

XIX. DESCRIPTION OF A BARNACLE  
OF THE GENUS *SCALPELLUM*  
FROM MALAYSIA

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The Malaysian Pedunculate Cirripedes in the collection of the Indian Museum were described in the *Memoirs of the Asiatic Society of Bengal*, vol. i, in 1906; but since that date an interesting new species from the Archipelago has been acquired. It is here described.

*Scalpellum (Smilium) kampeni*, sp. nov.

CAPITULUM with fifteen valves, subtriangular, compressed, lined with blackish membrane, which gives the shell a greyish colour externally; the valves smooth, covered with a delicate hairless

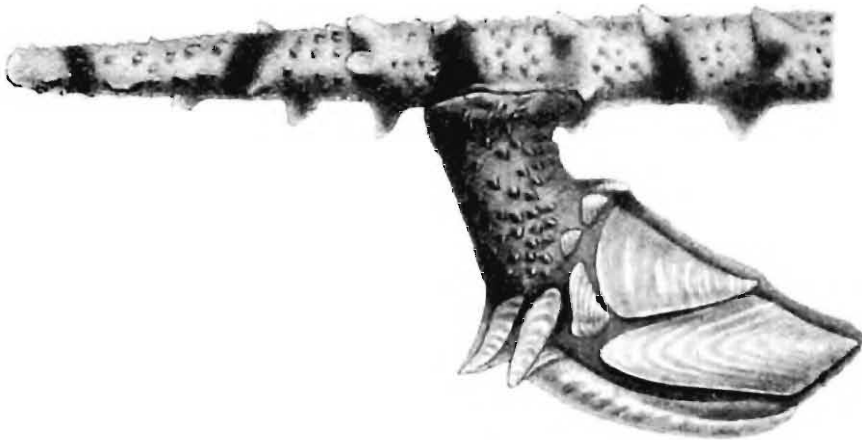


FIG. 1.—*Scalpellum kampeni*,  $\times 5$ , side view.

membrane. *Tergum* relatively very large, subrhomboidal, with the carinal angle subangulate and the scutal margin nearly straight; the occludent margin straight, vertical, about  $\frac{2}{3}$  as long as the scutal; the umbo at the apex of the capitulum, whence a faint ridge runs diagonally down the valve to its base dividing it into two equal areas. *Scutum* large, triangular, with the occludent and tergal margins subequal, nearly straight and forming an acute angle which is faintly retroverted at the tip; the basal margin convex downwards, much shorter than either of the other two. *Rostrum* well developed, triangular, broader than long, not very prominent, with the basal margin convex and the two upper margins concave. *Carina* nearly straight, reaching almost to the top of the capitulum; the dorsum rounded, the lateral faces somewhat flattened on the

upper half; the umbo at the apex of the valve. *Subcarina* large, elongate, claw-shaped, very prominent, with a prominent *subcarinal latus* somewhat resembling it in shape on either side. *Median latus* small, situated between the scutum and the carina, irregularly triangular, with the carinal margin much shorter than either of the other two and distinctly convex towards the carina; the basal margin somewhat convex; the main axis of the valve tangential to the base of the capitulum. Two small, prominent, pointed latera beneath the base of each scutum. The valves slightly separated from one another by membrane.

**PEDUNCLE** short, sparsely covered with small, triangular, upwardly pointed plates arranged in about nine irregular rows.

**APPENDAGES, etc.**—*First cirri* with both rami slender, the anterior ramus with about ten joints and the posterior with eight; both well provided with long bristles on the distal joints. *Anal appendages* consisting of a single joint, laterally compressed, much longer than broad, somewhat curved inwards towards the abdominal surface; the sides parallel, the tip bluntly pointed, bearing a band of long hairs which extends down the ventral margin for some distance as a fringe. The *penis* slender, pointed, not very long.

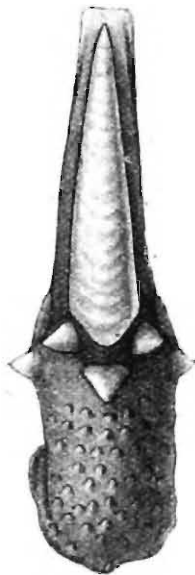


FIG. 2.—*Scalpellum kampeni*, × 5, back view.



FIG. 3.—*Scalpellum kampeni*, × 5, front view.

