

TWO SIMILAR SPECIES: *Plesionika edwardsii*
(BRANDT, 1851) AND *Plesionika crosnieri*,
NEW SPECIES (CRUSTACEA: DECAPODA: PANDALIDAE)

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Abstract.—Two species previously confounded under the name *Plesionika edwardsii* (Brandt, 1851) are recognized from the Indo-Pacific region, one bearing more than one post-rostral tooth is also found in the Mediterranean and Atlantic, while the other with only a single post-rostral tooth is known only from the Indo-Pacific. Although the type of *P. edwardsii* probably cannot be now verified, the type locality is selected as the Mediterranean. A reexamination of the syntypes of *P. longirostris* (Borradaile, 1900) from New Britain proved that it is a junior synonym of *P. edwardsii*. The Indo-Pacific species with only a single post-rostral tooth is described as new, with a holotype selected from Taiwanese material. The differences between the two species are discussed and their coloration illustrated.

In the older literature, *Plesionika edwardsii* (Brandt, 1851) was confused with *Plesionika narval* (Fabricius, 1787) (e.g., de Man 1920, Dieuzeide 1931). This was mainly because the beautiful illustration provided by H. Milne Edwards (1841, pl. 54, fig. 2) of *Pandalus narval* actually portrays a species different from that of Fabricius (1787). Brandt (1851) cast doubt on the identity of H. Milne Edwards' figure and proposed the name *Pandalus (Pontophilus) edwardsii* for the specimens illustrated. However, both H. Milne Edwards (1841) and Brandt (1851) did not indicate the locality of the specimen, though the species had subsequently been widely reported in the Mediterranean and Atlantic (Crosnier & Forest 1973). In 1900, Borradaile described a closely related species *Pandalus (Parapandalus) longirostris* from New Britain but in his report he did not mention *P. edwardsii* nor *P. narval* at all. In later literature, the name *P. edwardsii* is always applied to material from the Mediterranean and Atlantic (e.g., Zariquiey Alvarez 1968, Pequegnat 1970, Crosnier & Forest 1973, Holthuis 1980), while that from the Indo-

Pacific was called *P. longirostris* (e.g., Stebbing 1914; Barnard 1950; Crosnier & Jouannic 1973; Crosnier 1976; Suzuki 1974; King, 1981, 1984).

Recently, Chace (1985) compared his limited Albatross Philippines material with those from the Atlantic (including the Mediterranean) and concluded that the different populations should be treated as the same species. However, when we examined the Taiwanese *P. edwardsii*, it was found that the material displays two forms of coloration. It also appears that several slight but constant differences are always associated with the difference in coloration. A later visit to European museums by the first author revealed that the two forms are widely distributed (though not always together) in the Indo-Pacific but that only one is present in the Mediterranean and the Atlantic. Although the type of *P. edwardsii* cannot be verified from H. Milne Edwards' material deposited in the Muséum National d'Histoire Naturelle, Paris, its type locality is determined to be in the Mediterranean. A reexamination of the syntypes of *P. longirostris* showed that they belong to the same species

as those from the Mediterranean. Therefore, *P. longirostris* is synonymized with *P. edwardsii* but with reason very different from that proposed by Chace (1985). The species which is found only in the Indo-Pacific and not in the Mediterranean is then considered as new and described in detail. The differences between these two species are discussed and their coloration illustrated.

Specimens labeled NTOU remain deposited at the National Taiwan Ocean University, USNM at the National Museum of Natural History, Washington D.C., MNHN at the Muséum National d'Histoire Naturelle, Paris, RMNH at the Rijksmuseum van Natuurlijke Historie, Leiden, UMZC at the University Museum of Zoology, Cambridge. The measurement listed in mm under "Material examined" is the carapace length, measured dorsally from the post-orbital margin to the posterior margin of the carapace.

Plesionika crosnieri, new species
Figs. 1, 3a

Plesionika longirostris.—Stebbing, 1914:37 (in part).—Barnard, 1950:681, fig. 126n.—Crosnier & Jouannic, 1973:11, pl. 2, fig. 2 (in part ?).—Suzuki, 1974:27, fig. 1b-e.—Crosnier, 1976:234 (in part).—Kensley, 1981:28.—King, 1984:182, fig. 6 (in part ?); 1987:193, figs. 2 & 5 (in part ?) [non Borradaile, 1900].

Plesionika edwardsii.—Chace, 1985:62 (in part), fig. 26a-e [non Brandt, 1851].

