



Fig. 7. *Neostylodactylus affinis* sp. nov.

a, Anterior part of body, $\times 7.2$; b, abdominal somites including telson, $\times 7.2$; c, telson, $\times 10.2$; d, scaphocerite, $\times 10.2$; e, mandible, $\times 29.7$; f, maxillule, $\times 29.7$; g, first maxilliped, $\times 21.5$; h, maxilla, $\times 21.5$; i, second maxilliped, $\times 14.2$; j, third pereiopod, $\times 10.2$.

eyestalk is slightly swollen, with two or three small spines on the inner side. The tufts of plumose hairs are present on the border between cornea and stalk.

The antennular peduncle reaches the middle of the rostrum. The basal segment is more than three times as long as the distal two segments combined. The stylocerite reaches the middle of the basal segment and terminates in an acute spine at the outer side. The second and third segments are very short and subequal in length. The antennular flagella are short, reaching as far forward as the rostral apex. The outer flagellum is swollen in the proximal seven or eight joints which are sparsely setose, mixed with a few plumose hairs ventrally. The distal part is slender as large as the inner flagellum which also bears plumose hairs on articulation of some joints.

The scaphocerite is very narrow, more than six times as long as wide. The outer margin is concave, with about 15 very fine spinules. The terminal spine extends far beyond the lamella. The basicerite is armed with a strong spine on the outer distal margin and the carpocerite is small (Fig. 7d).

The mandibular palp is absent. The incisor process, which is armed with about ten teeth on the cutting edge and bears a trifoliated process below the teeth, is fused with the molar process which has several small teeth on the cutting edge (Fig. 7e). The maxillule has a tapering proximal endite bearing stout plumose seta. The distal endite is very broad with numerous short stout bristles and a few plumose hairs. The palp is indistinctly bilobed with two, one long and one short, setae (Fig. 7f). The proximal endite of the maxilla is rounded with a few long setae and the distal endite is deeply cleft. The palp is slender and long; the scaphognathite is well developed (Fig. 7h). The first maxilliped has a well-developed exopod with a distinct caridean lobe. The proximal and the distal endites are separated by a deep notch. The palp is long, with several long setae along the inner margin. The epipod is largely bilobed (Fig. 7g). The second maxilliped is typical. The distal two segments are placed side by side on the antepenultimate segment. The exopod is well developed and the coxa bears a slender epipod with a podobranch (Fig. 7i). The distal two segments of the third maxilliped are missing and the antepenultimate segment is shorter than the carapace, with long setiferous hairs on the lower border.

The branchial formula is rather different from that of the other species of this family. Only one arthrobranch is present on the third maxilliped.

The first pair of pereopods is missing. The second pereopod is provided with long setiferous hairs as in the former species and with long plumose hairs on several segments. The merus is 1.4 times as long as the carpus with five similar spines on the outer surface. The chela is long and slen-

der, bearing some short spines on the dorsal surface. The palm is extremely short. There are eight slender spines on the outer surface. The last three pereopods extend to the distal tip of the basal antennular peduncle. The ischio-merus of the third pereopod is armed with a strong outer spine near the distal articulation, and also bears densely plumose hairs on the dorsal and ventral margins. The carpus is more than half the length of the merus, provided with two small spines on the outer surface and with a few plumose hairs on the dorsal margin. The propodus is more than three times as long as the dactylus and is armed with ten spines on the lower margin, the distal three of these spines are as long as the width of the propodus. The dactylus bears five lower spines excluding the terminal claw (Fig. 7j). The fourth and fifth pereopods are similar to the third pereopod. The merus of the fourth pereopod is armed with only one spine near the distal articulation, as in the third. The dactylus bears six spines on the lower margin excluding the terminal claw. The merus of the fifth pereopod is armed with two spines; one is placed near the distal articulation, the other on the middle of the segment. There are seven spines excluding the terminal claw on the lower margin of the dactylus.

