



Figures 51 through 56, *Miomelon alarconi*, *Cancellaria stuardoi*, *C. crawfordiana*, and *Ptychosyrinx chilensis*.
 Figures 51 and 52, *Miomelon alarconi*. Figure 51, radular ribbon, LACM 73502, 200-400 m off Coquimbo, Chile, width of field 0.6 mm. Figure 52, LACM 66-153, 290-450 m off Cabo Carranza, Chile, height 74.9 mm.
 Figure 53, *Cancellaria stuardoi* new species, two views of holotype, LACM 1988, 240-350 m off Pichilemu, Chile, height 61.3 mm.
 Figure 54, *Cancellaria crawfordiana*, two views, LACM 72505, 50-100 m off Redondo Beach, California, height 49.8 mm.
 Figures 55 and 56, *Ptychosyrinx chilensis*. Figure 55, two views, LACM 72506, 350 m off Pichilemu, Chile, height 42.4 mm. Figure 56, radula ribbon, LACM 72506, same locality, width of field 0.4 mm.

Ptychosyrinx chilensis is the only eastern Pacific member of its genus, a member of the subfamily Turrinae, in which the excurrent sinus is located at the peripheral keel (see Powell, 1966; McLean, 1971). According to Powell (1966), other species occur in the "deep ocean basins of the Indian Ocean, Natal, East Africa and the East Indies, the north Atlantic, off Bermuda." Hickman (1976) illustrated *P. chilensis* and recorded species of *Ptychosyrinx* from the Oligocene of Oregon.

Ptychosyrinx chilensis Berry, 1968
 Figures 55, 56

Ptychosyrinx chilensis Berry, 1968:158; Hickman, 1976:89, pl. 7, figs. 1, 6.

DESCRIPTION. Shell moderately large, length of aperture and canal less than half the length of the shell; color light brown under a fine brown periostracum; shoulder concave, growth line deeply sinuate, periphery marked by strong axial projections, about 15 per whorl; base with three strong spiral cords, the posteriormost retained just above the suture; fasciole with more subdued spiral sculpture.

Dimensions: height 42.4 mm, diameter 15.8 mm (Fig. 55).

Radula (Fig. 56): rachidian rectangular, unicuspid; marginals of "wishbone" type. This is typical for the genus as described by Powell (1966).

MATERIAL. Chile: Punta Mar Brava (LACM), Punta Hornos (LACM), Coquimbo (LACM), Punta Panulcillo (LACM), Bahía Navidad (LACM), Pichilemu (LACM, Fig. 55), Cabo Carranza

(LACM). Specimens examined: more than 100.

TYPE MATERIAL AND TYPE LOCALITY. Holotype, LACM 1912. Type locality: "about 200 fms.," (366 m) off Coquimbo, Chile.

DISTRIBUTION. Punta Mar Brava (29°21'S) to Cabo Carranza, Chile (35°27'S). Depth range: 65–400 m.

REMARKS. *Ptychosyrinx chilensis* resembles the type species of *Ptychosyrinx* but has stronger spiral sculpture on the base and lacks the sinuate projection of the lower lip of that species.

ACKNOWLEDGMENTS

We are most grateful to the captains and the crews of the trawling vessels, in particular Sr. Alejandro Gonzalez, of the GODEN WIND, for collecting the majority of the specimens upon which this report is based.

Andrade thanks Prof. Maria Codoceo R., of the Museo Nacional de Historia Natural, Santiago, Prof. Pedro Baez, Instituto Profesional de Iquique, and Prof. Fernando Alcazar, Universidad de Valparaíso, for their continued assistance with many phases of the investigation of the offshore fauna of central Chile.

McLean thanks the director and staff members of the Instituto del Mar in Lima, Peru. Through arrangements made by Dr. Enrique M. del Solar, of Lima, McLean was a participant in the cruise of the SNP-1 to the Lobos Islands in northern Peru in 1974.

McLean is grateful to staff members of the Smithsonian Oceanographic Sorting Center for forwarding the material from cruises of the ANTON BRUUN, and to the committee members who designated the LACM, in addition to the USNM, as the final repository for mollusk collections made by the ANTON BRUUN in the southeast Pacific.

