

chelipeds and ambulatory legs covered with numerous short hairs, ambulatory propodi and dactyli lined with numerous stiff bristle-like hairs. Exopod of third maxilliped with short flagellum. G1 terminal segment 0.28 times total length of G1, distal part sharply tapering.

Material examined. Holotype--1 male (28.9 by 22.2 mm) (ZRC), Ton Nga Chang waterfall, Amphoe Hat Yai, Songkhla Province, southwestern Thailand, leg. P. Naiyanetr.

Paratypes—1 male (ZRC), 1 female (CNHM), same data as holotype.—3 females (NHM), Bo Ri Phat waterfall, Amphoe, Rataphum, Songkhla Province, southwestern Thailand, leg. P. Naiyanetr. — 1 female (CNHM), Pa Num waterfall, Amphoe Khuan Ka Long, Satun Province, southwestern Thailand, leg. P. Naiyanetr.— 22 males, 2 females (CNHM), Ya Roy waterfall, King Amphoe Khuan Don, Satun Province, southwestern Thailand, leg. P. Naiyanetr.

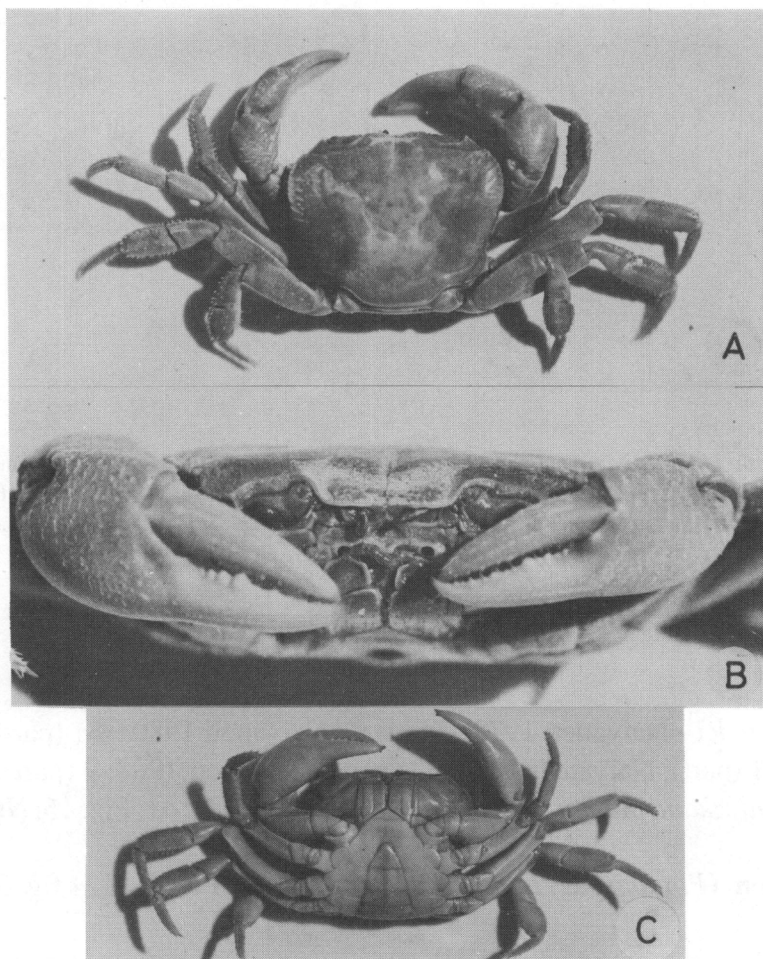


Plate 4. *Stoliczia panhai*. A-C, holotype male, 28.9 by 22.2 mm (ZRC) (Songkhla Province, Thailand).

