GSA Data Repository Item # 8315

Title of article: Radiometric dating of ash partings in coal of the Eocene Puget Group, Washington: Implications for paleobotanical stages

Author(s): Donald L. Turner, Virgil A. Frizzell, D. M. Triplehorn, C.W. Naeser

see GSA Bulletin v. 11, p. 527 - 531

Contents 6 pages

Appendix 1 p. 1

Samples (loc. & descript.) 2 - 3

Fossil localities 4

Top. map of study area 5 - 6
APPENDIX I

The following appendix will be placed on file with The Documents Secretary, Geological Society of America, P.O. Box 9140, Boulder, Colorado, 80301. It contains a detailed list of sample locations and descriptions, a figure showing the stratigraphic positions of dated ash partings with respect to Wolfe's (1968) fossil localities, and sample locations on Vine's (1969) geologic map of the area.
PUGET GROUP AND ADJACENT ROCKS

SAMPLE LOCALITIES AND DESCRIPTIONS

All of the following samples were collected by Turner and Triplehorn in the Cumberland quadrangle (7.5 minute series), King County, Washington, about 30 km (25 mi.) south of Seattle.

DT78-20 North bank of Green River, near the center of the NW 1/4 sec. 19, T.21N., R.7E. Whole-rock sample of altered basalt sill, collected from boulder pile at base of roadcut outcrop, at 500' elevation above the river, near watchman's cabin.

DT78-26 Old strip pit in Franklin No. 12 coal, NE 1/4 NE 1/4 sec. 17, T.21N., R.7E. At 950' elevation, about 30 m (100 ft.) west of gravel road, at the north end of the pit. Parting 1 to 2 cm (0.4 to 0.8 in.) thick, 2.4 m (8 ft.) from the top of coal, which is 9 m (30 ft.) thick. Light-colored, with abundant grains of medium sand size in a silt-size matrix.

DT78-27A Same location at DT78-26 but about 0.6 m (2 ft.) lower in the same coal. 2.5 cm (1 in.) thick, gray, mostly silt size with abundant grains of fine sand size.

DT78-27B Roadcut on gravel road NE 1/4 NW 1/4 sec. 35 T.21N., R.7E., at 1710 feet elevation, where road turns from NW-SE to SSW. Whole-rock sample of andesite intrusion; massive, dense, very fine grained; at least 9 m (30 ft.) thick. Unnamed volcanic unit overlying Puget Group.

DT78-28A Roadcut about 250 m (820 ft.) south of DT78-27B, near the center of the E 1/2 NE 1/4 sec. 35, T.21N., R.7E. Whole-rock sample of andesite intrusion similar to DT78-27B; at least 3 m (10 ft.) exposed. Unnamed volcanic unit overlying Puget Group.


DT78-31B Outcrop of a Franklin coal under roots of a large tree on the upslope side of a foot trail along the east side of Green River Gorge about 125 m (410 ft.) south of the highway bridge. SE 1/4 SE 1/4 SW 1/4 sec. 17, T.21N., R.7E. At 500' elevation, 12 m (40 ft.) downstream from where "Sally" is written on the rock face on the other side of the stream. One of more than five soft, light-colored partings in 2 m (7 ft.) of exposed coal (top and bottom not visible). Mainly medium and coarse sand-size grains, poorly consolidated, 10 cm (4 in.) thick, about 30 cm (1 ft.) from top of exposed coal.
DT78-32A  At water level, east bank of Green River, center NE 1/4 sec. 25, T.21N., R.6E. Parting 1 cm (0.4 in.) 15 cm (6 in.) from top of unnamed Kummer coal bed 1.2 m (4 ft.) thick. Thinnest of three partings in this coal. Light-colored very fine sand-size grains in a silt-size matrix with abundant coal, giving an overall gray color.

DT78-36F  At water level on north bank of Green River at prominent bend, SE 1/4 NW 1/4 sec. 8, T.21N., R.7E. Franklin No. 9 coal, nearly vertical, with at least a dozen light-colored ash partings in 7.6 m (25 ft.) exposed thickness; 1.1 m (3.5 ft.) above base. Light brown, clay rich, with abundant fine sand-size grains, 10 cm (4 in.) thick.

DT78-37A  North bank of Green River, NE 1/4 SE 1/4 sec. 8, T.21N., R.7E., about 9 m (30 ft.) above water level and 15 m (50 ft.) downstream from a large power line. Small exposure of nearly vertical beds in steep bank includes a Franklin coal bed with more than 1.5 m (5 ft.) exposed (top and bottom covered). Sample taken from lower 10 cm (4 in.) of 18 cm (7 in.) parting, within the lower 0.5 m (1.5 ft.) of exposed coal. Predominantly light-colored grains of medium sand size in a darker clay/silt matrix.

DT78-37B  Same location as DT78-37A but about 10.2 cm (4 in.) stratigraphically higher in the same coal. Medium gray, mainly silt-size, with abundant grains of fine and very fine sand-size material, 2.5 cm (1 in.) thick.

One sample was collected by Frizzell from the Mercer Island, Washington quadrangle, about 30 km (25 mi.) north of the other samples.

VF78-115  About 150 m (500 ft.) south of the intersection immediately east of the north end of Lake Boren, NW 1/4, SW 1/4, SW 1/4 sec. 27, T.24N., R.5E. Andesite breccia from upper part of the Tukwila Formation exposed in relatively steep roadcuts.
Sample Locations Cited in:

Radiometric dating of ash partings in coals of the Eocene Puget Group, Washington: Implications for paleobotanical stages

by

Sample Locations Cited in:

Radiometric dating of ash partings in coals of the Eocene Puget Group, Washington: Implications for paleobotanical stages

by