

# Two New Northeastern Pacific Gastropods of the Families Lepetidae and Seguenziidae

by

JAMES H. McLEAN

Los Angeles County Museum of Natural History, 900 Exposition Boulevard,  
Los Angeles, California 90007

**Abstract.** Two new deep water gastropods from the northeastern Pacific are described. In the family Lepetidae, *Iothia lindbergi*, broadly distributed at continental shelf depths, Vancouver Island, British Columbia, to Cabo San Quintín, Baja California; and in the Seguenziidae, *Seguenzia quinni*, from abyssal depths off Oregon.

## INTRODUCTION

TWO SPECIES ARE described below, preliminary to inclusion in an account of the archaeogastropods of the northeastern Pacific from Alaska to Baja California. In that work the rhipidoglossate species are to be treated by McLean and the docoglossate species by Lindberg.

Type material is placed in the Los Angeles County Museum of Natural History (LACM), the National Museum of Natural History, Washington, D.C. (USNM), the California Academy of Sciences, San Francisco (CAS), and the National Museum of Canada, Ottawa (NMC).

Family LEPETIDAE Dall, 1869

Genus *Iothia* Gray, 1850

*Iothia lindbergi* McLean, spec. nov.

(Figure 1)

"*Lepeta caecoides* Carpenter," SMITH, 1963:160.

"*Lepeta (Iothia) fulva* (Müller)," McLEAN, 1966:126, pl. 4, figs. 17-21.

**Description:** Shell (Figure 1) medium sized for genus (maximum length 6.2 mm), thin, translucent white; anterior slope concave to straight; posterior slope convex. Apex one-fourth shell length from anterior margin, eroded in mature specimens; protoconch retained in specimens under 2 mm in length, narrow, erect, non-spiral, posteriorly projecting. Fine concentric growth lines evident in shells under 2 mm long. Radial sculpture of 25 to 35 irregularly spaced ribs of unequal strength; rib interspaces broad, up to 5 times width of ribs; ribs imbricate, pustulose; pustules broader than high; concentric growth irreg-

ularities showing in interspaces. Interior glossy, muscle scar faintly marked.

**Dimensions:** Length 6.2, width 4.8, height 2.1 mm (holotype). The holotype is the largest specimen examined.

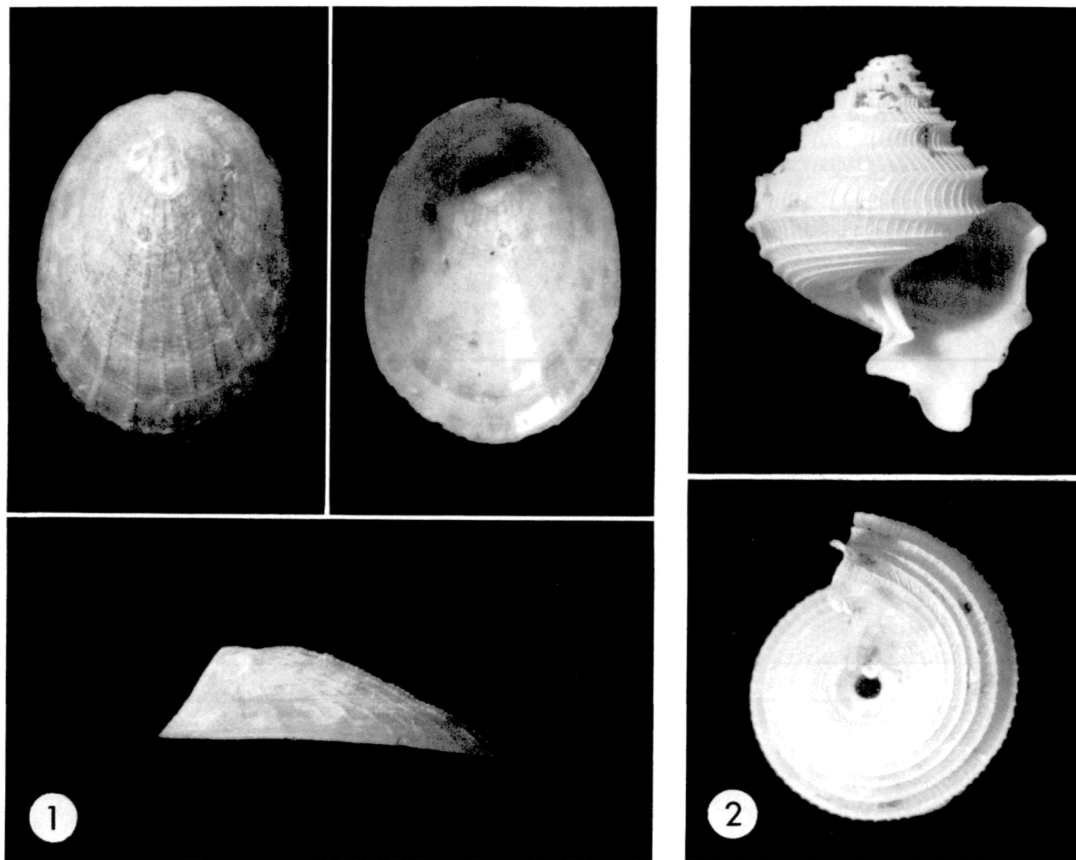
**Type locality:** 183 m (approximately 100 fm) on granite boulders, 6 miles (9.6 km) W of Point Pinos, Monterey Co., California (36°39'N, 122°01'W).