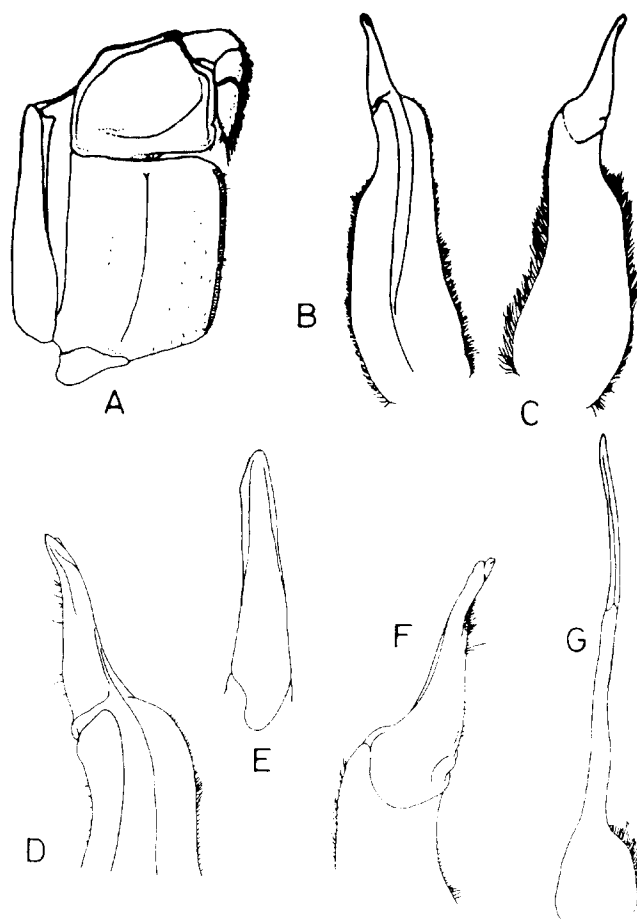


Figure 5. *Stoliczia panhai*. Holotype male, 28.9 by 22.2 mm (ZRC) (Songkhla Province, Thailand). A, Left third maxilliped; B,D, Ventral view of left G1; C, E, E, Dorsal view of left G1; F, Left G2.

Remarks. This species is easily differentiated from the other species in the *S. stoliczkana* complex by its distinctly shorter ambulatory legs (Table 2) which are covered with numerous stiff bristle-like hairs. Although *S. kedahensis* also has such hairs on its legs, they are not as dense. The ambulatory legs of *S. kedahensis* are also proportionately longer.

From *S. cognata* (Roux 1936), *S. panhai* can be separated by its flatter, more rectangular and hirsute carapace, generally larger size, and more strongly bent G1. From *S. tweediei* (Roux 1934), *S. panhai* can be separated by its hirsute, slightly more convex and less squarish carapace, and more strongly bent GL. The live colour of *S. panhai* is not known.

This species can be found under rocks in the shallow waters of relatively fast flowing streams.

Stoliczia cf. panhai Ng & Naiyanetr 1986
(Pl. 5, Fig. 6)

Patamon (Patamon) pealianum --Lanchester 1906: 128 (part)
(not *Telphusa pealiana* Wood Mason 1871: 204, Pl. 14 fig. 7-11)

Material examined. 1 young male (14.1 by 11.8 mm) (CMZ 30.XI. 1899b), Bukit Besar, northern Peninsular Malaysia.

Remarks. Lanchester (1906) identified 11 specimens collected from "Bukit Besar" at an altitude of 2500 feet as "*Potamon pealianum*", but this is extremely unlikely, since the type of *P. pealianum* (transferred by Bott (1966) to the genus *Potamiscus*) was from Assam. The exact locality of "Bukit Besar" is difficult to determine, and there are several highlands in Peninsular Malaysia named "besar", which is simply Malay for "big". None of these highlands are near the area where Lanchester's specimens are known to be collected, i.e. the Isthmus of Kra, around the border between southern Thailand and northern Malaysia. Lanchester's "Bukit Besar", being a Malay name, is probably located in Malaysia itself, or the southernmost tip of Thailand, where the population is predominantly Malay.

Lanchester however, noted that the short hairs on the carapace are densest in young specimens, and this is reminiscent of the condition in *S. kedahensis* and *S. panhai*, which are the most hirsute of the *Stoliczia* taxa so far recognised. In the CMZ, there are five females and a male labelled as "*Telphusa stolicikana*" (C.B. Goodhart, *in litt.* 18 September 1985), a pair of which were kindly sent to the author for detailed study.