McLean is also grateful to many Chilean biologists and malacologists who aided him during his visits to Chile in 1975 and 1978, including Dra. Marta Bretos Alarcon, Prof. Nibaldo Bahamonde N., Dr. Juan Carlos Castilla, Prof. Maria Codoceo R., Prof. Miguel Padilla G., Prof. Luis Ramorino M., Sr. Jaime Ramirez Boehme, Dr. Patricio Sanchez, Dr. Jose Stuardo, Prof. Jorge Tomacic K., and Dr. C. A. Viviani.

We thank the photography department of the LACM for assistance in the preparation of the illustrations. Radula slides were prepared and photographed by museum volunteer Jo-Carol Ramsaran.

LITERATURE CITED

- Andrade, H. 1980. Nueva especie de *Paralomis* en aguas de Chile: *Paralomis chilensis* n. sp. (Crustacea, Anomura, Lithodidae). Bol. Mus. Nac. Hist. Nat. Chile 37:269–273.
- Andrade, H., and P. Baez. 1977. *Calastacus rostriserratus* n. sp. (Crustacea, Decapoda, Macrura, Axiidae). An. Mus. Hist. Nat. Valparaíso 10:65–67.
- _____. 1980. Crustaceos decapodos asociados a la pesquería de *Heterocarpus reedi* Bahamonde 1955 en la zona central de Chile. Bol. Mus. Nac. Hist. Nat. Chile 37:261–267.
- Baez, P., and H. Andrade. 1977. *Geryon affinis* Milne-Edwards y Bouvier, 1894, frente a las costas de Chile (Crustacea, Decapoda, Brachyura, Geryonidae). An. Mus. Hist. Nat. Valparaíso. 10:215–219.
- _____. 1979. Crustaceos decapodos arquibentonicos frecuentes frente a la costa de Chile central. An. Mus. Hist. Nat. Valparaíso 12:219–231.
- Bayer, F.M. 1971. New and unusual mollusks collected by R/V JOHN ELLIOTT PILLSBURY and R/V GERDA in the tropical western Atlantic. Bull. Marine Sci. 21(1):111–236.
- Berry S.S. 1968. Notices of new Eastern Pacific Mollusca. VII. Leaflets in Malacology 1(25):155–158.
- Beu, A.G. 1979. Bathyal Nukumaruan Mollusca from Oaro, southern Marlborough, New Zealand. New Zealand Jour. Geol. Geophysics 22(1):87–103.
- Carcelles, A. 1944. Las especies del genero *Capulus* Montfort, 1810, en aguas argentinas. Comunic. Zool. Mus. Hist. Nat. Montevideo 1(9):1–5.
- Carcelles, A.R., and S.I. Williamson. 1951. Catalogo del los moluscos marinos de la provincia Magallánica. Rev. Inst. Nac. Invest. Cienc. Nat. Buenos Aires 2(5): 225–383.
- Cernohorsky, W.O. 1977. The taxonomy of some southern ocean Mollusca (Gastropoda) mainly Antarctic and subantarctic. Rec. Auckland Inst. Mus. 14:105–119.
- Clench, W. J. 1944. The genus *Columbarium* in the Western Atlantic. Johnsonia 1(15):1–4, pl. 1
- Clench, W.J., and R.D. Turner. 1960. The genus *Calliostoma* in the western Atlantic. Johnsonia 4(40):1–80.
- Codoceo, M., and H. Andrade. 1978. Asterozoos arquibentonicos de Chile Central. An. Mus. Hist. Nat. Valparaíso 11:153–174.
- _____. 1980. *Solanometra antarctica* (Carpenter, 1888) en la region arquibentica de Chile Central. Bol. Mus. Nac. Hist. Nat. Chile, 37:229–234.
- _____. (In press.) Nuevo asteroideo para Chile: *Cryptopeltaster philippii* n. sp. (Goniasteridae, Hippasteriinae). Rev. Biol. Mar. Inst. Oceanol. Univ. Valparaíso 17(3).
- Codoceo, M., P. Baez, and H. Andrade. 1978. Segundo registro *Ophiomastus molinae* Castillo, 1968 (Equinodermata, Ophiuroidea). Not. Mens. Mus. Nac. Hist. Nat. 261:10.
- Dall, W.H. 1980. Scientific results of explorations by the U.S. Fish Commission steamer Albatross. VII. Preliminary report on the collection of Mollusca and Brachiopoda obtained in 1887–88. Proc. U.S. Nat. Mus. 12(773):219–362.
- _____. 1908. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California. XIV. The Mollusca and Brachiopoda. Bull. Mus. Comp. Zool. Harvard Univ. 43(6):205–487.
- _____. 1909. Report on a collection of shells from Peru, with a summary of the littoral marine Mollusca of the Peruvian Zoological Province. Proc. U. S. Nat. Mus. 37 (1074):147–294, pls. 20–28.
- Darragh, T.A. 1969. A revision of the family Columbariidae (Mollusca: Gastropoda). Proc. Royal Soc. Vict. 3(1):63–119, pls. 1–6.
- Dell, R.K. 1956. The archibenthal Mollusca of New Zealand. Dominion Mus. Bull. 18:1–235.
- _____. 1963. Archibenthal Mollusca from northern New Zealand. Trans. Royal Soc. New Zealand, Zool. 3(20):205–216, pl. 1.
- _____. 1971. The marine Mollusca of the Royal Society ex-

