Latah Formation[1]

Miocene, middle or upper: Eastern Washington and western Idaho.

Original reference: J. T. Pardee and Kirk Bryan, 1926, U.S. Geol. Survey Prof. Paper 140, p. 4–12.

J. W. Hosterman, 1960, U.S. Geol. Survey Bull. 1091, p. 7–8, pls. 2, 3, 4. In general vicinity of clay deposits in Washington and Idaho, the Latah is interbedded with Columbia River basalt and is divided into an upper an lower part by the unit of basalt on which residual clay is developed.

Typical exposure on slope west of Latah Creek, a short distance south of Spokane, Spokane County, Wash.

Latah formation.

Miocene (upper or middle): Eastern Washington and western Idaho.

J. T. Pardee and K. Bryan, 1926 (U. S. G. S. P. P. 140, pp. 4–12). *Latah fm.*—Chiefly clay and sh., with some beds of sand and gravel and one or more beds that contain sufficient quantities of diatom skeletons to be classed as impure diatomaceous earth. Many sh. beds appear to be composed largely of very fine volcanic ash. The sh. generally contains plant remains classified by F. H. Knowlton as middle or lower Mio. [Berry assigned the flora to middle or upper Mio.; R. W. Brown considers it middle Mio. The fm. is mapped in this rept as far N. as 25± mi. from Spokane and 10± mi. S. of Spokane.] Evidence indicates it extends E. into the open valleys near Coeur d'Alene, Idaho. Thickness at least 250 ft. in area of typical exposure on slope W. of Latah Creek (a short distance S. of Spokane), and 0 to 1,500 ft. in Spokane-Coeur d'Alene [Idaho] area. In Spokane area, so far as known, it everywhere rests on the granite-schist group, and apparently it is or was at one time everywhere covered by the lava flows comprising the "rim rock," which are somewhat later than Yakima basalt. It formerly extended continuously over the area from Silver Hill-Cheney Ridge N. and E. to the mtns, except for the "islands" or "steptoes" of crystalline rock, many of which were not covered even by the highest lava flow. To S. and W. of the ridge the extent of the fm. is not definitely known and the upper beds are surely missing.

V. R. D. Kirkham and M. M. Johnson, 1929 (Jour. Geol., vol. 37, No. 5, pp. 483+). The Latah fm. at Spokane, Wash., by definition occupies position underlying Columbia River basalt instead of being interstratified with the lava. But plants col-

over

lected from 7 localities described by Russell are all typical of Latah flora. The fm. has been identified in Benewah, Latah, and Nez Perce Counties, Idaho. [Describes exposures at 40 places in these counties.] The material in Idaho differs little from that at Spokane. Although defined in type loc. as being essentially a pre-basalt fm., the Latah, as shown by a large number of localities over a much greater area, appears to be more commonly a series interbedded with lava flows of Columbia River basalt. In nearly all Idaho localities the greater part of the series has basalt underlying as well as overlying it. In some places, however, the Latah beds lie directly on the pre-basalt terrain. At all places where this was observed, except at Moscow, higher and thicker members interstratified with the overlying basalt were also present. The beds consist chiefly of fine sediments which contain plant fossils that indicate their Latah age. Where two members of the series are thought to be separated by as much as 400 ft. of lava the fossil assemblage shows neither notable break nor evolution, so far as observed. The various members of Latah series as found in Idaho appear to occur within a range of 800 ft. The geographic extent of the series is many times greater than was at first surmised. The lake beds are interstratified with the basalt without angular uncon., but both basalt and sediments abut uncon. against pre-basalt fms. The greatest measured thickness of any one memb. in Idaho is 350± ft. At no Idaho locality is the combined thickness of the various sed. layers believed to be more than 400 ft. The usual thickness of upper layer is 100± ft., and that of lower layer 150 to 200 ft.

Latah Fm. 1963

Bond, J. G., Geology of the Clearwater Embayment: Idaho Bur. Mines and Geol. Pamphlet 128 (new names) (283)
P

p. 7

Miocene

Clearwater Embayment
W-Cent. Idaho

Latah Fm.

1964

Evernden, J. F., and James, G. T., Potassium-argon dates and the Tertiary floras of North America: Am. Jour. Sci., v. 262, no. 8.

p. 972

S(200)
Am48

Tertiary

North America

Latah Fm. 1961

Waters, A. C., Stratigraphic and lithologic variations in the Columbia River Basalt: Am. Jour. Sci., v. 259, no. 8, p. 608

Middle to Late Miocene

eastern
Oregon & Washington

Latah fm. 1965

Griggs, Allan B., Stratigraphic relationships between the Columbia River basalt and the Latah formation in Spokane area, Washington: (Abs.) GSA Spec. Paper 82.

