

Greece and Turonian rocks of Russia. The first appearance of *Vernedia* in lower Cenomanian rocks of Oregon implies that the genus migrated westwardly across the Pacific into the Old World Tethyan province.

Besides the new species, the only other species of *Vernedia* known from the Western Hemisphere is *V. freisi* from upper Cenomanian or lower Turonian strata in southern Mexico (Kollmann and Sohl, 1980). According to them, *Vernedia freisi* differs from all European species with which it could be compared. As discussed earlier, *Vernedia freisi* also differs from the new species.

Sogdianella has a geologic range of Albian to Maastrichtian. The earliest records are from Peru and Cuba, and the Albian *S. peruviana* Olsson from Peru is most like the new species. According to Kollmann and Sohl (1980), during the Cenomanian this genus was known only from the Middle East. They noted that the disjunct Cenomanian record of *Sogdianella* is probably due to the incomplete knowledge about this genus and scarcity of proper facies, rather than absence of the genus. The presence of *Sogdianella* in the Cenomanian of Oregon helps considerably in adding more paleobiogeographic information to the data base. During the Albian/earliest Cenomanian, *Sogdianella* must have migrated north from Peru into Oregon. Except for the South American occurrences of *Sogdianella*, the distribution of this genus roughly parallels that of *Vernedia* (Kollmann and Sohl, 1980). The two genera also co-occur together at LACMIP locality 9936 in Oregon, and this indicates that both preferred the same paleoecologic conditions.

Actaeonellids were restricted to the Cretaceous and were commonly associated with rudist- framework ("reef") tracts that ranged throughout the Mexico-Central America-Antillean-Gulf Coast regions. The greatest latitudinal extent of these tracts was during Albian to Cenomanian time; subsequently, they were restricted to narrowed Tethyan and marginal Tethyan areas. One anomalous paleolatitudinal occurrence of an actaeonellid in Alaska is associated with an allochthonous terrane. The extinction of the actaeonellids at the end of the Cretaceous was close in time to the extinction of rudist bivalves, nerineid gastropods, and other major faunal associates of the Tethyan warm-water biota (Sohl and Kollmann, 1985).

The geologic range of the actaeonellid *Neocylindrites* is Early Cretaceous (Barremian) to Late Cretaceous (Maastrichtian). *Neocylindrites* is the earliest actaeonellid subgenus, and its earliest record is in southern France. *Neocylindrites* attained its greatest distribution during the Albian, and its range extended from Central Asia through Mediterranean Europe to Angola and westward to Texas, New Mexico, and Baja California (i.e., Alisitos Formation) (Sohl and Kollmann, 1985). The new species of *Neocylindrites* from Oregon is very similar to a middle Albian to early Cenomanian species in northern Austria, as well as similar to an actaeonellid specimen of Albian age from the Alisitos Formation. These similarities strongly suggest that the new species from Oregon was part of a *Neocylindrites* lineage that arrived on the west coast of North America during the Albian, via a current that flowed westward from Western Europe. According to Kollmann and Sohl (1985), during the Cenomanian to early Turonian time, *Neocylindrites* was restricted to the area from the Transcaucasus to central Europe. The new species from Oregon now allows a modification of that report; namely, that during the Cenomanian *Neocylindrites* was also present in the New World. The Campanian and Maastrichtian species of *Neocylindrites* are restricted to the Western Hemisphere in Puerto Rico and in Chiapas, Mexico (Sohl and Kollmann, 1985).

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APPENDIX

LOCALITIES CITED

LACMIP 15800.—North side of South Fork of Beaver Creek, 915 m northeast of Bernard Ranch house, and 419 m south and 76 m west of the northeast corner of sec. 11, T 17 S, R 25 E, U.S. Geological Survey, 7.5-minute Suplee Quadrangle, 1992, Crook County, east-central Oregon. [Locality is the same as locality V171 of Dickinson and Vigrass, 1965, table 10 and pl. 1 (west half)]. Bernard Formation, about 150–180 m above base of formation, according to Dickerson and Vigrass (1965, table 10). Lower Cenomanian. Collector: Unknown.

LACMIP 9936.—Fossiliferous brown sandstone approximately 4.5 km south of U.S. Highway 26, along west side of Bridge Creek, 610 m north and 805 m east of southwest corner of sec. 25, T 13 S, R 27 E, U.S. Geological Survey, 7.5-minute Aldrich Mtn. North Quadrangle, 1972 (photorevised 1983), Grant County, east-central Oregon. Unnamed strata. Lower Cenomanian. Collectors: W. P. Popenoe and J. Alderson, 12 June 1975. [Locality is same as LACMIP locality 28787].

LACMIP 25426.—Approximately 4.8 km south of Medford and 1,737 m east of Dark Hollow, along east side of Griffin Creek, 2,408 m north and 2,949 m west of southeast corner of U.S. Geological Survey, 7.5-minute Medford West Quadrangle, provisional edition 1983, Jackson County, southwest Oregon. Osburger Gulch Sandstone Member of the Hornbrook Formation. Lower Cenomanian. Collector: C. Fitch, 14 July 1962.

UCMP A-8831.—Abundantly fossiliferous tuffaceous siltstone approximately 10 to 15 m stratigraphically above lowest Cretaceous exposures along south side of Punta China, northern Baja California, Mexico (see Allison, 1955, fig. 1). Alisitos Formation. Middle Albian. Collector: E. C. Allison.