- pedition to southern Chile, 1958–59. *Rec. Dominion Mus.* 7(17):155–233.
- _____. 1978. Additions to the New Zealand Recent molluscan fauna with notes on *Pachymelon (Palomelon)*. *Nat. Mus. New Zealand Rec.* 1(11):161–176.
- Fretter, V., and A. Graham. 1962. British prosobranch molluscs: their functional anatomy and ecology. Ray Society, London, xiv + 755 pp.
- Grant, U.S., IV., and H.R. Gale. 1931. Catalogue of the marine Pliocene and Pleistocene Mollusca of California and adjacent regions. *Mem. San Diego Soc. Nat. Hist.* 1, 1,036 pp., 32 pls.
- Graham, A. 1966. The fore-gut of some marginellid and cancellariid prosobranchs. *Studies Tropical Oceanography, Miami* 4:134–151.
- Habe, T. 1979. The Western Pacific columbariid species. *Venus, Jap. Jour. Malac.* 38(1):1–4, pl. 1.
- Harasewych, M.G., and R.E. Petit. 1982. Notes on the morphology of *Cancellaria reticulata* (Gastropoda: Cancellariidae). *Nautilus* 96(3): 104–113.
- Hickman, C. S. 1976. Bathyal gastropods of the family Turridae in the early Oligocene Keasey Formation in Oregon, with a review of some deep-water genera in the Paleogene of the eastern Pacific. *Bulls. Amer. Paleont.* 70(292):1–119, pls. 1–7.
- _____. 1981. Selective deposit feeding in the deep-sea archaeogastropod *Bathybembix aeola*. *Mar. Ecol. Prog. Ser.* 6:339–432.
- Keen, A.M. 1966. West American mollusk types at the British Museum (Natural History), III. Alcide d'Orbigny's South American collection. *Veliger* 9(1):1–7, pl. 1.
- _____. 1971. Sea shells of tropical west America—Marine mollusks from Baja California to Peru, 2nd ed. Stanford Univ. Press, Calif. xiv + 1,064 pp.
- Lamarck, J. P. B. 1816. *Tableau encyclopedique et methodique des trois regnes de la nature*. Pt. 23, pp. 1–16, pls. 391–488.
- Matsukuma, A. 1978. Fossil boreholes made by shell-boring predators or commensals. I. Boreholes of capulid gastropods. *Venus, Jap. Jour. Malac.* 37(1):29–45.
- Merriman, J. A. 1967. Gut content and radular illustration of *Bathybembix bairdii* (Dall, 1889). *Veliger* 9:355–356.
- McLean, J.H. 1971. A revised classification of the family Turridae, with the proposal of new subfamilies, genera, and subgenera from the eastern Pacific. *Veliger* 24(1):114–130, 4 pls.
- _____. 1981. The Galapagos Rift limpet *Neomphalus*: relevance to understanding the evolution of a major Paleozoic-Mesozoic radiation. *Malacologia* 23(1–2):291–336.
- Olsson, A.A. 1970. The cancellariid radula and its interpretation. *Paleontogr. Americana* 7(43):19–27, pls. 4–6.
- Orbigny, A. d', 1834–1847. *Voyage dans l'Amerique Meridionale*. Mollusques. Paris, vol. 5, pt. 3, xliii + 758 pp.; atlas, 85 pls.
- Orr, V. 1962. The drilling habit of *Capulus danieli* (Crosse) (Mollusca: Gastropoda). *Veliger* 5(2):63–67.