Material examined.—Holotype: Ta-Chi, I-Lan County, northeastern Taiwan, fish market, "baby" shrimp trawler, 19 Jun 1990: 1 ovig. ♀ 21 mm, NTOU. Paratypes (all at NTOU): Fish markets, "baby" shrimp trawlers, Ta-Chi, I-Lan County, 9 Dec 1984: 1 ovig. ♀ 24 mm; 8 May 1985: 1 ♂ 23 mm, 1 ovig. ♀ 24.5 mm; 14 May 1988: 2 ♂ 20, 22.5 mm, 2 ovig. ♀♀ 21, 21.5 mm; 28 Apr 1989: 2 ♂ 18, 22 mm, 2 ovig. ♀♀ 18, 21 mm; 20 Sep 1990: 2 ovig. ♀♀ 21, 23.5 mm. Tong-Kong, Ping-Tong County, about 130 m, 19

Jan 1989: 6 ♂ 11–21 mm, 6 ovig. ♀♀ 18–23 mm, 1 ♀ 18 mm. Southern coast, R.V. *Hai-Kung*, 22°01'N, 120°35'E, 350 m, traps, 30 Oct 1987: 1 ♀ 17.5 mm. Other specimens (not paratypes): Japan, Sagami Bay, H. Suzuki coll., 6 May 1973: 2 spec; 23 Jun 1973: 1 spec, RMNH. Crozet Islands, MD08, Stn 7, CC48: 5 spec, MNHN.

Description.—Rostrum curved downwards basally, then strongly curved upwards (nearly straight) beyond antennular peduncle, and occasionally bending slightly downwards again near apex; far overreaching scaphocerite, 1.8–2.5 (\bar{X} = 2.2) times as long as carapace; dorsal border armed with 16–29 (\bar{X} = 24) teeth over entire length, anterior teeth closely set but posterior ones larger and spaced farther apart, ventral border bearing 30–43 (\bar{X} = 36) closely packed teeth on upturned section. Post-rostral carina slightly elevated and bearing single fixed tooth, which is always smaller than posteriormost dorsal rostral tooth (very rarely almost at level of post-orbital margin), and with small posterior notch. Distance between post-rostral tooth and posteriormost dorsal rostral tooth equal to or slightly greater than that between posterior two dorsal rostral teeth. Eye large and subspherical, with distinct ocellus. Orbital margin regularly concave. Antennal and pterygostomian spines well developed. Stylocerite sharply acute with outer margin narrow and curved very slightly upwards, reaching to about middle of second antennular segment. Scaphocerite with distolateral tooth reaching nearly or quite to distal margin. Basicerite spine well developed and sharp, extending nearly to proximal end of outer scaphocerite margin.

Maxilliped 3, with distal two segments subequal, bearing rudimentary epipod and extending to about distal margin of scaphocerite. Four anterior pereopods with reduced epipods, those of pereopods 1 and 2 minute and inconspicuous while those at pereopods 3, 4 small but distinct. Pereopods 1 and 2 reaching to distal margin of