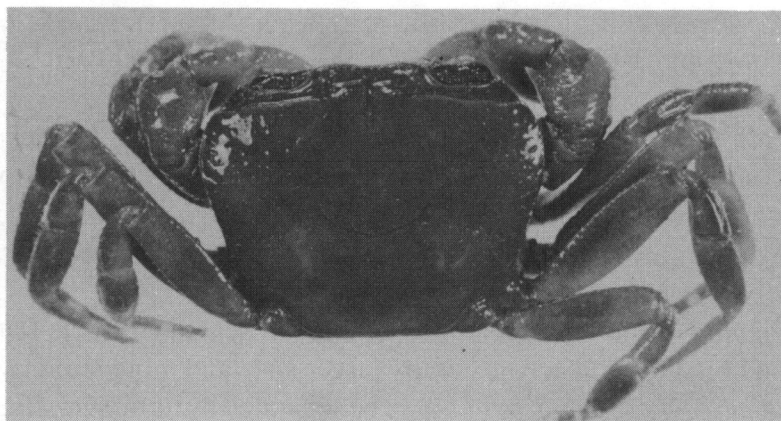


Plate 5. *Stoliczia cf. panhai*. Young male, 14.1 by 11.8 mm (CMZ 30. XI. 1899b)
(Bukit Besar, northern Peninsular Malaysia).

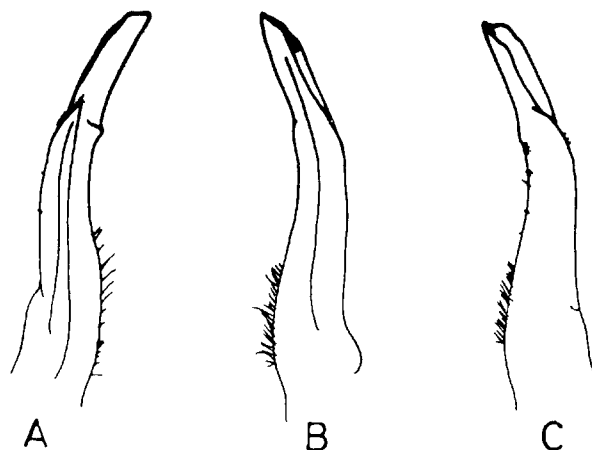


Figure 6. *Stoliczia* cf. *panhai*. Right G1, young male, 14.1 by 11.8 mm (CMZ 30.XI. 1899b) (Bukit Besar, northern Peninsular Malaysia). A, Ventral view; B, Dorso-marginal view; C, Dorsal view.

The single male specimen was contained in a separate vial from the others, with a label on which “Bukit Besar” was written. In all probability, this male belongs to the same series as the specimens identified by Lanchester (1906) as *Potamon pealianum*. Some of Lanchester’s specimens are kept in the CMZ, including most of his specimens from the 1899 “Skeat” Expedition. This also agrees with the knowledge that some of Lanchester’s specimens are deposited in the CMZ (Ng 1989; Ng & Tan 1988). The male specimens from “Bukit Besar” is clearly a *Stoliczia*, the exopod of its third maxilliped without a discernible flagellum, and its G1, although still poorly developed, closely resembles *Stoliczia stoliczkana*. The presence of a very short flagellum cannot be ruled out as the specimens are very small and not well preserved. Its carapace and legs are very tomentose, agreeing well with Lanchester’s description. This combination of characters suggests that Lanchester’s specimens might well be *S. panhai* and is here identified close to that species. The absence of adult males and more precise collection data precludes any certainty for the time being.

The other specimens contained in the same bottle are all rather small but are glabrous, with their carapaces slightly more convex. They are tentatively referred to *S. cf. ekavibhathai* instead.