**Type material:** 6 specimens from the type locality dredged by James H. McLean, R/V *Tage* (Hopkins Marine Laboratory): holotype and one paratype, 17 November 1960; 4 additional paratypes, 2 March 1961. Holotype LACM 2063, 2 paratypes LACM 2064, 1 paratype CAS 050118, 1 paratype USNM 784749, 1 paratype NMC 86715.

**Referred material:** 17 lots of this species are represented in the LACM collection, ranging from the north end of Graham Island, Queen Charlotte Islands, British Columbia, to Islas San Benito, Baja California, dredged on rocks in depths from 90 to 300 m. Intermediate localities include—British Columbia: off the north end of Vancouver Island; Washington: off Cape Flattery; California: off Davenport, Santa Cruz County; off Santa Rosa Island; off Catalina Island; off Cortez Bank; Baja California: off Cabo San Quintín. There is a single LACM record taken by scuba diving: one dead shell in rubble at 51 m on Cordell Bank, Marin County (37°59.1'N, 123°25.5'W), Robert W. Schmieder, 8 October 1983.

**Comparisons:** *Iothia lindbergi* is smaller-shelled and lacks the reddish orange coloration of the northeastern Atlantic *I. fulva* (Müller, 1776).

**Remarks:** Earlier (McLEAN, 1966) I could not find suf-



Explanation of Figures 1 and 2

Figure 1. *Iothia lindbergi* McLean, spec. nov. Exterior and interior (anterior at top), and lateral (left side) views of holotype. Length 6.2 mm.

Figure 2. *Seguenzia quinni* McLean, spec. nov. Apertural and basal views of holotype. Height 7.6 mm.

ficient grounds to separate the new species from *Iothia fulva* in the northeastern Atlantic. However, the northeastern Pacific species is now known from a sufficient number of lots to show that it never has a trace of the red-orange coloration usual in *I. fulva* and does not reach the size known for *I. fulva*. (The largest examined specimen of *I. fulva* is 8.2 mm in length; LACM, Gullmar Fjord, Sweden.) In view of these differences, and the greatly disjunct distribution, with no records of the genus in Alaska or the North American Arctic Ocean, a separate name for the northeastern Pacific species is warranted. No radular differences between the two species were detected, the radula being more useful as a generic than specific character in this genus.

**Etymology:** The name honors David R. Lindberg, of the University of California, Berkeley.

Family SEGUENZIIDAE Verrill, 1884

Genus *Seguenzia* Jeffreys, 1876

*Seguenzia quinni* McLean, spec. nov.

(Figure 2)

**Description:** Shell large for genus, up to 7.6 mm in height, higher than broad, narrowly umbilicate, thin, translucent white; interior and exterior surfaces with pink and green iridescence. Protoconch and first teleoconch whorl missing in the two known specimens. Remaining teleoconch whorls 6, evenly expanding. Primary spiral sculpture of three narrow, projecting keels—subsutural keel, which covers peripheral keel of preceding whorl, shoulder keel, and peripheral keel. Area between subsutural keel and shoulder keel concave at first, becoming slightly convex on final whorl; area between shoulder keel and peripheral keel concave at first, becoming straight on final whorl. Base evenly convex, with 10 spiral cords; those closest to peripheral keel and umbilicus more broadly spaced than other basal cords. Secondary sculpture of numerous, sharp, evenly spaced collabral riblets, and finer, microscopic, spiral threads. Collabral riblets traversing primary spiral

cords, forming fine, sharp nodes. Spiral threads present on spire and on base, except near umbilicus; spiral threads traversing axial riblets. Umbilicus narrow, bordered by projecting keel, faintly traversed by axial riblets. Outer lip thin, posterior sinus deep, bordering lip flared in mature stage. Parietal glaze thick enough to obliterate secondary sculpture but not primary spirals of base. Inner lip moderately thick, flared over umbilicus, strongly flexed at base to form strong columellar spur. Lip flared to left (in apertural view) anterior to columellar spur; lip also flaring to produce broad anterior canal.