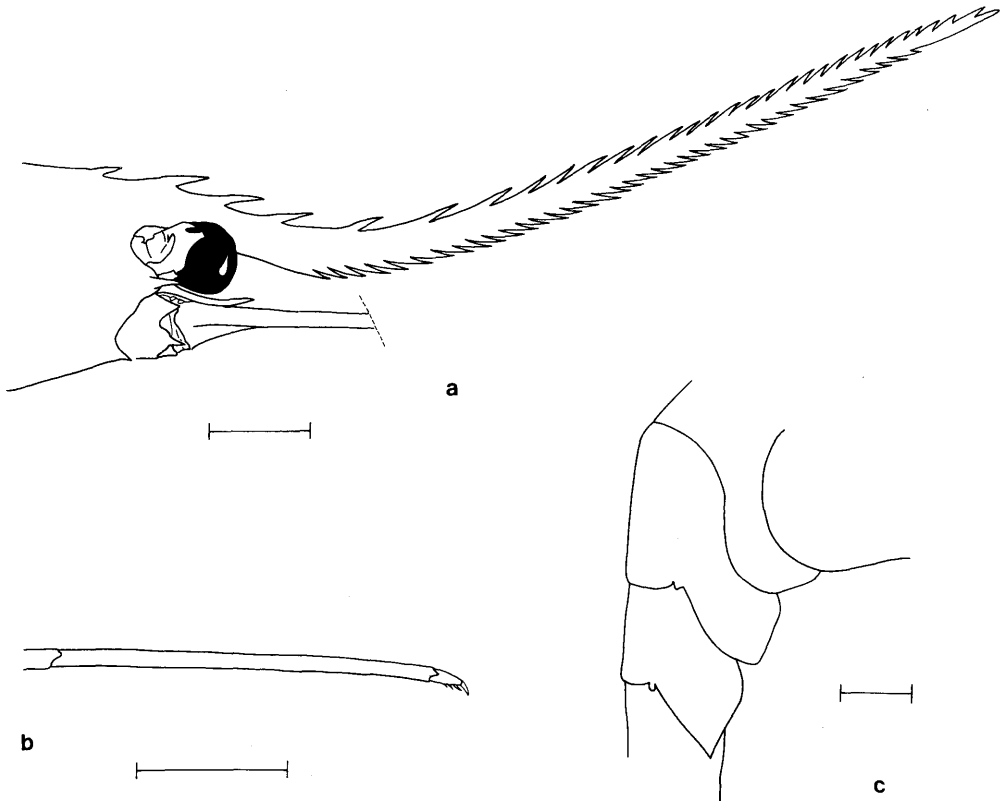


Fig. 1. *Plesionika crosnieri*, new species. Holotype, ovigerous female, cl = 21 mm, Ta-Chi, I-Lan County, Taiwan. a, lateral view of anterior carapace and rostrum. b, distal two segments of right pereopod 3. c, lateral view of abdominal somites 3 to 5. Scales = 5 mm.

scaphocerite, pereopods 2 subequal and having 19–27 ($\bar{X} = 22$) carpal articles. Posterior 3 pereopods moderately stout, with propodi shorter than carapace, dactyl very short. Pereiopod 3 overreaching scaphocerite by small fraction of carpus, pereiopod 4 by more or less than length of propodus, and pereiopod 5 by about $\frac{1}{2}$ length of propodus. Dactylus of pereiopod 3 about $\frac{1}{10}$ as long as propodus, that of pereiopod 4 about $\frac{1}{15}$, and of pereiopod 5 about $\frac{1}{18}$.

Dorsal surface of abdominal somites 1 and 2 rounded, those of posterior somites slightly arched (especially at somite 3) but not sharply angular. Pleura of anterior four somites rounded but pleuron 5 bearing sharp denticle postero-ventrally. Telson more or less as long as abdominal somite 6, usually

armed with 3 pairs of dorso-lateral spinules and 3 pairs of terminal spines. Eggs oval and numerous, about 0.5 mm in diameter.

Coloration.—Body pale pink. Eyes black brown. Uprturned section of rostrum red. Carapace uniformly colored, only with orbital margin and ventral parts somewhat reddish. Organs inside carapace vermilion and/or greenish blue, sometimes dorsally also with pair of iridescent yellowish green lines. Antennal and antennular flagella pinkish orange, pereiopods pink. Mouth parts, distal segment of maxilliped 3 and pereiopod 1, reddish. Abdomen with about 11 (13 in ovigerous females) somewhat faint longitudinal red stripes; dorsal midline bearing single red stripe extending to posterior margin of somite 3, dorsal second and

Table 1.—Major differences between *Plesionika edwardsii* (Brandt, 1851) and *P. crosnieri*, new species.

	<i>P. edwardsii</i> (Brandt, 1851)	<i>P. crosnieri</i> , new species
Post-rostral tooth	2–4, posteriormost typically minute, variably movable and abutting against or close to 2nd tooth	single fixed tooth far from posteriormost dorsal rostral tooth
Rostral teeth	27–36 on dorsal border, 37–52 on ventral border	16–29 on dorsal border, 30–43 on ventral border
Stylocerite	outer margin broad and distinctly curved upwards	outer margin narrow and only very slightly curved upwards
Basicerite spine	often slightly overreaching proximal end of scaphocerite margin	always failing to reach proximal end of scaphocerite margin
Coloration	generally strong; carapace with faint white stars and posterior vertical white band*, abdomen with stripes deeply colored and dorsal midline covered with pair of submedian stripes, distal end of uropods with iridescent yellowish white patches*	generally pale; carapace without white spots or bands, abdomen with stripes faint and dorsal midline covered with single stripe, distal end of uropods not particularly marked

* But quickly disappeared with becoming less fresh.

third stripes fused at posterior end of somite 4. Abdominal hinges distinctly reddish. No iridescent markings at uropods. Eggs bright blue, becoming dirty white when near hatching.

Type locality.—Taiwan.

Distribution.—Indo-West-Pacific and Southern Ocean, but so far only known with certainty from the eastern coast of South Africa, La Réunion, Crozet Islands, Indonesia, Philippines, Taiwan, Japan and New Caledonia (see Remarks). At depths of 80–350 m.