***Stoliczia ekavibhathai* Ng & Naiyanetr 1986**

(Pl. 6, Figs. 7, 9F)

Stoliczia tweedei - Naiyanetr 1978: 34 (part); Naiyanetr 1980a: 31 (part); Naiyanetr 1980b: 51 (part); Naiyanetr 1983: 43 (part); Naiyanetr 1988: 9 (part)

Stoliczia stoliczkana ekavibhathai Ng & Naiyanetr, in Ng 1986: 41, Fig. 16; Ng 1988: 62, Fig. 27

(not *Potamon (Potamiscus) tweedei* Roux 1934: 31, Fig. 2, Pl. 4 fig. 3)

Diagnosis. Carapace appears rounded due to smooth surfaces and more convex branchial regions; cervical regions depressed without deep cervical groove, surface of and adjacent to anterolateral and posterolateral margins slightly rugose, with very few scattered and very short hairs, intestinal regions glabrous. Exopod of third maxilliped with very short flap-like flagellum. Ambulatory legs lined with scattered short hairs. GI terminal segment 0.30 total length of GI, distal part gradually tapering or slightly flared.

Material examined. Holotype—1 male, 30.8 by 23.5 mm (ZRC), Sai Khao waterfall, Amphoe Khok Pho, Pattani Province, southeastern Thailand, leg. P. Naiyanetr.

Paratypes—1 male, 1 female (CNHM), 1 male (ZRC), same data as holotype. — 9 males, 5 females (1 gravid) (CNHM), Suk Tha Lai, Amphoe, Banang Sata, Yala Province, southeastern Thailand, leg. P. Naiyanetr. — 2 females (CNHM), Than To waterfall, King Amphoe Than To, Yala Province, southeastern Thailand, leg. P. Naiyanetr. — 1 male, 1 female (CNHM), Chat Wa Rin waterfall, Amphoe Sungai Padi, Narathiwat Province, southeastern Thailand, leg. P. Naiyanetr. — 22 females (CNHM), Ba Cho waterfall, Amphoe Bacho, Narathiwat Province, southeastern Thailand, leg. P. Naiyanetr.

Remarks. This species was briefly characterised (as a subspecies) by Naiyanetr & Ng (in Ng 1986) and Ng (1988). There is some variation in the specimens collected from the various localities, but these are all minor. In the smaller male from Chat Wa Rin waterfall (CNHM no. 757a) (29.7 by 23.0 mm), the postorbital crest continues almost all the way to the epibranchial tooth without any sharp bend. In the larger male from this same locality as well as others, the junction between the epibranchial tooth and the postorbital crista is much more angular. An aberrant male from Sai Khao waterfall (ZRC) has the carapace more distinctly inflated, with the dactyli of the legs appearing longer than other comparatively sized males. Other specimens collected from the same locality are however, identical with the holotype. It is possible that this aberrancy may have developed during the post-moult period, when the carapace is still soft, and factors like habitat choice etc. would be important in determining the final shape of the animal. The G1 terminal segments show some variation, but they are not significantly different from each other. It must be emphasised that the configuration and structure of the terminal segment, so important in freshwater crab taxonomy, may be affected by not only age, but also by moulting and mating processes. It is thus important to determine whether the differences observed are of the qualitative or quantitative kind, and if they could be possibly accounted for by other factors.

Ng (1988) figured the transposed right G1 as the left G1; but subtle differences in the general form and tip of the G1 necessitate that both be figured here (Figs. 7B-E, 8A, B, E-H). In the actual left G1, the tip is more flared and slightly flattened, whereas

