

THE CORRECT NAME OF
THE HELIOPORAN OCTOCORAL
LITHOTELESTO MICROPORA BAYER AND MUZIK

Frederick M. Bayer

Abstract.—Comparison of Recent *Lithotelesto micropora* Bayer & Muzik, 1977, with Cretaceous *Primnoa gracilis* Nielsen, 1925, shows that the two forms are congeneric. Synonymy of *P. gracilis* Nielsen, 1925, with *Epiphaxum auloporoides* Lonsdale, 1850, demonstrated by Voigt (1958), makes *Lithotelesto* Bayer & Muzik, 1977, a junior subjective synonym of *Epiphaxum* Lonsdale, 1850. Specimens of *Epiphaxum* are reported from the Indian Ocean south of Madagascar.

Since publication of the description of *Lithotelesto micropora* Bayer and Muzik (1977:976), it has become clear that at least the genus already had been described as a fossil. Lonsdale (1850:261, pl. 18, figs. 35-37) described from the Chalk Formation of Sussex, England, a small, encrusting coral named *Epiphaxum auloporoides* having narrow, corrugated stolons containing at intervals "visceral cavities . . . provided with eight indentations or blunt lamellae." As illustrated by Lonsdale, the stolons are very similar to those of *Lithotelesto*, but no specimens were available for direct comparison.

Somewhat later, Nielsen (1925:5, figs. 2-3) described from the Danian of Denmark a coral called *Primnoa gracilis* having a grooved calcareous axis grossly similar to that of certain gorgonaceans of the family Primnoidae but, unlike them, hollow and tubular rather than solid. Still later, Voigt (1958:9, pl. 1, figs. 1-7; 2, figs. 7-12; 10, fig. 3) demonstrated, on the basis of material from both lower and upper Maastrichtian from several localities in Germany, that the tubular "axes" of *Primnoa gracilis* Nielsen are, in fact, detached calicular tubes belonging to *Epiphaxum*. Comparison of the original material of *Lithotelesto micropora* with specimens of *Primnoa gracilis* from Denmark sent to the Smithsonian Institution by the Mineralogical and Geological Museum of the University of Copenhagen shows beyond doubt that the two are congeneric. As *Primnoa gracilis* has been demonstrated to be a synonym of *Epiphaxum auloporoides* Lonsdale (Voigt, 1958), the correct generic name of *Lithotelesto* Bayer & Muzik, 1977, is *Epiphaxum* Lonsdale, 1850.

Order HELIOPORACEA Bock, 1938

Coenothecalia Bourne, 1895:468.

Helioporidea Bock, 1938:49.

Helioporaria Stiasny, 1939:368.

Helioporacea Bayer & Muzik, 1977:983 (nom. correct.).

Family Lithotelestidae Bayer & Muzik, 1977

Article 40 of the International Code of Zoological Nomenclature requires that this family name be retained even though the name of the type-genus is now considered a junior synonym. So far as I can determine, no family-group name has ever been based on the generic name *Epiphaxum*. Voigt (1958) placed that genus in the family Clavulariidae, as I had done previously (Bayer, 1956:F184).

Genus *Epiphaxum* Lonsdale, 1850

Epiphaxum Lonsdale, 1850:261 (type-species, *Epiphaxum auloporoides* Lonsdale, by monotypy).

Primnoa.—Nielsen, 1925:5 (not *Primnoa* Lamouroux, 1812).

Lithotelesto Bayer & Muzik, 1977:983 (type-species, *Lithotelesto micropora* Bayer & Muzik, by original designation and monotypy).

Stratigraphic range.—Upper Cretaceous (Maastrichtian) to Recent.

Geographic range.—Northwestern Europe (Upper Cretaceous); Lesser Antilles (Recent); Indian Ocean south of Madagascar (Recent).

Epiphaxum auloporoides Lonsdale, 1850

Epiphaxum auloporoides Lonsdale, 1850:261, pl. 18, figs. 35–37.—Voigt, 1958:9, pl. 1, figs. 1–7; pl. 2, figs. 7–12; pl. 10, fig. 3.