Remarks.—The new species is extremely similar to *P. edwardsii*. Except for plentiful fresh material available in Taiwan we would probably have not been able to recognize the difference between the two species. When the two species occur together in the same catch they can be readily distinguished by the different coloration. Furthermore, such color difference is always associated with several morphological differences as listed in Table 1. A reexamination of Chace's (1985) *Albatross* material of *P. edwardsii* showed that the two species were confounded. Chace's female from Indonesia (fig. 26a) has only one fixed post-rostral tooth, while the other two from the Philippines have two

or three post-rostral teeth (with the posteriormost apparently movable). Examinations of the numerous specimens deposited at MNHN and RMNH showed that the two species are widely distributed in the Indo-Pacific, and available photographs always show the different coloration. However, all the material from the Mediterranean and Atlantic bear more than one post-rostral tooth and is apparently identical with the redder form from the Indo-Pacific.

There was no indication of the locality for the specimen illustrated as *Pandalus narval* (not *Astacus Narval* Fabricius, 1787) by H. Milne Edwards (1841, pl. 54, fig. 2). Brandt (1851) also had not specified the type locality of *P. edwardsii*. Although H. Milne Edwards' figure shows only one post-rostral tooth on the carapace, that tooth is nearly at the level of the post-orbital margin, a situation that seems very unlikely. In the collection of the MNHN, there is only one lot of specimens labeled as "*Pandalus narval*, Naples, ancienne collection" by H. Milne Edwards. There are three specimens in this lot; one being the true *P. narval* while the other two are "*P. edwardsii*." The latter two are ovigerous females (19 and 22.5 mm cl), and in very poor condition (rostrum

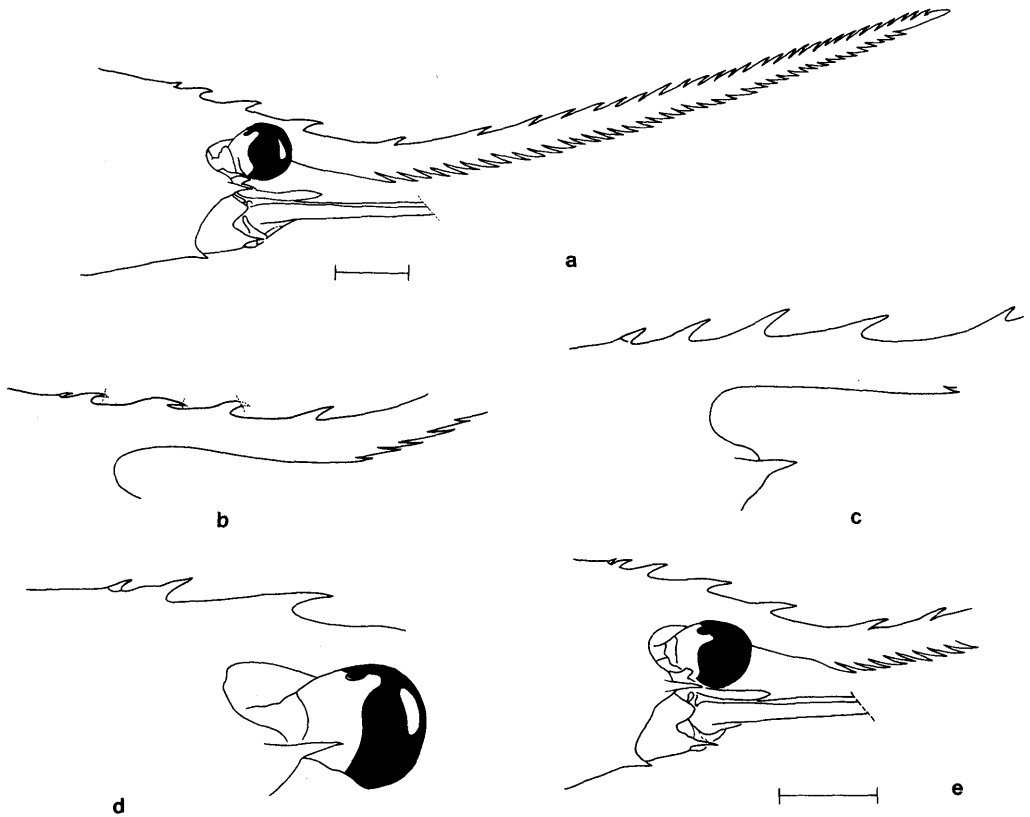


Fig. 2. *Plesionika edwardsii* (Brandt, 1851). a, lateral view of anterior carapace and rostrum, ovigerous female cl = 24.5 mm, from Sicily, off Pantellerid Island. b–e, lateral view of anterior carapace: b, ovigerous female cl = 22.5 mm from Naples, identified by H. Milne Edwards as *Pandalus narval*; c, ovigerous female cl = 18 mm, syntype of *P. longirostris* (Borradaile, 1900); d, female cl = 20 mm, syntype of *P. longirostris*; e, ovigerous female cl = 21.5 mm from Ta-Chi, I-Lan County, Taiwan. Scales = 5 mm.

broken). Although the larger female is similar in size to the one figured by H. Milne Edwards (1841), no eggs are shown in the figure and both specimens have two post-rostral teeth on the carapace (fig. 2b). Thus, either the specimen illustrated by H. Milne Edwards was from the Indo-Pacific and accurately drawn or it was from the Mediterranean and poorly drawn.

