

**Pseudohinnites levii gen. et spec. nov.**  
(Mollusca, Bivalvia: Pectinidae) from New Caledonia

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*Pseudohinnites levii* gen. et spec. nov. is introduced for material dredged from bathyal depth from off the southern and southeastern region of New Caledonia.

Key words: Bivalvia, Pectinidae, *Pseudohinnites* gen. nov., taxonomy, New Caledonia.

During the BIOCAL cruise of the R/V "Jean Charcot" and the BIOGEOCAL cruise of the R/V "Coriolis" in the seas around southern and southeastern New Caledonia and the Loyalty Basin in 1985 and 1987, a new pectinid has been dredged from 900-2040 m.

A complete juvenile specimen has also been found among the unidentified Pectinidae and Propeamussiidae material from the Siboga Expedition to the Indonesian Archipelago (1899-1900), which was not mentioned by Dautzenberg & Bavay (1912).

**Pseudohinnites gen. nov.**

Diagnosis. — Shell medium-sized, fragile, inequivalve and very irregular, with a *Hinnites*-like appearance. Auricles inequal, in the left valve not very much contrasted against the valve; anterior auricle slightly longer than posterior, hinge line straight.

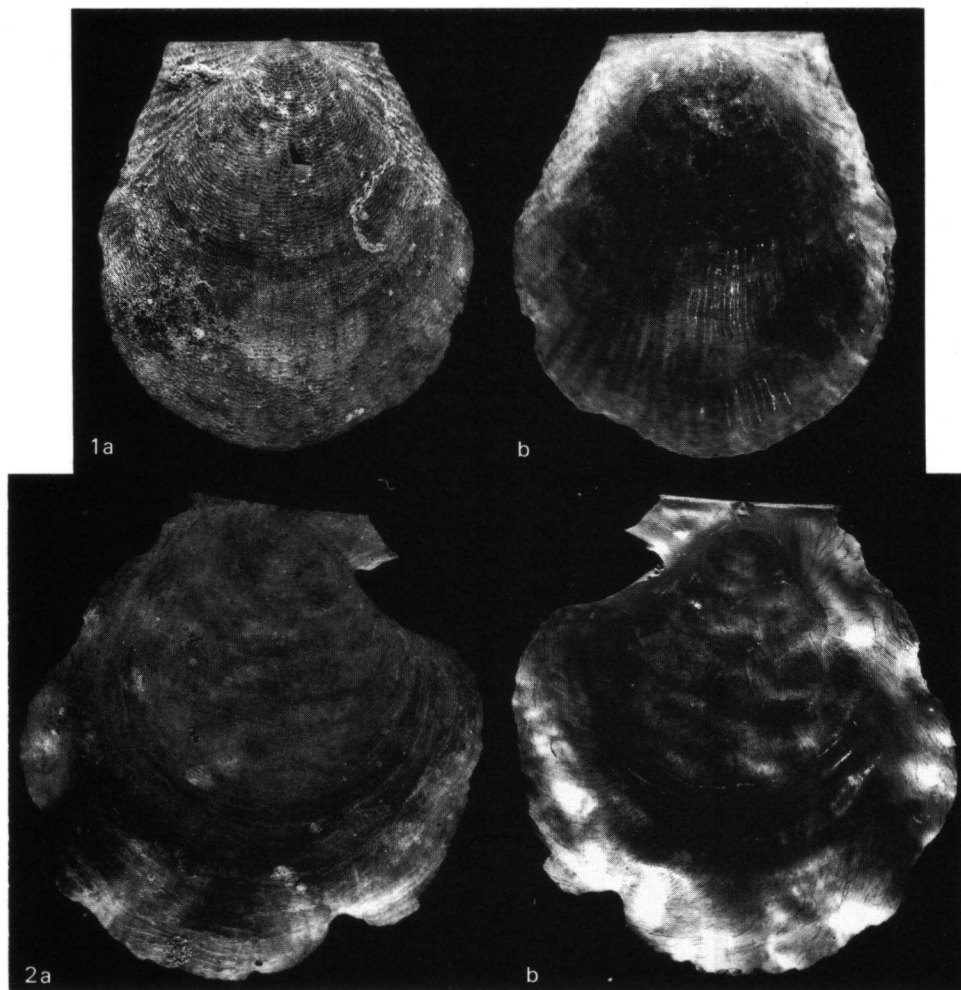
Left valve convex, right valve flat, both valves very irregular, with marked growth lines. Exterior of left valve with irregular radial costae and concentric lamellae overlying the radial costae and interstices. Right valve smooth, with irregular concentric waves or irregular depressions, giving a deformed appearance. Sculpture of left valve continued on the auricles, with radial costae and fine concentric lamellae. Auricles of right valve with a few radial costae near the hinge line only. An inactive and active ctenolium with three to five teeth are present.

