

Wilson, E. C.,  
1984

THE GONIATITE *AGATHICERAS* (MOLLUSCA: CEPHALOPODA)  
IN THE LOWER PERMIAN (WOLFCAMPIAN) OF CALIFORNIA

EDWARD C. WILSON

Natural History Museum of Los Angeles County, Los Angeles, California 90007

Three silicified specimens of the goniatite *Agathiceras* Gemmellaro, 1887 were collected from the McCloud Limestone on the west face of Bollibokka Mountain, Shasta County, northern California. One specimen was found 378 m above the base of the section (University of California Museum of Paleontology hypotype 37402, UCMP locality D-820) and two specimens were found nearby (Los Angeles County Museum of Natural History, Invertebrate Paleontology Section hypotypes 5881-5882, LACMIP locality 5309). Rocks at these localities fall within fusulinid zone A of Skinner and Wilde (1965), which is low in the Wolfcampian Series (Wilde, 1971, p. 364), and are in a section having a rich coral fauna (Wilson, 1982).

The specimens are silicified and fragmen-

tary, but the pronounced longitudinal lirae, involute shells, and agathicerid sutures ensure the generic identification. LACMIP hypotype 5881, the largest specimen, has a shell diameter of 19 mm, a whorl height of 11 mm, and a (partially reconstructed) width of 16 mm (Figures 1A, B). UCMP hypotype 37402, smaller but more complete, has a shell diameter of 15 mm, a whorl height of 8 mm, and a width of 11 mm (Figures 1C, D). LACMIP hypotype 5882 was originally of similar size to the other two but is now too fragmentary to measure accurately. The prominent, regular, evenly spaced, longitudinal lirae that cover the shells are spaced three per mm. Living chambers are not preserved. Because the specimens are so few and fragmentary, and because no single complete suture is preserved, they cannot be assigned firmly to any of the species of this morphologically conservative genus.

*Agathiceras* has a stratigraphic range in Lower Pennsylvanian to Upper Permian rocks and is known from northern Africa, southern Europe, eastern Russia, eastern Asia, Australia, and North America (British Columbia, Oklahoma, Texas, and Coahuila). This note extends the geographic range of the genus to California and provides a significant addition to the meager published record of the Permian cephalopod fauna of the far western United States (Miller, Furnish and Clark, 1957).

I am indebted to Professors William M. Furnish and Brian F. Glenister of the University of Iowa for helpful comments on the LACMIP specimens.

REFERENCES

- GEMMELLARO, G. G. 1887. La Fauna dei Calcari con *Fusulina* della Valle del Fiume Sosio nella Provincia di Palermo. *Cephalopoda. Giornale di Scienze Naturali ed Economiche di Palermo*, 19:1-106.  
MILLER, A. K., W. M. FURNISH and D. S. CLARK. 1957. Permian ammonoids from western

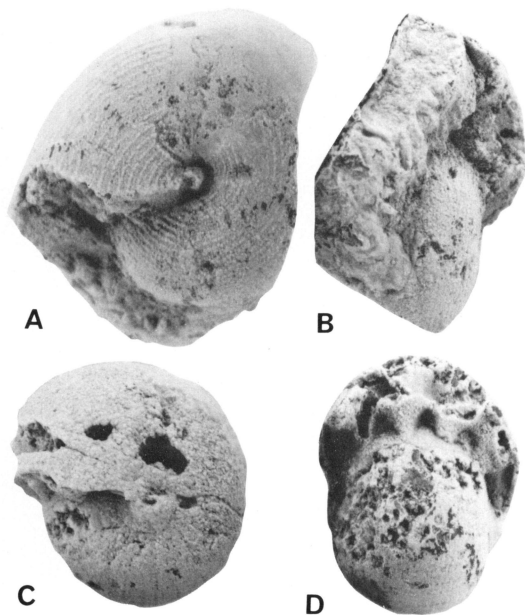


FIGURE 1—*Agathiceras* sp. from the McCloud Limestone. A, B, lateral and ventral views, LACMIP hypotype 5881. C, D, lateral and ventral views, UCMP hypotype 37402. All figures  $\times 2.5$ .

- United States. *Journal of Paleontology*, 31:1057-1068.
- SKINNER, J. W. and G. L. WILDE. 1965. Permian biostratigraphy and fusulinid faunas of the Shasta Lake area, northern California. University of Kansas Paleontological Contribution, Protozoa, 6:1-98.
- WILDE, G. L. 1971. Phylogeny of *Pseudofusulinella* and its bearing on Early Permian stratigraphy. *Smithsonian Contributions to Paleobiology*, 3:363-379.
- WILSON, E. C. 1982. Wolfcampian rugose and tabulate corals (Coelenterata: Anthozoa) from the Lower Permian McCloud Limestone of northern California. *Natural History Museum of Los Angeles County Contributions in Science*, 337:1-90.

MANUSCRIPT RECEIVED MARCH 21, 1982

REVISED MANUSCRIPT RECEIVED MAY 26, 1982