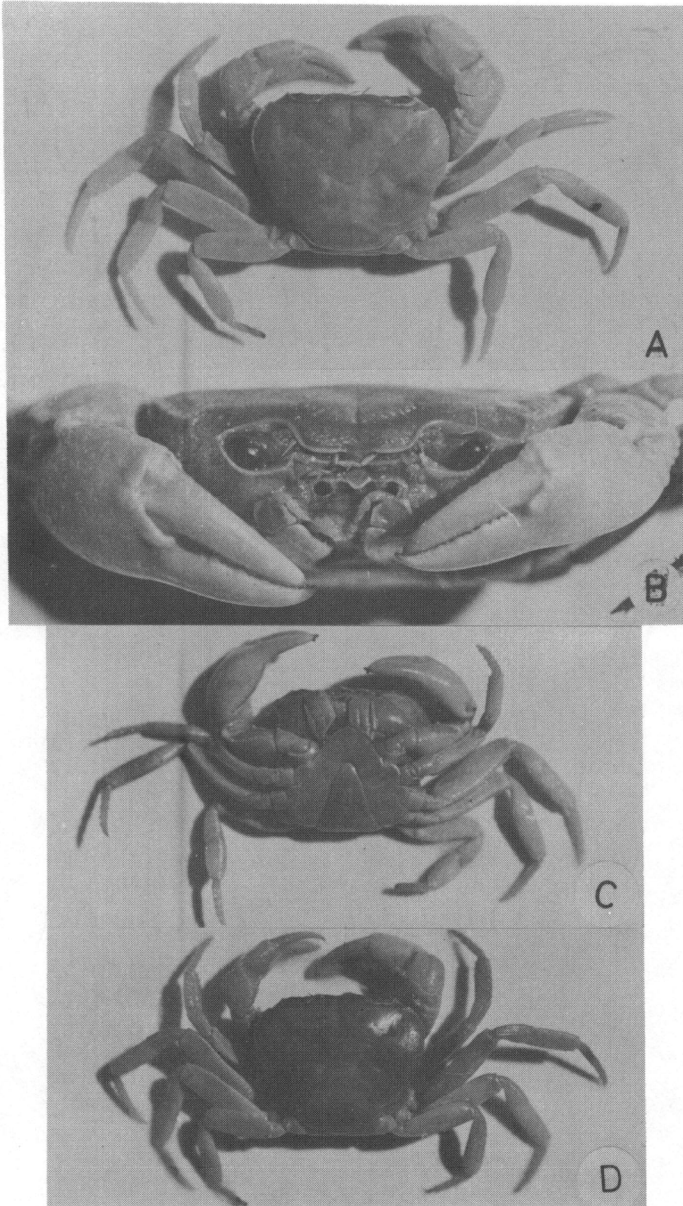


Plate 6. *Stoliczia ekavibhathai*. A-C, holotype male, 30.8 by 33.5 mm (ZRC) (Pattani Province, Thailand); D, Aberrant paratype male (ZRC) (Pattani Province, Thailand).

it appears slightly flared in the right. The angle from which the G1s are drawn can significantly affect the apparent shape (Figs. 7B, C vs. 8C, D). When the G1 is lying more on its dorsomarginal edge, the outer margin appears much straighter. When lying completely horizontal, the outer margin appears gently sinuous instead.

