

**BERTHELLA KANIAE, A NEW OPISTHOBRANCH FROM
THE EASTERN PACIFIC**

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ABSTRACT

Berthella kaniae Sphon, a member of the opisthobranch family Pleurobranchidae, is described as a new species from Isla Siboga, Perlas Islands, Panama (type locality) and Punta Mita, Nayarit, Mexico. It is close to *B. sideralis* (Lovén) and *B. californica* (Dall).

A new species of *Berthella* was collected by the author from Punta Mita, Nayarit, Mexico, in 1960, and through the kindness of Mrs. K. B. Meyer of the Smithsonian Tropical Research Institute in Panama, a second specimen was obtained from the Perlas Islands, Panama. I take great pleasure in naming this species for her.

***Berthella kaniae* new species**

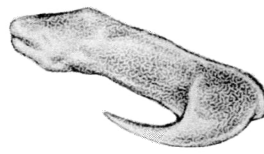
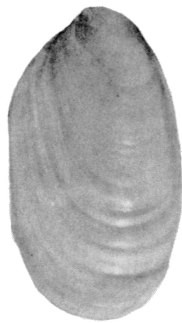
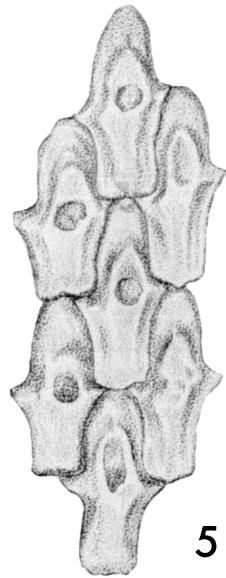
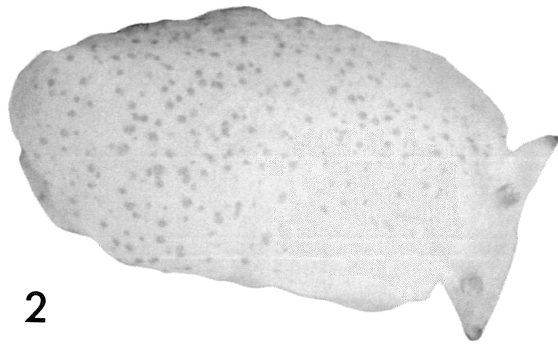
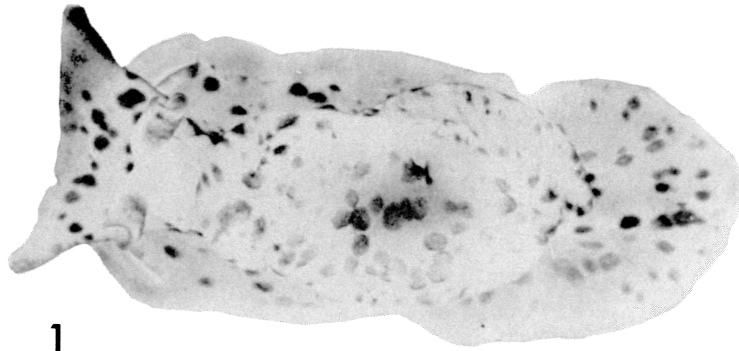
Figs. 1-8

Description - Ground color translucent, ranging from deep yellow to almost white. Color more intense on dorsum; fading along edges of mantle. Tips of frontal veil, rolled rhinophores, and area around genital aperture colored reddish brown. Notum, gill, sides and frontal veil spotted with same reddish brown color. Notum (of holotype) covered with white powdering seen only under 10 magnification. Shell located mid-dorsal area, wholly internal, thin, delicate, translucent, white; haliotiform in shape. Ventral side of shell iridescent. Umbo small, spire of two small whorls. Sculpture of very fine irregular growth lines radiating from umbo region and showing through shell. Gill rachis smooth; 18 leaves on the dorsal half. Genital opening simple without lobule; located in front of gill. Radula 80 rows with 100-105 teeth per half row. No rachidian tooth. Dental formula, 80(100-105.0.105-100). Teeth equal in size for entire half-row except for the outermost 3 or 4 which get progressively smaller. Curve of hook of individual lateral teeth remains constant. Mandibular plates with approximately 58 rows and about 37 platelets per

row. Scales of platelets approximately equal-size except for the outermost 4 or 5 which become progressively smaller. No denticles or barbs on the platelets.

