, a rhino of John Day age (lower Miocene). Would like to see anything more you may pick up there. Hope this is of help to you.

Sincerely,

J. A. Shotwell

JAS:lf



State Dept. of Geology etc.
521 N.E. "E" Street.
P.O. Box 417
Grant Pass, Oregon

97526

Yakima 9/23/68.

Gentlemen.

It gives me
pleasure to have you quote
me regarding the forest
woods of the Fishhole area
of southern Oregon -
material I sent to Alfred
D. Collier of Klamath, Ore.

Sincerely,

George F. Beck.

2408 Summitview

Yakima 1/23/60

Mr Alfred D Collier, Pres.,
Swan Lake Woodworks,
South 9th St.
Klamath Falls Oreg

Dear Mr Collier:

At Long Last I am
mailing you a box containing the
fish ^{Hole Mountain} ~~lake~~ petrified woods. Those #
1-12 were originally in one box labeled
fish lake. The others were in two associated
groups as indicated.

I hope they will display nicely - they
are about the right size for the purpose.
If there are any questions refer to
me by number of specimen.

Sincerely
Gord + Bief

Mr Alfred D Collier.

10/18/60

Swank Lake Moulding Co.

South 6th St, Okemulgee Falls, Okla.

Dear Mr. Collier:

Your letter of 10/4/60 was forwarded to me here, but had to wait for my return from an after visit to the Midwest.

Yesterday I returned to the Campus and was happy to find your fossil material just as I had left it. You I have been retired for a year and a new man is in charge at Central.

Five years ago I hurt my eyes - what I mean is some excessive microscope work had got up with me, and I had done no work of the kind since.

However a fossil wood student of mine has a fine outfit at the high school here, where he teaches, and we will go over your woods again. In the meantime I have forgotten all of the details and will have a fresh unbiased view of the material.

It will take some time - I hope you would prefer careful attention rather than hurried.

In the meantime thanks a lot for the check. It is not often that consideration in dollars and cents has been given to the work involved in development of woods.

Note change of address

George F Beck

ALFRED D. COLLIER, PRESIDENT
V. E. O'NEILL, VICE-PRESIDENT
D. F. FERGUSON, VICE-PRESIDENT
F. B. EHLERS, VICE PRESIDENT
A. M. COLLIER, SECRETARY
D. C. HARGUS, ASST. SECRETARY

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KLAMATH FALLS, OREGON

Norm Peterson
State Dept of Geology & Mineral Industries
P.O. Box 417
521 N E "E" St.
Crumps Pass, Oregon.

8-24-68,

Dear Norm:
Pardon delay in answering your letter of the 15th. Too much Bobo Ruth Baseball World Series.

As I remember Judge Kuykendall said he gathered the petrified wood to show the range of trees in the forest south of Fishlake Mountain. I would judge it might have covered a township or so. I have not heard from Professor Beck since the letter received with the rocks. I believe that Professor Beck would welcome the publishing of the information and would be willing that his name should be used in connection with the identification. I think you will find his address on the letters but if not he could be reached by writing the Central College of Education at Ellensburg, Washington forward it to him.

Alfred D. Collier

UNIVERSITY OF OREGON



Museum of
Natural History

EUGENE, OREGON 97403
telephone (code 503) 342-1411

October 7, 1968

Norm Peterson
Department of Geology and Mineral Industries
Grants Pass Field Office
P. O. Box 417
Grants Pass, Oregon 97526

Dear Norm:

Enclosed is the dope I promised you. The Harvey Creek locality is based on only one tooth and not a real good one either. The main locality represents a specimen which came out of a well with no data on depth.

I hope you will find this scrappy information useful.

Sincerely,

A handwritten signature in blue ink, appearing to read 'A. Shotwell', is written over the typed name.

