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ON A SMALL COLLECTION OF CARIDEAN SHRIMPS (DECAPODA, CARIDEA) FROM INHACA ISLAND, MOZAMBIQUE

BY

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ABSTRACT

During a series of irregular visits to Inhaca Island, Mozambique in the years 1982-1987, J.H.C. Walenkamp, often aided by students and staff of the Faculty of Biology in Maputo, made extensive collections of littoral and infralittoral invertebrates. Among the extensive collections of Brachyura, several caridean shrimps were encountered, upon which we herein report. *Cuapetes* cf. *ensifrons* is recorded from Mozambique for the first time.

Key words. — Caridea, Mozambique

RÉSUMÉ

Au cours d'une série de visites irrégulières à l'île d'Inhaca, Mozambique, dans les années 1982-1987, J.H.C. Walenkamp, souvent avec l'aide d'étudiants et de personnel de la Faculté de Biologie de Maputo, a réalisé de vastes collectes d'invertébrés littoraux et infralittoraux. Parmi les grandes collectes de Brachyura, plusieurs crevettes Caridea ont été trouvées, dont nous rendons compte ici. *Cuapetes* cf. *ensifrons* est signalée pour la première fois au Mozambique.

Mots clés. — Caridea, Mozambique

INTRODUCTION

In 1958 Macnae & Kalk published their book on the natural history of Inhaca Island, southern Mozambique. This Inhaca report is based upon collections acquired over many years and could be expected to be moderately complete. In

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this book they listed 34 species of caridean shrimps from Inhaca Island. The most complete checklist of the decapod Crustacea of southern Africa, including Mozambique, was compiled by Kensley (1981) from existing literature. This list included 65 marine caridean species from Mozambique. The most recent overview of the caridean fauna of Mozambique was published by Emmerson (2016). However, in his book less species are treated than in the work by Kensley (1981).

During a series of irregular visits to Inhaca Island, Mozambique in the years 1982-1987, J.H.C. Walenkamp, often aided by students and staff of the Faculty of Biology in Maputo, made extensive collections of littoral and infralittoral invertebrates. Among the extensive collections of Brachyura (Willems & Fransen, in prep.), several caridean shrimps were encountered upon which we herein report.

MATERIAL AND METHODS

Specimens were studied using a dissecting stereomicroscope (Zeiss Discovery.V8) and a compound microscope (Olympus BX53), both provided with a drawing tube. All drawn figures were performed by the first author. Drawings were scanned (Canon Canoscan 9000F) with a resolution of 600 dpi and subsequently mounted into plates using Adobe Photoshop software (Adobe Systems). Post-orbital carapace length (pocl.) was measured from the posterior margin of the orbit to the posterior margin of the carapace in dorsal midline; rostral characters (R) are formulated as R = number of postorbital dorsal teeth + number of dorsal teeth on rostrum proper/number of ventral rostral teeth. Field collection numbers are abbreviated as fcn. Specimens were deposited in the Naturalis Biodiversity Center (formerly Rijksmuseum van Natuurlijke Historie, RMNH), Leiden, The Netherlands.

SYSTEMATIC PART

Infraorder CARIDEA Dana, 1852
Family ALPHEIDAE Rafinesque, 1815
Genus *Alpheus* Fabricius, 1798
Alpheus lobidens De Haan, 1849 [in De Haan, 1833-1850] sensu lato
(fig. 1)

Alpheus lobidens De Haan, 1849: 179; Anker & De Grave, 2016: 357; Emmerson, 2016: 264; Cunha et al., 2020: 337, figs. 1-4.

Alpheus crassimanus Heller, 1862: 526; Barnard, 1926: 121; 1950: 744 (key), 756, fig. 144; Fourmanoir, 1953: 91; Macnae & Kalk, 1958: 75, 80, fig. 19C; 1969: 80, 126; Day, 1974: 74, 89 (table).