Miocene W. Washington

Latah Fm. 1961

Savage, C. N., Economic geology of central Idaho blacksand placers: Idaho Bur. Mines and Geol. Bull. 17 (283)
B

Table 7 (p. 38), p.

Miocene-Pliocene

Idaho

Latah Fm. 1962

Ross, C. P., Stratified rocks in South-central Idaho: Idaho Bur. Mines & Geol. Pam. 125

p. 105

Cenozoic S-central Idaho

Latah Fm.

1966

Crosby, J. W., Ground-Water Research in the Pullman-Moscow Basin: in Idaho. Eng. Geology and Soils Eng. Symp., 4th Ann., Proc., Apr.

p. 231, 232

age not stated

NE. W ash.-
NW. Idaho

Latah Fm.

1967

Gray, Jane and Kittleman, L. R., Geochronometry of the Columbia River Basalt and Associated Floras of Eastern Washington and Western Idaho: Amer. Jour. Sci., v. 265, no. 4, Apr.

S(200)
Am48

p. 257-291

258, 260, 267

E. Wash.-
W. Idaho

M. Mio.

Latah Fm.
(Columbia River Gp.)

1967

Ross, S. H. and Savage, C. N., Idaho Earth Science - Geology, Fossils, Climate, Water, and Soils: Idaho. Bur. Mines & Geology, Earth Sci. Ser., no. 1, July.

p. 9, 14

(283)
qEs

Mio.

Idaho

Latah Fm.

1968

Weis, P. L., Geologic Map of the Greenacres Quadrangle, Washington and Idaho: USGS Geol. Quad. Map GQ-734.

over, under, interlayered with
Columbia River Gp.

Mio. **E. Wash.-NW. Idaho**

Latah Fm. (aband. loc.)

1968

Savage, C. N., Lexicon of Idaho Geologic Names: Idaho. Bur. Mines & Geology, Inf. Circ. 20, Dec.
p. 1-78

(283)
qIn3c

74

replaced by Deer Creek Beds (new)

Mio.(?)

SW. Idaho

Latah Fm.

1969

Lewis, S. W., Fossil Insects of the Latah Formation (Miocene) of Eastern Washington and Northern Idaho: Northwest Sci., v. 43, no. 3, Aug. p. 99-115

S(200)
N87

99 - age

12.1-21.3 m.y.
M-U. Mio.

E. Wash. &
N. Idaho

Latah Fm. (lith.) 1974

Ko, Chong-An, Geology and Groundwater Resources of the Hangman Creek Drainage Basin, Idaho-Washington: Montana Univ. NW Geol., v. 3.
p. 16-21 G(280)
N818

clay, sand, basalt, gray

[Mio.]

ne. WA
nw. ID

Latah Fm. 1975
(Columbia River Gp.)

Armstrong, R. L., The Geochronometry of Idaho: New Mexico Bur. Mines & Min. Resources, Isochron/West 14. p. 1-50 G(272) qIs72

22..of Evernden & James, '64

incl. Whitebird Lake Beds [1350]

K-Ar: 12.1±0.4 m.y. (plagioclase) ID

Latah Fm 1975

Miller, F. K. & Clark, L. D., Engels, J. C., Geology of the Chewelah-Loon Lake Area, Stevens & Spokane Counties, Washington: USGS PP 806. (200)
p. 1-74 qB
61, pl.2

clay

Mio ne.WA

Latah (?) Fm 1979

Rember, W.C., Bennett, E.H., and others, Geologic Map of the Challis Quadrangle, Idaho: ID Dept Lands, Bur Mines and Geol, Geol Map Ser, Challis 2° Quad at scale 1:250,000

M(283)2
C352r

Mio c. ID

Latah Fm 1979

Aadland, Rolf K., Bennett, Earl H., and others, Geologic Map of the Sandpoint Quadrangle, Idaho: ID Dept Lands, Bur Mines and Geol, Geol. Map Ser, Sandpoint 2° Quad. at scale of 1:250,000

M(283)2
Sa56a

under: glacial, terrace, alluvial deposits (Quat)
over: unnamed cgl (Olig)

Mio nw. ID