J. A. Shotwell

JAS:rb

COPY
UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

Ground Water Branch
Box 3418 - 1001 N.E. Lloyd Boulevard
Portland 8, Oregon

May 28, 1959

Mr. Hollis Dole, Director
Oregon State Dept. of Geology and Mineral Industries
1069 State Office Building
Portland 1, Oregon

Dear Hollis:

In reply to your May 27 request, the locations of the diatom samples mentioned in my letter to Ken Lohman are as follows:

<u>Sample No.</u>	<u>Locality</u>
4737	(Fort Rock Basin) NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 28 S., R. 16 E.
4736	(Fort Rock Basin) SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 27 S., R. 17 E.
1032	(Burns Valley) Sec. 32, T. 23 S., R. 29 E.
1016	(Sprague River Valley) Sec. 12, T. 36 S., R. 10 E.
1017	(Poe Valley) Sec. 25, T. 40 S., R. 11 E.

The lower numbered samples have been described in USGS Bulletin 875, but with no reference to the age or range in age of the individual species.

As you know, we are always on the lookout for some means of tying the various lithologic units of central Oregon together with something stronger than a geologist's native intuition. We are becoming more optimistic about diatoms, especially when some species have limited age ranges and are thus useful as a geologic time filter, as well as beer and industrial filters.

If you have any suggestions as to a means of creating enough interest in the diatomaceous deposits of central Oregon to warrant a special project by our P & S Branch, please let us know. I hope you find the sample localities useful.

Sincerely yours,

/s/ E. R. Hampton

Geologist

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
P.O. Box 3418
Portland 8, Oregon

May 26, 1959

TO: Mr. K. E. Lohman, Washington, D.C.
FROM: E. R. Hampton, Portland, Oregon GW
SUBJECT: Diatoms in Fort Rock Basin

Dear Mr. Lohman:

I would like to take this opportunity to thank you and your staff for what appears to be a very thorough job of identification and dating of the diatoms from the Fort Rock Basin in central Oregon.

Upon re-examination and more detailed mapping, the locality of USGS diatom sample 4737 appears to be stratigraphically lower than, or nearly equal to that of sample 4736, thus confirming your age determination of + upper middle Pliocene.

While comparing the diatom list of the Fort Rock Basin with the species lists in USGS Bull. 875, I noted that Melosiva solida Eulenstein, a form restricted geologically, occurs in diatomite deposits in the Burns area in the Danforth formation (sample no. 1032) and at two localities in the Klamath Basin in the Yonna formation (samples no. 1016 and 1017). Since only partial lists of diatom species were included in Bull. 875, I wondered if you have more complete species lists for these above-mentioned areas that would confirm or at least indicate an age correlation of the Danforth formation of the Burns area, WSP 841, the Yonna formation of the Klamath Basin, and the Fort Rock beds (unpublished name) of the Fort Rock Basin.

Your assistance in the proof or disproof of the possibility of the above-mentioned regional correlation will be greatly appreciated. Thank you again for the fine job on the Fort Rock Basin diatoms.

The stratigraphy and correlations of the sedimentary beds in the various basins of south central Oregon has long needed a lot of objective work. We are wondering if an extensive diatom correlation project could not be undertaken by your section in the near future. Possibly accompanying work could be undertaken on the vertebrates also. It is a greatly ignored area geologically and paleontological correlations would provide a timely impetus to a lot of geological work that is bound to come in the next few years.

/s/ Eugene R. Hampton

cc Mr. Dole, Director, State Dept.
Geol. & Min. Industries

Geologist

UNIVERSITY OF OREGON 610
MUSEUM OF NATURAL HISTORY 13
EUGENE, OREGON 7

July 28, 1958 - 7

Mr. Norm Peterson

Box 417

Grants Pass, Oregon

Dear Norm:

The tooth you sent from Thomas Creek is apparently an upper premolar of Diceratherium, a rhino of John Day age (lower Miocene). Would like to see anything more you may pick up there. Hope this is of help to you.