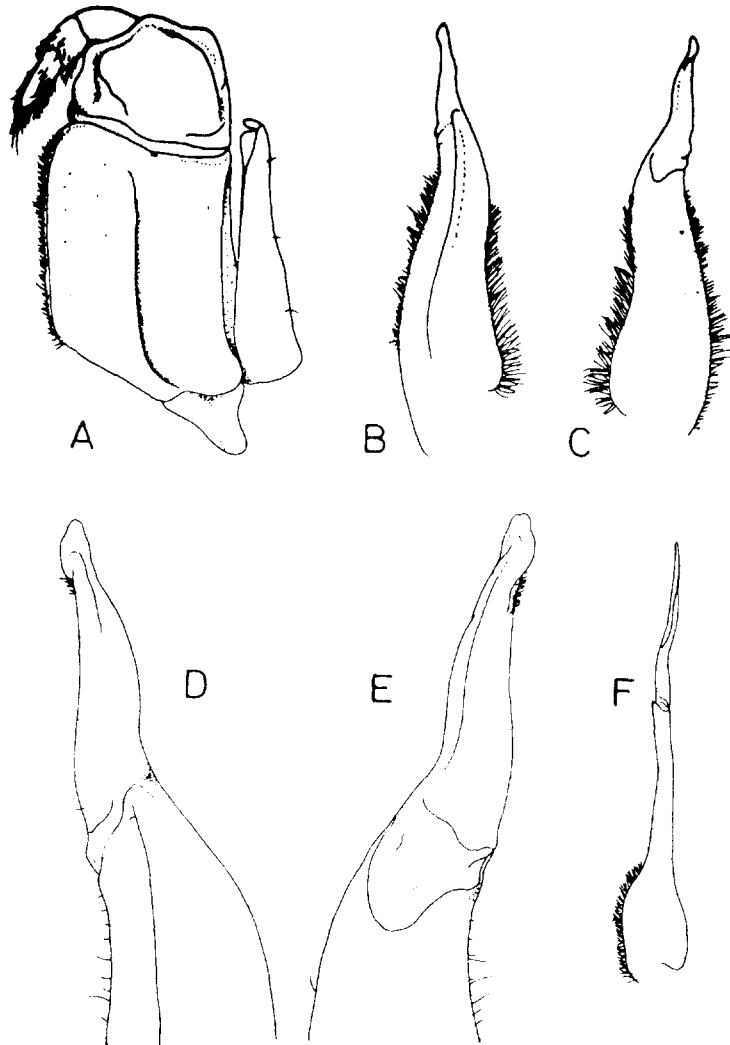


Figure 7. *Stoliczia ekavibhathai*. Holotype male, 30.8 by 33.5 mm (ZRC) (Pattani Province, Thailand). A, Exopod of left third maxilliped; B, D, Ventral view of left G1; C, E, Dorsol view of right G1; F, Right G2.

Stoliczia ekavibhathai can be separated from *S. tweediei* s. str. by its more inflated carapace (that of *S. tweediei* is flat), absence of a deep cervical groove, blunt lower epistomal median triangle (that on *S. tweediei* is sharp), shorter flagellum on the third maxilliped exopod, and the more sinuous G1.