Based on the available information, we conclude that the possibility that H. Milne Edwards' figure was drawn from a specimen collected in the Indo-Pacific is very unlikely. This is because species mentioned by H. Milne Edwards from the Indo-Pacific were mostly, if not all, from shallow water. *Pan-*

dalus edwardsii is a deep-water species and, in H. Milne Edwards' days, deep-water material almost always came from the Mediterranean. Although difficult to prove, the specimen illustrated was probably from the Mediterranean and inaccurately drawn (i.e., the minute posteriormost movable post-rostral tooth overlooked). Thus, the type locality of *P. edwardsii* is believed to be in the Mediterranean. It is, however, still not certain that the two females identified as *Pandalus narval* by H. Milne Edwards in MNHN should be treated as the types. Yet, this conclusion leaves no alternative but to identify the form with more than one post-rostral teeth as *P. edwardsii*.

The remaining problem is whether the other species could represent *P. longirostris*, described by Borradaile (1900) from New Britain. Borradaile's figure (1900, pl. 37, fig. 10a) clearly shows only one post-rostral tooth present on the carapace but in the text he stated that there were from three to four teeth of the rostral series located on the carapace. However, the descriptions and illustrations provided by Borradaile (1900) are generally considered to be inaccurate (e.g., Stebbing 1914, Chace 1985). The types examined of *P. longirostris* from UMZC contain two badly damaged females (18 and 20 mm cl, rostrum broken), the smaller one being ovigerous. Both specimens have two post-rostral teeth on the carapace with the posteriormost movable (fig. 2c, d) and are in other respects similar to the Mediterranean *P. edwardsii*. Thus, *P. longirostris* should be synonymized with *P. edwardsii*. The material with only one fixed post-rostral tooth, even though resembling both H. Milne Edwards' and Borradaile's figures, actually is of an undescribed species.

Examination of the material deposited at MNHN and RMNH showed that, in addition to Taiwan, the two species occur sympatrically in New Caledonia, La Réunion, Indonesia and the Philippines. So far, only *P. crosnieri* has been found in Japan and Crozet Island (hundreds of additional specimens in the MNHN from this Southern Ocean locality are probably all *P. crosnieri*). On the other hand, only *P. edwardsii* is found in the Mediterranean and the Atlantic and at New Britain, Fiji, French Polynesia in the Indo-Pacific. From other reports, both or either of the species are also present in Madagascar (Crosnier & Jouannic 1973), Seychelles (Crosnier, unpublished photo), Marianas, Samoa, Tonga and Hawaii (King 1984, 1987). For Vanuatu, the photographs illustrated in King (1981, as *P. longirostris*) clearly show the typical coloration of *P. edwardsii*. Although Chace (1985) expressed doubt about the exact identity of the small specimens reported as

P. longirostris from South Africa by Stebbing (1914) and Barnard (1950), the descriptions and figure provided by the latter author closely resemble *P. crosnieri*, with the shorter telson likely due to the very small size of the specimens. It will be of interest to have more data on the distribution of these two species.

Etymology.—The species is named after Dr. A. Crosnier for his invaluable help in furnishing us the definitive information (i.e., finding H. Milne Edwards' material and re-examining Borradaile's types) that finally established the status of this species.

Plesionika edwardsii (Brandt, 1851)

Figs. 2, 3b

Pandalus narval.—H. Milne Edwards, 1841: pl. 54, fig. 2 [not *P. narval* (Fabricius, 1787)].

Pandalus (Pontophilus) edwardsii Brandt 1851:122 [type locality (herein designated): Mediterranean].

Pandalus (Parapandalus) longirostris Borradaile, 1900:413, pl. 37, fig. 10a–h [type locality: New Britain].

Plesionika longirostris.—de Man, 1920: 114—Crosnier & Jouannic, 1973:11, pl. 2, fig. 2 (in part ?).—Crosnier, 1976:234 (in part), fig. 4a.—King, 1981:14, figs. 6–7, 2 unnumbered photo; 1984:182 (in part ?), fig. 4-Pl, fig. 6 (in part ?); 1987:193, figs. 2 & 5 (in part ?).