Sincerely,



J. A. Shotwell

JAS:lf





UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Geologic Division
Pacific Coast Branch
345 Middlefield Road
Menlo Park, California 94025

September 12, 1968

Mr. Norman V. Peterson
Department of Geology and
Mineral Industries
Grants Pass Field Office
P.O. Box 417
Grants Pass, Oregon 97526

Dear Norm:

My vertebrate fossil locality (GWW-15-60) about 3-4 miles southwest of Dog Mountain, Lake County, Oregon, is near the line separating sections 17 and 18, T. 40 S., R. 17 E. It must be the same as or very near the locality you mention in your letter.

Shotwell, who briefly saw material collected at this locality during an evening in Lakeview, gave an off-the cuff and non-quotable age of questionable Barstovian. At a later date Charles Repenning prepared an informal report indicating that my very poor collection contains the following:

1. Perissodactyl upper teeth fragments, one fairly large
2. Horse astragalus of a size comparable to Merychippus severus
3. Perissodactyl patella, looking very much like a chalicothere
4. Astragalus of a medium sized artiodactyl -- somewhat pig-like
5. Misc. scrap, some of which might be identified with more work.

Repenning summarizes his preliminary findings by writing ... "Tentatively, therefore, it seems to me there is fair reason at the moment to say probably middle to late Miocene." He also states that it can't be Pliocene.

I'm sure that Rep would not care to be quoted without doing some additional work on these fossils. I talked with him this morning and he will re-examine the collection within the next day or so letting us know whether his original determinations still stand and whether he is willing to be quoted.

His report on my vertebrate collection, plus evaluation of stratigraphy and structure, were the basis for labelling rocks southwest of Dog Mountain as (Upper) Miocene. At the time I mapped this area at a dead run, I was worried, however, that patches of younger (Pliocene?) rocks might fill lows between areas of Miocene rocks and be sufficiently comparable in lithology as to be unrecognizable. Have you and Jim considered this possibility?

Sincerely,

A handwritten signature in cursive script that reads "George". The signature is written in dark ink and is positioned above the printed name.

George W. Walker



UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Geologic Division
Pacific Coast Branch
345 Middlefield Road
Menlo Park, California 94025

September 16, 1968

Mr. Norman V. Peterson
Department of Geology and
Mineral Industries
Grants Pass Field Office
P.O. Box 417
Grants Pass, Oregon 97526


Dear Norm:

Charles Repenning has reviewed the small collection of vertebrate fossils from my locality (GWW-15-60; U.S.G.S. loc. no. M-1139) southwest of Dog Mountain with the following results. He thinks the fossils are late Miocene (Barstovian) and that they definitely cannot be younger than early Pliocene (Clarendonian). One rhino tooth fragment has not been precisely identified, but its characteristics are more like middle or early Miocene. Hence, there is still some question in his mind.

Repenning is willing to be quoted that the fossils indicate an age of probable Barstovian or Clarendonian(?), but is not willing to go beyond this nor is he willing to specify that your locality is the same as mine. Inasmuch as all of this material is lag -- at least, I never found any in place -- is there a chance that Hemphillian and older material have been mixed during erosion of this sequence of beds? I'm sure none of it has moved very far, however.

You'll have to decide how to best resolve this discrepancy, although whether these beds are late Miocene or early Pliocene doesn't seem very important at the moment.

Sincerely,


George W. Walker

UNIVERSITY OF OREGON
Museum of Natural History
Eugene, Oregon

July 28, 1958

Mr. Norm Peterson

Box 417

Grants Pass, Oregon

Dear Norm:

The tooth you sent from Thomas Creek is apparently an upper premolar of Diceratherium, a rhino of John Day age (lower Miocene).

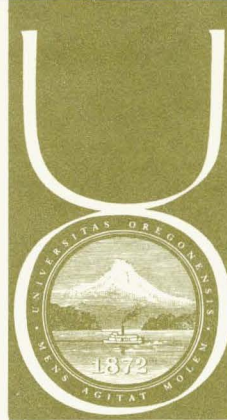
Would like to see anything more you may pick up there. Hope this is of help to you.

