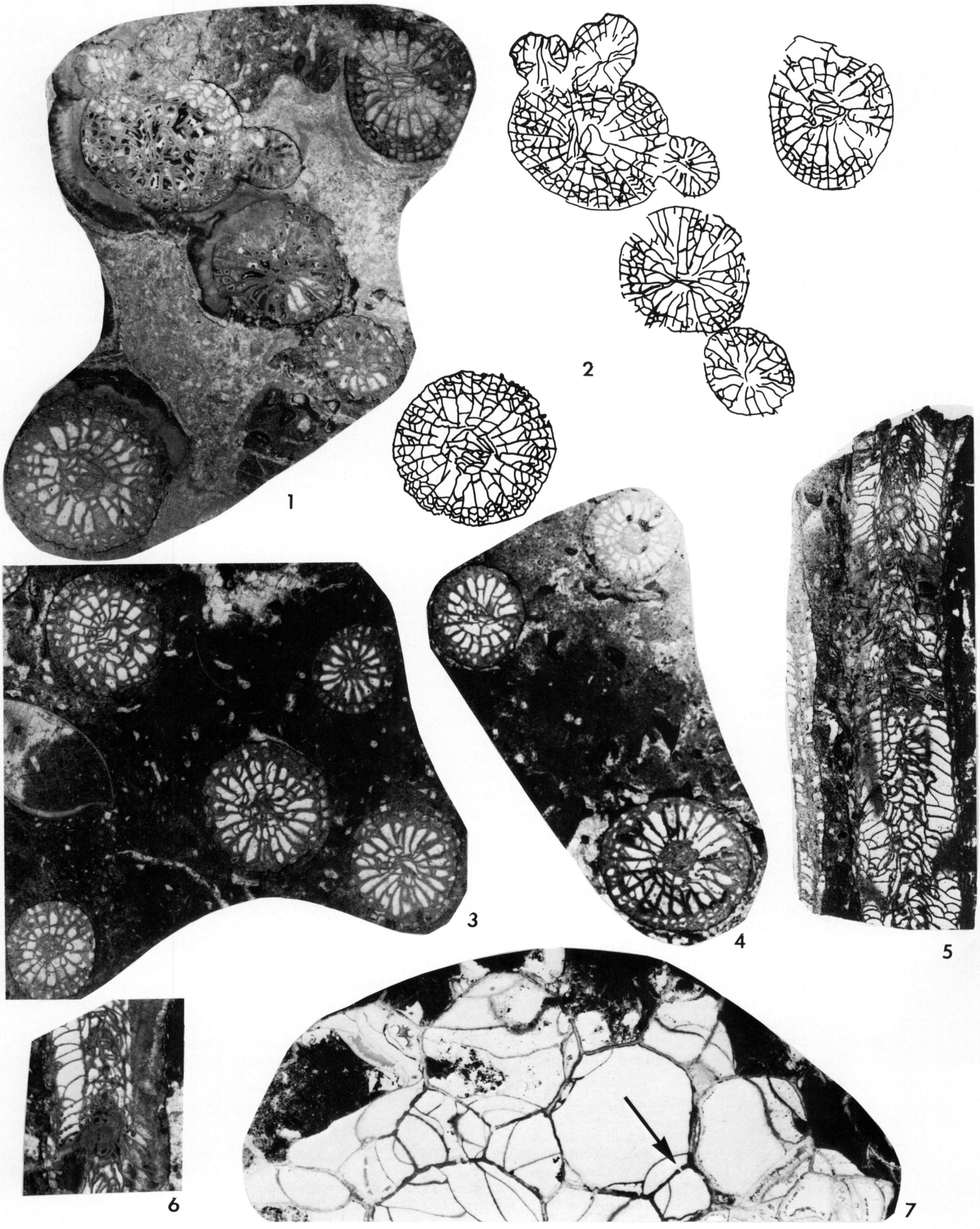
1
2
3
4
5
6
7

referred to *M. transitoria* Knod, 1908, a Bolivian species of Devonian age. This specimen has much smaller corallites (4–9 mm) and more complete tabulae than the Devonian species, making the species assignment improbable using present standards. Meyer's (1914) specimen also has somewhat smaller corallites than the type series of *M. escobari,* suggesting that there may be two species of *Michelinia* in the Copacabana Limestone. Unfortunately, the whereabouts of the Cerro Lamarani specimens is unknown.

Branisa (1965) referred several coralla from the Copacabana Limestone at Yaurichambi to *Michelinia* and *Favosites.* The whereabouts of these coralla are unknown and scales for the figured specimens are not given. They all appear to be *Michelinia* and, if natural size, further suggest that there are two species in the formation. *Michelinia* sp. of Branisa (1965, Pl. 72, fig. 10) has corallites perhaps about the same diameters as those cited by Meyer (1914) for his species. *Favosites* sp. (=*Michelinia*) of Branisa (1965, Pl. 72, figs. 6, 11–13) has corallites about the same size as those of *M. escobari. Michelinia* was not encountered in the Yaurichambi sections and no other reports of it are known from there. No other *Michelinia* has been reported from the Permian of South America.