Type species. — *Pseudohinnites levii* spec. nov.

Derivatio nominis. — The new genus recalls in its general form and appearance a species of *Hinnites*.

Remarks. — *Pseudohinnites* resembles at first glance the genera *Hinnites* Defrance, 1821 [see description of the type species *Hinnites cortesii* Defrance, 1821 (= *Ostrea crispa* Brocchi, 1814) from the North Italian Pliocene], and *Crassadoma* Bernard, 1986 (see description of the type species *Lima gigantea* Gray, 1825, in Bernard, 1986: 70-74).

The new genus differs from both *Hinnites* and *Crassadoma* by being quite fragile, whereas *Hinnites* and *Crassadoma* are solid and much larger. The juvenile stage of these is typical for "*Chlamys*", whereas in *Pseudohinnites* the juveniles have the same conchological features as the adults.



Figs. 1-2. *Pseudohinnites levii* spec. nov. (1) Holotype, MNHN, Southeast of New Caledonia, 23°25'S, 167°53'E, 965 m, "Jean Charcot", BIOCAL sta. DW 70, coll. Bouchet, Métivier & Richer de Forges, 4.IX.1985; (a) left valve, exterior; (b) left valve, interior (height 34 mm, length 30.5 mm). (2) Paratype, MNHN, 20°32'S, 166°48'E, 900-980 m, BIOCAL sta. DW 80, 5.IX.1985; (a) right valve, exterior; (b) right valve, interior (height 26 mm).

It has not been established that the deformed mature shell of *Pseudohinnites* is the result of idiomorphic growth caused by the substrate, as is the case in *Hinnites* and *Crassadoma*. Species of these two genera generally live on the continental shelf, from shallow water down to about 200 m, whereas *Pseudohinnites* is known only from the bathyal zone.

*Pseudohinnites* in some aspects also resembles *Hyalopecten* Verrill, 1897. Species of this genus are also fragile, with an undulating external sculpture. Sometimes *Pseudohinnites* bears a slight resemblance to *Hyalopecten* with its irregular undulating sculpture of both valves. *Hyalopecten* also lives in the bathyal zone, but deeper down.

***Pseudohinnites levii* spec. nov.**

figs. 1-3

Description. — Shell medium-sized, up to 46 mm high, higher than wide, thin, fragile and somewhat translucent, inequivalve, left valve convex, right valve flat. Exterior of left valve with very irregular small and close-set concentric lamellae, crossed by irregular radial costae, giving the surface a cancellate appearance. In the dissoconch stage only concentric lamellae are visible, the radial costae start only at about 4-8 mm from the beaks. Concentric lamellae more pronounced near the sides and the ventral margin. Sculpture continued on the auricles, no interruption between the shell disc and the auricles. Anterior auricle slightly longer than posterior auricle.

Internal sculpture of left valve composed of irregular radial plicae reproducing the external irregular radial sculpture.

Exterior of right valve somewhat smooth with irregular growth lines, becoming coarser towards the ventral margin. In addition, on both valves irregular concentric low waves or irregular depressions; surface strongly deformed with a “*Hinnites*”-like appearance. Auricles of right valve with radial ribs directly under the hinge line, bearing tiny scales where growth lines are crossed. No byssal notch; inactive and active tenorium present.

Interior reproducing the exterior deformed disc. Hinge line straight with a rather broad triangular resilium pit and a very small outer ligament.

Exterior surface milky white, interior more or less polished and silvery.

Derivatio nominis. — The new species is dedicated to Prof. C. Lévi, principal investigator of the BIOCAL-Expedition.

Locus typicus. — Southeast of New Caledonia, 23°25'S, 167°53'E, 965 m, “Jean Charcot”, BIOCAL sta. DW 70, coll. Bouchet, Métivier & Richer de Forges, 4.IX.1985.

Type material. — Holotype: 34 mm (h), 30.5 mm (l), left valve. Paratypes: 22°40'S, 166°27'E, 1618-1740 m, BIOCAL sta. CP 26, 28.VIII.1985, 2 fragments of left valve, 3 fragments of right valve; 23°09'S, 166°41'E, 1140 m, BIOCAL sta. CP 30, 29.VIII.1985, 4 fragments of left valve, 1 fragment of right valve; 20°32'S, 166°48'E, 900-980 m, BIOCAL sta. DW 80, 5.IX.1985, right valve; 21°00'S, 166°58'E, 1820-1980 m, BIOGEOCAL sta. CP 260, 17.IV.1987, 3 left valves and 2 right valves; 21°02'S, 166°57'E, 1920-2040 m, BIOGEOCAL sta. CP 273, 20.IV.1987, 4 left valves and 3 right valves. Holotype and paratypes are deposited in the collection of the Muséum National d'Histoire Naturelle, Paris (MNHN).