- Perez-Farfante, I. 1943. The genera *Fissurella*, *Lucapina*, and *Lucapinella* in the western Atlantic. *Johnsonia* 1(10):1–20.
- Philippi, R.A. 1845–51. *Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien*. Kassel, 3 vols. 24 parts.
- Powell, A.W.B. 1929. The Recent and Tertiary species of the genus *Buccinulum* in New Zealand, with a review of related genera and families. *Trans. New Zealand Inst.* 60:57–98.
- _____. 1951. Antarctic and subantarctic Mollusca: Pelaeypoda and Gastropoda. *Discovery Repts.* 26:47–196.
- _____. 1960. Antarctic and subantarctic Mollusca. *Rec. Auck. Inst. Mus.* 5:117–193.
- _____. 1966. The molluscan families Speightiidae and Turridae. *Bull. Auckland Inst. and Mus.* 5, 184 pp., 23 pls.
- _____. 1979. *New Zealand Mollusca*. Collins, Auckland, xiv + 500 pp.
- Reeve, L. 1847–48. *Monograph of the genus Fusus*. *Conchologica Iconica*, 4, 21 pls.
- Radwin, G.E. and A. D'Attilio. 1976. *Murex shells of the world, an illustrated guide to the Muricidae*. Stanford Univ. Press, 284 pp., 32 pls.
- Rehder, H.A. 1971. A molluscan faunule from 200 meters off Valparaiso, Chile, with descriptions of four new species. *Proc. Biol. Soc. Wash.* 83(51):585–596.
- Revuelta G., and H. Andrade. 1978. Nueva localidad para *Lithodes murrayi* Henderson, 1888, en el Pacifico Sur Oriental. *Nat. Mens. Mus. Nac. Hist. Nat.* 261:3–4.
- Roeding, P.F. 1798. *Museum Boltenianum. Pars II*. Hamburg, 199 pp.
- Sievers, H., and N. Silva. 1975. Masas de agua y circulacion en el Pacifico Suroriental. Latitudes 18 S - 33 S (Operacion Oceanografica MARCHILE VIII). *Cienc. y Tec. del Mar. Contrib. CONA* 1:7–67.
- Silva, N., and H. Sievers. 1981. Masas de agua y circulacion costera de la corriente de Humboldt latitudes 18 S - 33 S (Operacion Oceanografica MARCHILE X y ERFEN I). *Cienc. y Tec. del Mar, Contrib. CONA* 5:5–50.
- Smith, J.T. 1970. Taxonomy, distribution, and phylogeny of the cymatiid gastropods *Argobuccinum*, *Fusitriton*, *Mediargo*, and *Priene*. *Bulls. Amer. Paleont.* 56(254):445–573.
- Stuardo, J., and M. Villarroel. 1974. On some living and fossil volutes referred to *Miomelon* Dall, 1907, and *Proscaphella* von Ihering, 1907. *Veliger* 17(2):139–155.
- Thorson, G. 1965. A neotenus dwarf-form of *Capulus ungaricus* (L.) (Gastropoda, Prosobranchia) commensalistic on *Turritella communis* Risso. *Ophelia* 2(1):175–210.
- Tryon, G. W. 1881. *Manual of Conchology*. 3, Tritonidae, Fusidae, Buccinidae. Philadelphia, 310 pp., 97 pls.
- Vokes, H.E. 1963. *Studies on Tertiary and Recent giant Limidae*. *Tulane Stud. Geol.* 11(2):73–92, pls. 1–2.
- Weaver, C.S., and J.E. DuPont. 1970. Living volutes, a monograph of the Recent Volutidae of the world. *Delaware Mus. Nat. Hist., Monogr. Ser.* 1, 375 pp., 79 pls.

Received 15 April; accepted for publication 12 July 1982.