Parapandalus Narwal.—de Man, 1920:138 [not *P. narval* (Fabricius, 1787)].

Pandalus narwal.—Dieuzeide, 1931:3, figs. 1–4, 1 unnumbered pl. [not *P. narval* (Fabricius, 1787)].

Plesionika edwardsii.—Zariquiey Alvarez, 1968:109, fig. 45.—Pequegnat, 1970:93.—Crosnier & Forest, 1973:202, figs. 63b, 64b.—Holthuis, 1980:144.—1987:251, unnumbered figs.—Chace, 1985:62 (in part), fig. 26f–g.

not *Plesionika edwardsii.*—Takeda, 1983: 62, unnumbered photo [= ?].—Chace, 1985:62 (in part), fig. 26a–e [= *P. crosnieri*, new species].

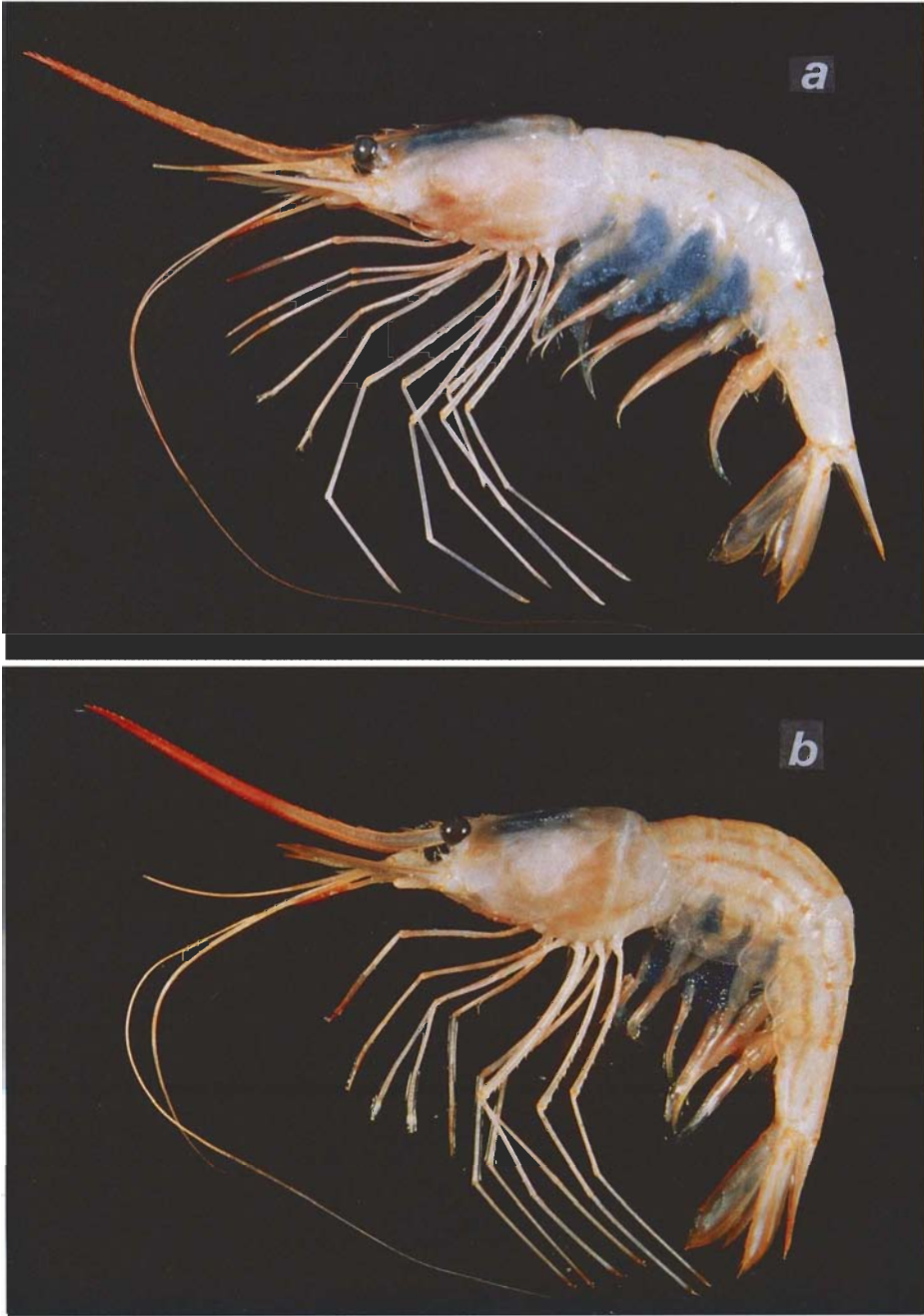


Fig. 3. a, *Plesionika crosnieri*, new species: ovigerous female, cl = 23.5 mm, Taiwan; b, *Plesionika edwardsii* (Brandt, 1851): ovigerous female, cl = 24 mm, Taiwan.