Primnoa gracilis Nielsen, 1925:5, figs. 2–3.

Distribution.—Chalk Formation, Sussex (Lonsdale); Bryozoan Chalk at Faxø, Rejstrup and Herfølge, and the Chalk at Stevns Klint, Denmark (Nielsen); Turonian, vicinity of Rostov, U.S.S.R., Campanian near Lägerdorf, Lower and Upper Maastrichtian from Hemmoor and several other localities in Western Germany (Voigt).

Epiphaxum micropora (Bayer & Muzik, 1977), comb. nov.

Lithotelesto micropora Bayer & Muzik, 1977:976, figs. 1–6.

Distribution.—Lesser Antilles (Barbados). ?Indian Ocean (south of Madagascar).

Remarks.—It is regrettable that Verrill made no mention of the locality and depth of his material in the explanation of his unpublished figures, which

are the first known evidence of the occurrence of *Epiphaxum* in the Recent fauna (Bayer & Muzik, 1977). As those figures were included among the illustrations of the octocorals collected by the *Blake*, his specimens almost certainly were West Indian and may even have come from Barbados, as the *Blake* made 29 bottom stations there 5–10 March 1879.

Specimens obtained from sediment samples collected at Walter Shoal south of Madagascar (33°12.0'S, 43°58.2'E, 360–200 m, *Marion Dufresne* cruise MD 08, sta. 6, DC 3, 16 March 1976) were correctly identified as *Lithotelesto* by Dr. H. Zibrowius and sent to me for verification. Unfortunately, those specimens retain no trace of soft tissue, making it impossible to compare anatomical and spicular characters with those of *Epiphaxum micropora*. As some calices show development of eight distinct skeletal septa, which so far have not been observed in West Indian material, I am not able to state with certainty that this material is specifically identical with *E. micropora*.

Acknowledgments

I am indebted to Dr. Porter M. Kier of the Department of Paleobiology, National Museum of Natural History, for valuable advice in the paleontological interpretation of *Lithotelesto* and *Epiphaxum*, and to Dr. Thomas E. Bowman, Department of Invertebrate Zoology, for critical reading of the manuscript.

Literature Cited

- Bayer, Frederick M. 1956. Octocorallia. In Raymond C. Moore (Ed.), *Treatise on Invertebrate Paleontology*, part F:166–231.—Geological Society of America and University of Kansas Press, xx + 498 pp.
- Bayer, Frederick M., and Katherine M. Muzik. 1977. An Atlantic helioporan coral (Coelenterata: Octocorallia).—*Proc. Biol. Soc. Wash.* 90(4):975–984, figs. 1–6.
- Bock, Sixten. 1938. The alcyonarian genus *Bathyalcyon*.—*Kungl. Svenska Vet. Akademiens Handlingar* (3)16(5):1–54, pls. 1–2.
- Bourne, Gilbert C. 1895. On the structure and affinities of *Heliopora coerulea*, Pallas. With some observations on the structure of *Xenia* and *Heteroxenia*.—*Phil. Trans. Roy. Soc. London* 25:205–243, figs. 1–22.
- Lonsdale, William. 1850. Descriptions of the fossils of the Chalk Formation. Notes on the corals. In Frederick Dixon, *The geology and fossils of the Tertiary and Cretaceous formations of Sussex*.—London, Longman, Brown, Green, and Longmans. Pp. 237–324, pls. 18, 18A.
- Nielsen, K. Brünnich. 1925. Nogle nye Octocoraller fra Danienet.—*Medd. fra Dansk Geol. Forening, København* 6(28):1–6, figs. 1–3.
- Stiasny, Gustav. 1939. System der Octocorallia.—*Zool. Meded. Leiden* 21:367–368.
- Voigt, Ehrhard. 1958. Untersuchungen an Oktokorallen aus der oberen Kreide.—*Mitt. Geol. Staatsinst. Hamburg* 27:5–49, figs. 1–8, pls. 1–13.

Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560.