Type material - Holotype: California Academy of Sciences Invertebrate Zoology Type collection no. 560 consists of the entire animal and an egg mass that was laid after the specimen had been collected from 15-30 feet, Isla Siboga (type locality), Perlas Islands, Panama, by Joyce Young on February 15, 1972. It measured 13 X 6.5 mm. when alive and fully relaxed. The preserved animal measures 9 X 5.5 mm. Color transparencies of the holotype (CASIZ slide collection 2741) and of the paratype (CASIZ slide collection 2742) have also been deposited with the California Academy of Sciences. Both photos were taken of the animals in life. Paratype: Los Angeles County Museum of Natural History, Invertebrate Zoology type collection no. 1453 consists of the shell, a radula slide and a slide of the jaw plates. The paratype was collected by the author in 2 feet of water on the underside of a dead coral head at Punta Mita, Nayarit, Mexico, on January 21, 1970. Color transparencies of both the holotype and paratype have also been deposited at the Los Angeles County Museum of Natural History.

Discussion - There are two other species of *Berthella* known to occur in the eastern Pacific: *Berthella sideralis* (Lovén, 1846) and *Berthella californica* (Dall, 1900). The simplest, and most artificial, way to separate *B. kaniae* from these two species is on the basis of distribution and color. *Berthella*



sideralis was originally described from the Norwegian coast and later collected by Dall (this was questioned by MacFarland, 1966) from 25 fathoms off Unalaska, Alaska. *Berthella californica* ranges from Crescent City, Del Norte County, to La Jolla, San Diego County, California. *Berthella kaniae* is a tropical-subtropical species found in Nayarit, Mexico, and the Perlas Islands, Panama. Both *B. sideralis* and *B. californica* are white in color. *Berthella kaniae* has a yellowish ground color and is tipped and spotted with reddish-brown.

Illustrations by MacFarland (1966, pl. 13) show the median lateral radular tooth of *Berthella sideralis* to be thin, narrow and have a slight bend at the tip. This varies along the half row to rather short, stubby, hooked innermost teeth. The outermost teeth have only a slight bend and no hook at the end of a long narrow tooth. MacFarland's illustrations (from Bergh, 1904) for the radular teeth of *Berthella californica* illustrate almost sickle shaped teeth. *Berthella kaniae* has little variation along the entire half row of teeth, but the teeth are sharply hooked. None of the three species appear to have serrations on the teeth margins.

The mandibular platelets of all three species are of comparable shape, but those of *Berthella sideralis* are serrated while both *B. californica* and *B. kaniae* are smooth. The shells of all three species are comparable in form.

Acknowledgments - I am extremely grateful to Mrs. Kaniaulono B. Meyer for supplying the holotype specimen, photo and data which made it possible to complete the description. I also wish to thank Mr. David K. Mulliner for permission to use his photograph of the paratype.

On May 19, 1972 (after the original submitting of this paper) a third specimen of *Berthella kaniae* Sphon was found in 15 feet of water at Isla Siboga, Islas de las Perlas, Bay of Panama. The animal was nestled in a crevice on the underside of a small clump of the coral *Pocillopora* sp. and as it was being pried out with a knife, it autotomized a large piece of the notal border. By the time the animal was removed, a second piece had been cast off so that the whole notal border (about half the entire notum) was missing from the animal. Figure 1 of the holotype clearly shows that that specimen had also autotomized its notal border. Although the phenomena of autotomy appears frequently in the nudibranchs and sacoglossans as a defensive mechanism, to my knowledge this is the first report of it occurring in the pleurobranchs.

LITERATURE CITED

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Figs. 1-8. Berthella kaniae Sphon, new species. Fig. 1, Holotype (CASIZ 560, X7). Fig. 2, Paratype (LACM 1453). Fig. 3, Shell of paratype, dorsal view (X7.5). Fig. 4, Shell of paratype, ventral view (X7.5). Fig. 5, Group of mandibular platelets (from paratype). Fig. 6, Single mandibular platelet (from paratype). Fig. 7, Pair of lateral teeth (from paratype). Fig. 8, Single lateral tooth (from paratype).