Sincerely,

J. A. Shotwell

JAS:lf

UNIVERSITY OF OREGON



Museum of
Natural History

EUGENE, OREGON 97403
telephone (code 503) 342-1411

September 12, 1968

Norm Peterson
Dept. of Geology and Mineral Industries
Grants Pass Field Office
P. O. Box 417
Grants Pass, Oregon 97526

Dear Norm:

As you know vertebrate sites are rather rare in Klamath County and only a little more abundant in Lake. In answer to your questions I cannot add anything to the information on the footprints at Drews Gap. Several times I have looked over the area and usually succeeded only in getting stuck in the spring. If the tracks are bear they can be no older than late Miocene.

The camel you asked about is a late Pliocene form. There are quite a number of sites in southern Klamath County which probably are of the same age. Two important ones are the quarry (Wilson Quarry) at the north end of Stukel Mountain and the chalky beds due south of Merrill on the State-line Road. The upper unit in the Wilson Quarry is late Pliocene, the light colored beds are mid-Pliocene. The state-line locality is late Pliocene.

North of Malin in what used to be Sand Hollow there are late Miocene sediments below the surface. I have seen some specimens which came from wells there.

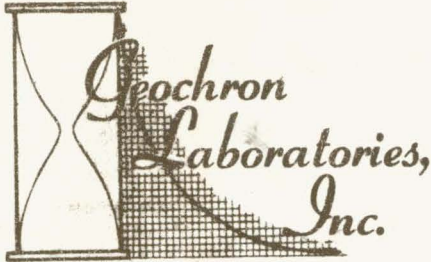
If you could give me the boundaries of your map I can list those localities I know of which indicate age of the sediments. Most are just a little bit better than nothing. I spent the summers of 1949 and 50 trying to improve the record there and later about 1959 but had very little success. Let me know what further information I can provide, particularly to the east of those I mentioned.

Sincerely,

J. A. Shotwell

JAS:rb

24 Blackstone Street, Cambridge, Mass. 02139
Telephone TRowbridge 6-3691



29 January 1969

Mr. E. L. Oakes
Atlantic Richfield Company
1500 Security Life Bldg.
Denver, Colorado 80202

Dear Mr. Oakes:

We have now completed the potassium-argon age determinations on two samples of rhyolite which were received by us about two weeks ago for potassium-argon dating. These samples were analyzed for you on behalf of Dr. Norman V. Peterson and we are sending copies of the enclosed reports to Dr. Peterson.

We were able to separate concentrates of sanidine and of biotite from samples 1 and 2 respectively as I recommended in my letter to Dr. Peterson of 20 November 1968. The ages determined on these mineral concentrates are 8.1 ± 0.5 and 7.6 ± 0.4 m.y. respectively. These two results are, of course, indistinguishable at the one standard deviation error level. Both ages would appear to be middle to late Pliocene.

I trust that you or Dr. Peterson will get in touch with us if we may be of any assistance in discussing these age determinations. In the meantime, I am enclosing our invoice for the analyses and I hope we will have the pleasure of serving you again in the near future.

Sincerely,
GEOCHRON LABORATORIES, INC.

Harold W. Krueger
Technical Director

HWK/pw
encs.

CC Dr. N. V. Peterson

UNIVERSITY OF OREGON
Museum of Natural History
Eugene, Oregon

July 28, 1958

Mr. Norm Peterson
Box 417
Grants Pass, Oregon

Dear Norm:

The tooth you sent from Thomas Creek is apparently a n upper premolar of Diceratherium, a rhino of John Day age (lower Miocene). Would like to see anything more you may pick up there. Hope this is of help to you.

Sincerely,

J. A. Shotwell

JAS:lf

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Museum of Natural History
Eugene, Oregon

July 28, 1958

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