**MOUTH PARTS.**—*Labrum* slightly produced, without chitinous teeth. *Mandible* with the outer tooth larger than and widely separated from the second, which is rather smaller than the third; a fairly large subsidiary tooth situated at the base of the deep concavity between the first and the second; the inner angle broadly truncated, covered with short bristles, narrowly separated from the third tooth. *Maxillæ* relatively large; the free edge without a definite incisure but slightly sinuous as a whole; a pair of very

stout bristles at the outer angle and a bunch of fine hairs at the inner angle, which is rounded; the intermediate bristles of various sizes, fairly stout. *Second maxilla* not distinctly bilobed.

Length of capitulum	7 mm.
Breadth of     ,,	4     ,,
Thickness of   ,,	1.5   ,,

MALE.—A single male was found in the usual position at the edge of the scutum. It was attached in a little depression on the edge of the mantle and may be described as follows:—Capitulum not very clearly separated from the peduncle, which is broad above and

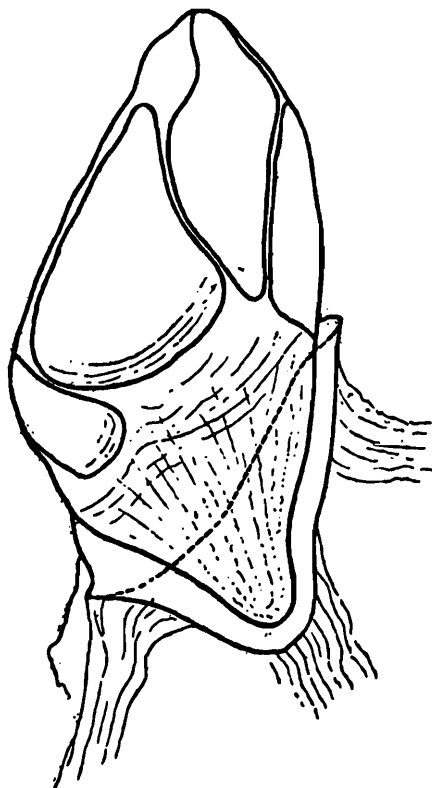


FIG. 4.—Complemental male of *S. kampeni* in pit at edge of mantle of hermaphrodite,  $\times 30$ .

tapers at the base. Six relatively large, closely adjacent, feebly calcified valves present—a carina and rostrum, a pair of terga and one of scuta. Tergum slightly smaller than the scutum, somewhat irregular in shape, pointed above. Scutum triangular, with its tergal margin somewhat sinuous and its basal and occludent margins convex. Carina triangular, with the base convex downwards; the apex considerably below that of the tergum, and the base situated nearer the base of the capitulum than that of the same valve. The rostrum shaped as in the hermaphrodite but relatively much larger.

Total length of male	0.92 mm.
Breadth of capitulum of male	0.44   ,,

HABITAT.—A single specimen from Lat.  $0^{\circ} 14' N.$ , Long.  $104^{\circ} 42' E.$ ; between 13 and 16 fathoms. I am indebted for this specimen, which is attached to the spine of a sea-urchin, to Dr. P. van Kampen. It is numbered  $\frac{5727}{10}$  in the Indian Museum register of Crustacea.

*Scalpellum kampeni* is a primitive form which would come in Hoek's division *Protoscalpellum* (Hoek, *Sib. Exp.*, Mono. xxxia, p. 58), and would by Pilsbry be placed in the genus *Smilium* (*Proc. Acad. Nat. Sci. Philadelphia*, lx, p. 107, 1908).

I take this opportunity to state, as has already been inferred in the explanation to plate iii, Crust. Ent., of the *Illustrations of the "Investigator,"* that *Scalpellum pellicatum*, Hoek (*op. cit.*, p. 91), is in my opinion a variety of the species previously described by me as *S. sociabile*. The anatomical differences noted by Hoek are variable characters, and the mouth parts of the specimen I figured and described were abnormal (see *Mem. Ind. Mus.*, ii, p. 84, 1909). The form of the anal appendages is very characteristic.

The same author's *S. stearnsi* var. *gemina* only differs very slightly from the form I described as *S. inerme*, which is undoubtedly a variety of the species to which Hoek referred his specimens. *S. stearnsi* is very closely related to *S. magnum*<sup>1</sup> of the Coralline Crag of Sudbourne, but may perhaps be distinguished by the fact that the carinal latus is not turned upwards at the tip and does not project in so marked a manner. This, however, seems to be a somewhat doubtful character in the fossil form, and, indeed, a variable one in the recent species. That *S. stearnsi* is the direct descendant of *S. magnum* there cannot, at any rate, be any doubt.

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<sup>1</sup> Darwin, *Mon. Fossil Lepadidæ*, p. 18, pl. i, fig. 1 (1851).