not *Plesionika longirostris*.—Stebbing, 1914: 37 (in part).—Barnard, 1950:681, fig. 126n.—Crosnier & Jouannic, 1973:11, pl. 2, fig. 2 (in part ?).—Suzuki, 1974:27, fig. 1b–e.—Crosnier, 1976:234 (in part).—Kensley, 1981:28.—King, 1984:182, fig. 6 (in part ?); 1987:193, figs. 2, 5 (in part ?) [= *P. crosnieri*, new species].

Material examined.—Mediterranean: Italy, Naples, “ancienne collection,” labeled *Pandalus narval* by H. Milne Edwards and in the same jar with one specimen of *P. narval* (Fabricius, 1787): 2 ovig. ♀♀ 19, 22.5 mm, MNHN (? larger specimen illustrated in pl. 54, fig. 2 in H. Milne Edwards 1841); Sicily, off Pantellerid Island, Luiciotta, 36°14'12"N–36°14'30"N, 12°18'06"E–12°15'30"E, 400 m, 21 Jun 1974: 4 ♂♂ 14–21 mm, 1 ovig. ♀ 24.5 mm, NTOU (USNM exchange). Nice, France, NA2060, labeled *Parapandalus narval* by A. Milne-Edwards: 1 ovig. ♀ 25.5 mm, MNHN. Barcelona, Spain: 5 spec, RMNH; 300 m, 6 Jun 1956: 2 spec, RMNH; 5 Aug 1961: 1 ovig. ♀ 26 mm, RMNH. Algeria, Jun 1927: 2 spec, RMNH. NW Atlantic: Norfolk Canyon, Gilliss Stn 76-01, 37°01'30"N, 74°00'39"W, 150 m, 31 Jan 1976: 1 ♂ 19 mm, 1 ovig. ♀ 19.5 mm, NTOU (USNM exchange). Taiwan (all at NTOU): Fish markets, “baby” shrimp trawlers. Ta-Chi, I-Lan County, 4 Jun 1988: 1 ♂ 22.5 mm, 2 ovig. ♀♀ 24, 28.5 mm; 22 Jun 1989: 1 ovig. ♀ 20 mm; 10 Mar 1990: 1 ovig. ♀ 21.5 mm; 20 Sep 1990: 1 ovig. ♀ 23 mm. Tong-Kong, Ping-Tong County, 19 Jan 1989: 1 ovig. ♀ 24 mm. New Britain: Syntypes of *Pandalus* (*Parapandalus*) *longirostris* Borradaile, 1900: 1 ♀ 20 mm, 1 ovig. ♀ 18 mm, UMZC (examined by A. Crosnier). Fiji: Suva, Laucala Bay, King coll., 1979: 3 spec, RMNH.

Diagnosis.—Rostrum curved downward in basal region, then strongly curved upwards beyond antennular peduncle, slightly more than 2 times as long as carapace; armed dorsally with 28–36 teeth over entire length, anterior teeth closely spaced, posterior teeth

larger and well spaced, ventral border bearing 37–52 closely spaced teeth. Two to 3 (rarely 4) post-rostral teeth on carapace, posteriormost tooth typically minute or small, variably movable and abutting against (sometimes only near) second posterior tooth. Eye large and subspherical, with distinct ocellus. Orbital margin regularly concave. Outer margin of stylocerite broad and distinctly curved upwards. Basicerite spine long, often slightly overreaching proximal end of outer margin of scaphocerite. Epipod on maxilliped 3 rudimentary, those on anterior 4 pereopods reduced and sometimes inconspicuous on pereopods 1 and 2. Distal two segments of maxilliped 3 subequal. Pereopods 2 subequal, with 18–28 carpal articles. Posterior three pereopods moderately stout, with pereopod 3 overreaching scaphocerite by small part of carpus, dactylus about $\frac{1}{10}$ as long as propodus. Dorsal surface of abdominal somite 3 slightly arched but not sharply angular. Abdominal pleuron 4 rounded, pleuron 5 pointed. Telson nearly as long as abdominal somite 6. Eggs ovate, numerous, about 0.5 mm in diameter.