The large corallite diameters readily distinguish *M. escobari* from the 11 species described from the Pennsylvanian and Permian of North America with the exception of *M. harkeri* Nelson, 1962, from the Upper Pennsylvanian(?) of the northern Yukon Territory, Canada. *Michelinia harkeri,* however, has very abundant incomplete tabulae and almost no complete ones, whereas *M. escobari* has few incomplete tabulae and abundant complete ones.

Of the dozen or so species of *Michelinia* described from the Permian of China, India, and Russia, none has corallite diameters as large as those of *M. escobari.*

Etymology.—The species is named in honor of Ing. Angel Escobar D.

Order AULOPORIDA Sokolov, 1947
Superfamily AULOPORICAE Milne-Edwards and Haime, 1851
Family PYRGIIDAE de Fromentel, 1861
Genus CLADOCHONUS McCoy, 1847
CLADOCHONUS CARRASCOI n. sp.
Figure 11.4–11.9

Diagnosis.—A species of *Cladochonus* characterized by the combination of moderately large corallites, abundant internal septal ridges, and abundant external septal furrows.

External description.—Corallum basally an auloporoid mat, distally of short, erect branches; corallites 5–10 mm in length, 3–4 mm in diameter, trumpet shaped, with flared, turned-up calices branching in same or different directions; septal ridges low, numerous, as many as 30, confined to internal edge of corallites; septal furrows of equal numbers to septal ridges, crossing external growth wrinkles; daughter corallites opening relatively high in calices, maintaining connection with mother corallites through small pore remaining after apical part of corallite much thickened with sclerenchyme.

Internal description.—As above; single thin tabulae apparently present in some corallites separating mother–daughter corallites.

Collections.—Holotype, LACMIP 8035; paratypes, LACMIP 8036–8047. Four thin sections, 56 polished sections, and one etched corallum from 13 coralla from LACMIP localities 8661 (holotype, 8035; paratypes, 8036–8040), 8648 (paratypes, 8041–8045), 8656 (paratype, 8046), 8657 (paratype, 8047) were studied. Corallites are abundant along the entire strike of the bed on the east side of the hills of these localities. A corallum was considered to be a hand sample containing abundant corallites.

Discussion.—*Cladochonus* is a genus in search of a reviewer to monograph its species. *Cladochonus carrascoi* has been compared with all the many American Pennsylvanian and Permian species descriptions and with numerous species from elsewhere in the world. Many species are not comparable because their corallite diameters are much smaller or much larger. Most of these do not possess septal ridges and septal furrows and are not comparable on these grounds either. Only two named species possess somewhat comparable corallite diameters as well as septal ridges and septal furrows.

Cladochonus striatus Hill, 1942, from the Permian of Australia, has comparable corallite diameters (3–4 mm) but fewer (18–20) septal ridges and septal furrows. *Cladochonus conus* Strimple and Cocke, 1973, from the Pennsylvanian of Oklahoma, has larger corallite diameters (5–7.2 mm) and fewer (24) septal ridges and septal furrows.

Etymology.—The species is named for Ing. Raul Carrasco C. of Bolivia.

ACKNOWLEDGMENTS

Among the many people who helped with this project, I am especially grateful to the following. R. C. Cordova, Director Ejecutivo of the Servicio Geologico de Bolivia (GEOBOL) in La Paz most graciously provided official permission for me to collect in Bolivia and assigned a GEOBOL geologist, driver, and jeep for the fieldwork. A. Escobar D., the GEOBOL geologist, arranged the field logistics, including stops and accommodations, and assisted personally with the field work in numerous ways. J. Ibanez drove the GEOBOL vehicle. J. M. Pandolfi cheerfully assisted at every stage of the operation and was an indefatigable field assistant. L. Branisa identified the Colquencha localities and assisted with collecting them. K. E. Campbell, Jr., provided initial guidance to the intricacies of obtaining permission to work in Bolivia and showed me the ropes in La Paz. N. D. Newell encouraged this project. P. Semenoff-Tian-Chansky courteously assisted by locating, preparing, and lending corals from the d'Orbigny collection in the Museum National d'Histoire Naturelle, Paris. S. Sakagami generously shared information and publications of the Research Group on the Bolivian Permian. R. B. Saul and J. T. Smith commented on the identity of some lithology samples. The officials of the Empressa Minera Matilde lodged my field party at the Campamiento Mino Matilde while we worked in the area. The National Science Foundation provided a grant which funded this project (BSR 84-15909).

Special thanks are offered to W. J. Sando and C. H. Stevens for thoughtful reviews of this paper, including many useful sug-

→

FIGURE *11—1–3, Michelinia escobari* n. sp. *1,* transverse section, holotype, LACMIP 8027; *2,* longitudinal section, holotype, LACMIP 8027; *3,* longitudinal section, paratype, LACMIP 8029. *4–9, Cladochonus carrascoi* n. sp. *4, 6, 8,* transverse and longitudinal sections, paratypes, LACMIP 8036 (Figures 11.4, 11.8), 8037 (Figure 11.6); *5, 7,* etched corallites viewed from above and side, showing septal furrows and ridges, holotype, LACMIP 8035, ×10; *9,* etched corallum viewed dorsally, holotype, LACMIP 8035. All figures ×3 unless otherwise indicated.