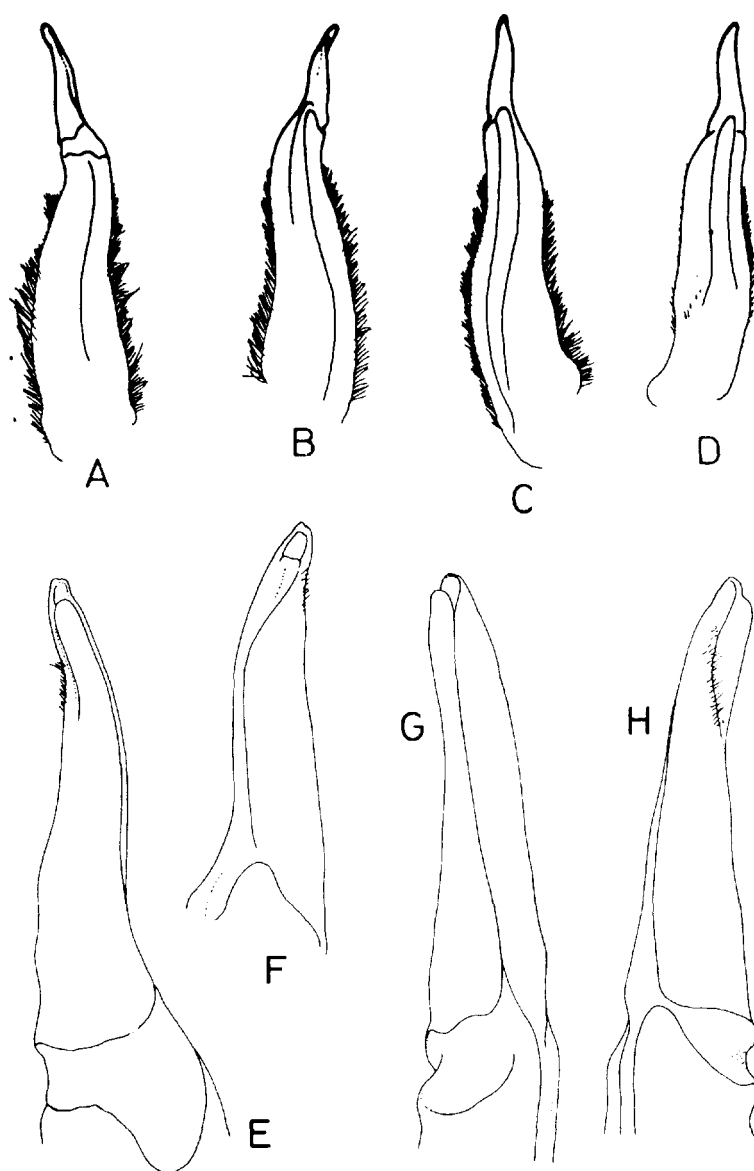


Figure 8. *Stoliczia ekavibhathai*. Holotype male, 30.8 by 33.5 mm (ZRC) (Pattani Province, Thailand). A, B, E-H, Left G1; C, D, Right G1 (drawn at a different angle from Fig. 7B, D).

This species can be found under rocks in shallow, fast flowing streams. Naiyanetr (1983) provides some information on its biology (as *S. tweedei*). The colour is a dirty olive green on all dorsal aspects (see Naiyanetr 1988).