Coloration.—Body pinkish white. Carapace with numerous soft white spots and bearing vertical white band near posterior margin (both fading quickly when becoming less fresh). Uprturned section of rostrum, ventral carapace and mouth parts reddish. Organ inside carapace vermilion and/or dark blue, sometimes dorsally also with pair of iridescent yellowish green lines. Eyes dark brown and orbital margin red. Antennal and antennular flagella pinkish orange. Pereopods pink and with distal segment of maxilliped 3 and pereopod 1 somewhat reddish. Abdomen provided with 5 (6 in ovigerous females) pairs of deep red longitudinal stripes; with pair of submedian stripes near dorsal midline and second dorsal stripe extending only to posterior margin of somite 2. Abdominal hinges reddish. Distal ends of uropods with iridescent yellowish white patches. Eggs blue.

Distribution. — Worldwide: Mediterranean, Atlantic (east coast to Angola and west coast from Virginia, U.S.A., to Gulf of Mexico) and Indo-Pacific. In Indo-Pacific known with certainty only from La Réunion, Indonesia, Philippines, Taiwan, New Britain, New Caledonia, Vanuatu, Fiji and French Polynesia. At depths of 50–680 m, commonly 200–400 m.

Remarks. — The material from the Indo-Pacific is virtually identical with that from the Mediterranean and the Atlantic. The determination that *P. edwardsii* is distributed in both the Atlantic and Indo-Pacific by Monod (1966, in Crosnier & Forest 1973), and Chace (1985), should be credited although the conclusions were based on very different reasons. Chace's (pers. comm.) examination of 129 Mediterranean and 68 NW Atlantic specimens deposited at USNM showed that these specimens usually bear two or less frequently, three post-rostral teeth on the carapace. Only in one specimen (from the Mediterranean), four post-rostral teeth were present, with the posteriormost two movable. Another specimen (also from the Mediterranean), has the second posteriormost tooth directly above the post-orbital margin and with the posteriormost tooth movable. Most of the remaining specimens have the posteriormost tooth variably movable (about 5% have it virtually immovable), minute or small and often abutting against the second posterior tooth (fig. 2a, b). Sometimes the posteriormost tooth is well-separated from the second posterior tooth but the distance between the posterior two post-rostral teeth is always distinctly shorter than that between the second and third (or the posteriormost dorsal rostral tooth) teeth (fig. 2d). A brief examination of the other *P. edwardsii* material from various localities deposited at MNHN and RMNH, as well as those from Taiwan, also showed such trend of variations (e.g., fig. 2c, e; see also Crosnier & Forest 1973:fig. 63b). Furthermore, the outer margin of the stylocerite is always broad and distinctly

curved upward in *P. edwardsii*. It also appears that the rostral teeth are generally higher in *P. edwardsii* (see Zariquiey Alvarez 1968, Pequegnat 1970, Holthuis 1987) than those of *P. crosnieri* (see Suzuki 1974). Although the epipods on the pereopods are also reduced in *P. edwardsii*, those on pereopods 1 and 2 are often larger than those of *P. crosnieri* and sometimes they are even nearly as large as those of pereopods 3 and 4.

The stars and reddish color of *P. edwardsii* appears to be very constant in the Indo-Pacific material [King 1981 (photo of *P. longirostris*), 1984:fig. 4-PI; Crosnier, unpublished photo]. King (1981, 1984) even called it the "Stars and stripes shrimp". Although such a color pattern can readily distinguish *P. edwardsii* from the pale colored *P. crosnieri*, the stars and white band on the carapace fade very quickly when the specimen becomes less fresh and making it appear very similar to the latter.

Plesionika edwardsii is reported to be of commercial potential from the Mediterranean (Holthuis 1980, 1987), and Vanuatu (King 1981). This shrimp also appears to be rather common in many eastern Atlantic and Indo-Pacific localities (e.g., Crosnier & Forest 1973; Crosnier 1976; King 1984, 1987). The "*P. edwardsii*" specimens reported by Takeda (1983) from Suriname and French Guiana seem to represent a very different species since they have very long dactylus, pointed abdominal pleuron 4 and completely different arrangement of basal rostral teeth and coloration. An examination of the La Réunion material deposited at MNHN showed that in this region *P. edwardsii* is much more common than *P. crosnieri*. However, the opposite is true for the material in Taiwan where *P. crosnieri* is the most common species, although the two species were sometimes found together in the same catch. The two are among the largest *Plesionika* species in Taiwan and both are sometimes sold in fish markets at a price of about NT\$50-100/kg (usually mixed with other *Plesionika* species) under the common

name of "Mother shrimp" (a name used locally for all *Plesionika* and *Heterocarpus* species) because they always carry brightly colored eggs.

Acknowledgments

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