Habitat. — The material was collected on a fine muddy and sandy bottom with gravel, from 900 to 2040 m deep. No live specimens were dredged. The specimen from the Siboga Expedition has a fresh appearance, but no soft parts are preserved.

Distribution. — Philippines, Indonesian Archipelago and off New Caledonia.

Other material examined. — Philippines: 12°53'N, 122°27'E, 1650-1660 m,

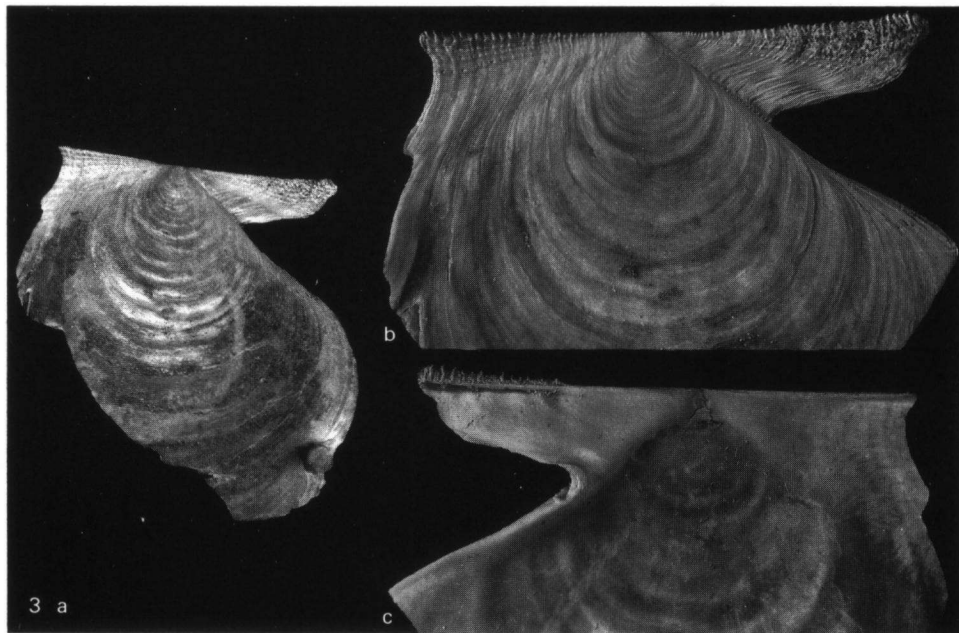


Fig. 3. *Pseudohinnites levii* spec. nov., paratype, MNHN, 23°09'S, 116°41'E, 1140 m, BIOCAL sta. CP 30 29.VIII.1985; (a) right valve, exterior (height 22 mm); (b) right valve, exterior ( $\times 1.8$ ); (c) right valve interior, coated specimen ( $\times 1.8$ ).

MUSORSTOM 2, a right valve, MNHN; Indonesia: 10°48'S, 123°23.1'E, 918 m, SIBOGA sta. 300, 30.I.1900, one complete juvenile specimen, Zoological Museum, Amsterdam.

Remarks. — The only other species in the genus *Pseudohinnites* is *Pseudohinnites adamsi* (Dall, 1886) from off St. Vincent (West Indies) at 1031 m (573 fms.), represented by one left valve only and described as *Hinnites adamsi* (Dall, 1886: 223, pl. 5 fig. 6). It is very close to *Pseudohinnites levii*. Another left valve was dredged by the Dana Expedition, south of the Virgin Islands (Dana sta. 1275, 17°41.5'N, 64°55'W, 550 m, 28.V.1922), and is housed in the Zoological Museum, Copenhagen (ZMK). No right valves have yet been taken.

*Pseudohinnites levii* is slightly larger than *P. adamsi*, the sculpture on the external surface of the left valve is less pronounced, and the auricles have more irregular radial costae than in *P. adamsi*.

A possible third representative of *Pseudohinnites* is *Pecten (Chlamys) fluctuatus* Bavay, 1904, from the Andaman Islands of unknown depth; the type is possibly preserved at the Zoological Survey of India in Calcutta. Unfortunately the author has not been able to examine this species.

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