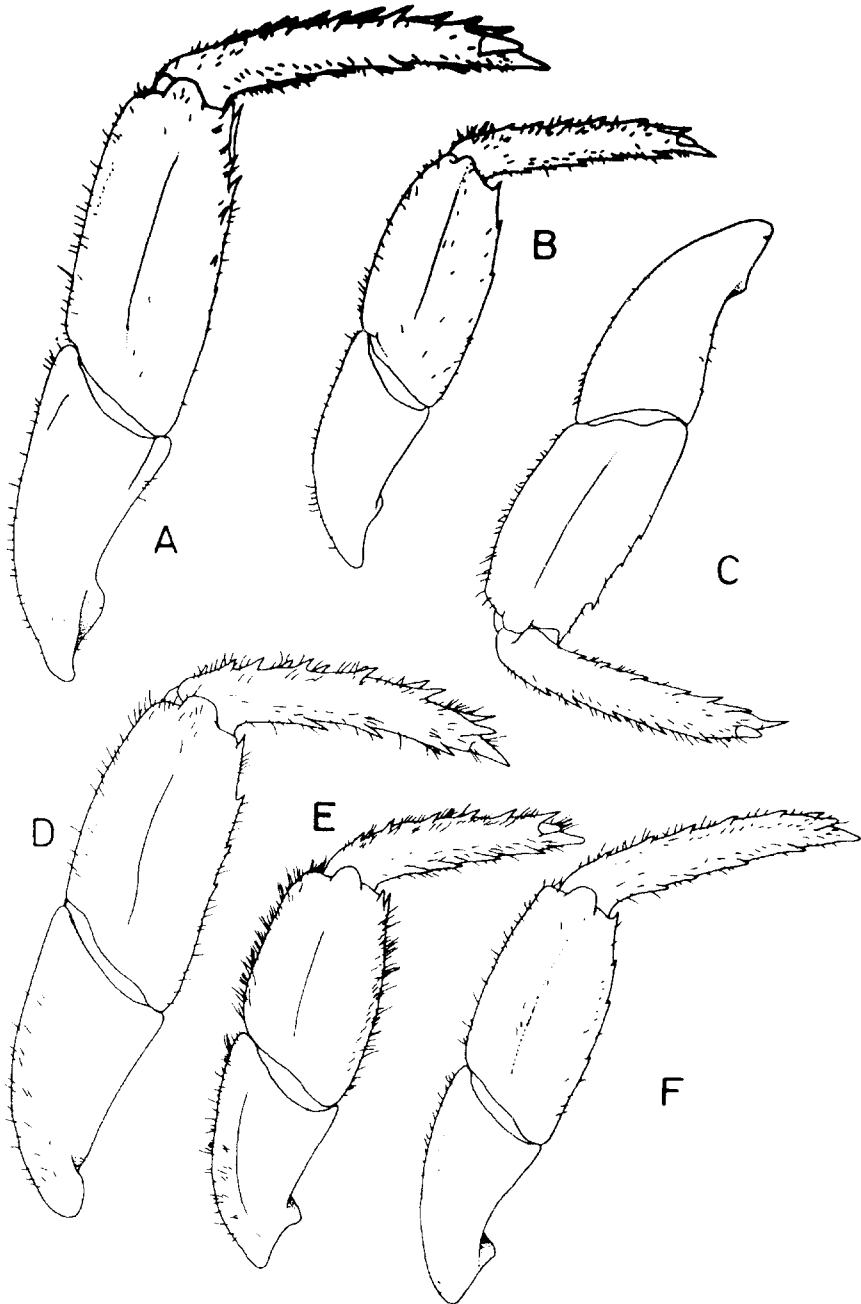


Figure 9. Last ambulatory legs. A, B, D-F, right leg; C, left leg (right dactylus damaged). A, *S. stoliczkana*, 42.0 by 31.5 mm (ZRC 1989. 2013) (Titikarawang, Penang); B, *S. stoliczkana*, male, 28.2 by 21.7 mm (ZRC 1984. 6843) (Penang Hill, Penang); C, *S. perlensis*, holotype male, 32.0 by 25.0 mm (SMF 2781) (Kaki Bukit, Perlis); D, *S. kedahensis*, holotype male, 39.0 by 29.0 mm (ZRC 1989. 3261) (Sungai Tekai, Kedah); E, *S. panhai*, holotype male, 28.9 by 22.2 mm (ZRC) (Songkhla Province, Thailand); F, *S. ekavibhathai*, holotype male, 30.8 by 33.5 mm (ZRC) (Pattani Province, Thailand).

Stoliczia cf. *ekavibhathai* Ng & Naiyanetr 1986
(Pl. 7)

Potamon (*Potamon*) *pealianum* --Lanchester 1906: 128 (part)
(not *Telphusa pealiana* Wood Mason 1871: 204, Pl. 14 fig. 7-11)

Material examined. 5 females (largest 30.2 by 23.0 mm) (CMZ 30. XI. 1899a), State of Lacom, Southern Thailand, "Skeat" Expedition, leg. 1899.

Remarks. The female specimens collected by Lanchester from "Lacom" and deposited in the CMZ are likely to belong to this species, their carapaces being relatively smooth, glabrous and convex. As all the specimens are relatively young, no males are available, and the exact collection locality uncertain, the present author prefers to place the specimens close to *S. ekavibhathai* until more specimens can be obtained. Tweedie (1936) indicated that "Lacom" might be in Nakon Sri Tammarat province, but this locality is much further north of the area where *S. stoliczana* is known to occur. In that area, *Potamon manii* Rathbun 1904, is common instead. In any event, these specimens are clearly *Stoliczia*, with the third maxilliped exopod not possessing a discernible flagellum (see Remarks for *S. cf. panhai*).

GENERAL DISCUSSION

The highland along the southeastern part of Thailand where *S. ekavibhathai* occurs is relatively far from those inhabited by *S. stoliczana* and *S. perlensis*, being separated by several patches of low lying ground. *Stoliczia stoliczana* is found on the highlands on Penang island, *S. perlensis* on Kaki Bukit in the state of Perlis, *S.*

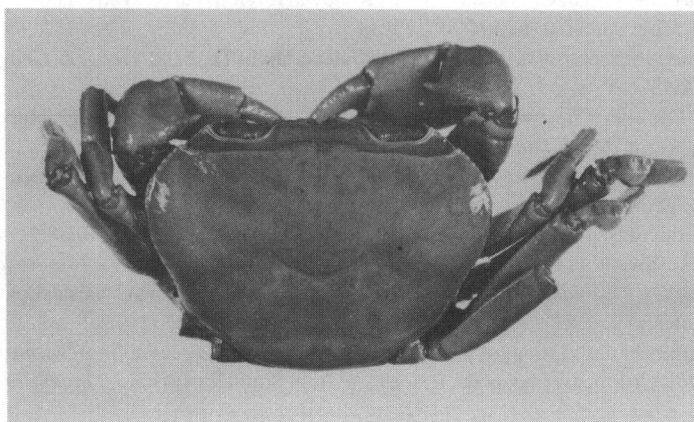


Plate 7. *Stoliczia* cf. *ekavibhathai*. Female, 30.2 by 23.0 mm (CMZ 30. XI. 1899a) (Lacom, southern Thailand).