**Dimensions:** Height 7.6, diameter 6.0 mm (holotype); height 7.3, diameter 5.9 mm (paratype).

**Type locality:** 3900 m, Tufts Abyssal Plain, 452 miles (723 km) W of Cape Foulweather, Lincoln Co., Oregon (45°02.0'N, 134°42.2'W).

**Type material:** One specimen from type locality, collected by the R/V *Yaquina*, Oregon State Univ. sta. BMT 306, 9 October 1972. Holotype LACM 2065. 1 paratype USNM 784750, from 2826 m, Cascadia Abyssal Plain, 144 miles (230 km) W of Cape Foulweather, Lincoln Co., Oregon (44°53.5'N, 127°27.5'W), collected by the R/V *Cayuse*, Oregon State Univ. sta. BMT 332, 4 November 1973.

Both specimens are now preserved dry; deeply retracted soft parts are visible through the translucent shell. Except for the slight difference in size, the two specimens are identical; both have 10 basal cords.

**Referred material:** Known only from the holotype and single paratype.

**Comparisons:** This is the only eastern Pacific *Seguenzia* to have strongly flaring borders to the anterior and posterior canals and to have a pronounced development of the columellar spur. Compared to other eastern Pacific species, *S. quinni* has spiral and axial sculpture like that of *S. stephanica* Dall, 1908, but that species is not umbilicate and lacks the strongly flaring anterior and posterior canals. The umbilicus and flared aperture of *Seguenzia quinni* resembles that of "*Seguenzia* n. sp.," from the Philippines (QUINN, 1983b, fig. 1), which differs in having a more acute spire angle and fewer spiral cords on the base. *Seguenzia textilis* MARSHALL (1983:242, figs. 3F-I), from the Tasman Basin, is smaller and has less pronounced axial riblets.

**Remarks:** Three other seguenziids (*Seguenzia stephanica*

Dall, 1908, *S. megalococoncha* Rokop, 1972, and the recently described *Carenzia inermis* Quinn, 1983) are also known at abyssal depths on the Cascadia Abyssal Plain off Oregon (LACM). However, none of these species is represented in material taken from the Tufts Abyssal Plain (type locality of *S. quinni*), west of the Juan de Fuca Ridge and the Blanco Fracture Zone. Infaunal biomass is richer on the Cascadia Plain (GRIGGS *et al.*, 1969; CAREY, 1981).

**Etymology:** Named after James F. Quinn, Jr., of the State of Florida Department of Natural Resources, St. Petersburg, who has recently reviewed the genera of the superfamily Seguenziacea.

#### ACKNOWLEDGMENTS

I thank Eugene Coan, Carole S. Hickman, and David R. Lindberg for reviewing the manuscript.

#### LITERATURE CITED

- CAREY, A. G., JR. 1981. A comparison of benthic infaunal abundance on two abyssal plains in the northeast Pacific Ocean. *Deep-Sea Res.* 28A(5):467-479.
- DALL, W. H. 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* 43:205-487, pls. 1-22.
- GRIGGS, G. B., A. G. CAREY, JR. & L. D. KULM. 1969. Deep-sea sedimentation and sediment-fauna interaction in Cascadia Channel and on Cascadia Abyssal Plain. *Deep-Sea Res.* 16:157-170.
- MARSHALL, B. A. 1983. Recent and Tertiary Seguenziidae (Mollusca: Gastropoda) from the New Zealand region. *New Zealand J. Zool.* 10: 235-262.
- MCLEAN, J. H. 1966. West America prosobranch Gastropoda: superfamilies Patellacea, Pleurotomariacea, and Fissurellacea. Doctoral Thesis, Stanford University. x + 255 pp., 7 pls.
- QUINN, J. F. 1983a. *Carenzia*, a new genus of Seguenziacea (Gastropoda: Prosobranchia) with the description of a new species. *Proc. Biol. Soc. Wash.* 96(3):355-364.
- QUINN, J. F. 1983b. A revision of the Seguenziacea Verrill, 1884 (Gastropoda: Prosobranchia). I. Summary and evaluation of the superfamily. *Proc. Biol. Soc. Wash.* 96(4):725-757.
- ROKOP, F. J. 1972. Notes on abyssal gastropods of the eastern Pacific, with descriptions of three new species. *Veliger* 15(1): 15-19.
- SMITH, A. G. 1963. Two range extensions. *Veliger* 5(4):160-161.