The endopod of the first pleopod is reduced, it has half the length of the exopod. The second to fifth pleopods are equally biramous with the well-developed appendices internae. The uropod considerably exceeds the posterior margin of the telson. The outer margin of the exopod is concave and terminates in a small process with a spine laterally.

Paratypes. The paratypes resemble the holotype in principal characters, but the following minor differences between them were observed.

The rostrum in one specimen is broken off distally. The upper border of the rostrum in the intact specimens is armed with 19 or 20 teeth, of which eight or nine proximal teeth are placed on the carapace. There are four or five teeth on the lower border of the rostrum. The pleuron of the third abdominal somite has a smooth margin without any spines, but those of the fourth and fifth somites each are provided with a small spine just above the postero-inferior angle as in the holotype. Most of the appendages of the three specimens are missing, but the few attached legs are similar to those in the holotype.

The eggs are small, measuring 0.4×0.5 mm in diameter.

Remarks. The present species is related to *N. amarynthi* (de Man) but easily distinguished from the latter by the following characters.

1) In the new species the pleura of the first two abdominal somites have smooth margins and those of the following three somites bear only one marginal spine, while in *N. amarynthi* the margins of the first five pleura bear some (three to eight) small spines.

2) The outer surface of the sixth somite in *N. amarynthi* is armed with

two spines, one situated on the middle of the somite, the other near the small triangular pleura of the somite; these spines are entirely absent in *N. affinis*.

3) There are only three pairs of spines on the dorsal surface of the telson in the new species, while in *N. amarynthis* five pairs of dorsal spines are present.

4) The outer spines of the scaphocerite are much smaller in *N. affinis* than in *N. amarynthis*.

5) The third maxilliped is provided with only one arthrobranch in *N. affinis*, while in *N. amarynthis* two, one normal and one rudimental, arthrobranches are present on the base of the third maxilliped.

6) The outer margin of the exopod of the uropod in *N. affinis* ends in two spines, the outer short and fixed, the inner long and movable. The diaeresis is well marked. The endopod of the uropod is normal in shape. In *N. amarynthis* the outer distal corner is provided with some short hairs and a movable spine, but is destitute of an acute fixed spine. The diaeresis is scarcely marked. There is a distinct lateral process on the outer margin near the base of the endopod of the uropod.

The new species was collected by the research vessel "Yoko Maru" of the Seikai Regional Fisheries Research Laboratory in the Korea Strait. The only other caridean crustaceans collected together with this species is a species of *Processa*.

Neostylodactylus investigatoris (Kemp)

Stylodactylus investigatoris Kemp, 1925, p. 260, figs. 1, 2—Mergui Archipelago.

Material examined.

Tsushima Strait, 34° 00.7' N, 129° 19.4' E, depth 110 m, June 20, 1964, Time 19:25, H. Yamashita leg., 1 ovig. ♀ (ZLKU No. 11128).

Description. The specimen measures 17 mm in body length. The rostrum is shorter than the carapace, bearing 19 teeth on the upper border, of which the proximal six teeth are placed on the carapace. The lower border of the rostrum is straight, without any teeth. Supraorbital, antennal and pterygostomial spines are present.

The abdomen is bent backward, with smooth margins. The first somite is very narrow dorsally. The third somite has the postero-median part produced over the fourth somite. The pleuron of the fifth somite is not produced posteriorly and the posterior margin is truncated. The telson is slightly longer than the sixth somite, with three pairs of the dorsal spines.

The eye is long, rather compressed, with a small ocellus. The cornea is set obliquely on the stalk in lateral view. The scaphocerite has the outer

margin with about ten minute spines.

The branchial formula is similar to *N. amarynthis*, the third maxilliped bears one normal and one rudimental arthrobranch.

The eggs are small, being 0.4×0.5 mm in diameter.

Remarks. The present specimen agrees with Kemp's original description and illustrations, except for the scaphocerite which has the outer margin bearing a series of about ten minute spines as in *N. affinis* sp. nov.

This is the second record of the species, the types were collected from the Mergui Archipelago at the depth of 40 fms.

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