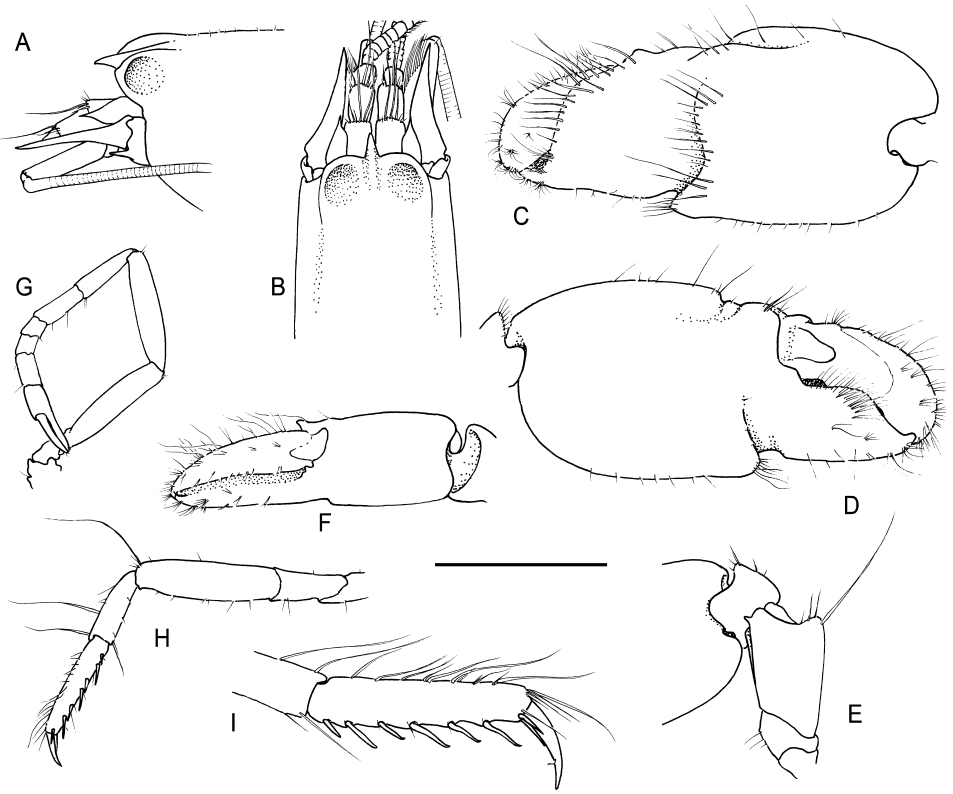

Fig. 1. *Alpheus lobidens* De Haan, 1849 (in De Haan, 1833-1850) sensu lato, ovigerous female, pocl. 4.7 mm (RMNH.CRUS.D.58893). A, Anterior carapace with appendages, lateral aspect; B, idem, dorsal aspect; C, right major first chela, lateral aspect; D, idem, mesial aspect; E, right first cheliped merus and carpus, mesial aspect; F, left minor first chela, mesial aspect; G, left second pereiopod, lateral aspect; H, left fourth pereiopod, lateral aspect; I, right fourth pereiopod, propodus and dactylus, lateral aspect. Scale A-H = 2 mm; I = 1 mm.

Alpheus lobidens polynesica Banner & Banner, 1975: 429, fig. 3A-H, J-L.

Material examined. — RMNH.CRUS.D.58893: 1 ovigerous female, pocl. 4.7 mm; 1 major cheliped, Maputo coast, new wooden pier, littoral, 15.x.1983, leg. J.H.C. Walenkamp, fcn X4131.

Remarks. — According to Anker (in Anker & De Grave, 2016) and Cunha et al. (2020) this species belongs to a complex of species within the Edwardsii group (see Banner & Banner, 1982). Cunha et al. (2020) redescribed the species as *Alpheus lobidens* De Haan, 1849 sensu stricto, from topotypic material from Japan. The present specimen suits the diagnosis provided by Cunha et al. (2020) for a suit of forms belonging to a complex of species gathered under the name *Alpheus lobidens* De Haan, 1849 sensu lato. Among the material they list are specimens collected from Madagascar and the Seychelles. Rostrum acute, triangular, reaching nearly to level of distal margin of 1st antennular segment, dorsal carina rather

sharp, not extending posteriorly beyond orbital hoods, anterior margin between rostrum and orbital hood unarmed, somewhat incised near rostral margin, adrostral furrows moderately deep (fig. 1A, B); 2nd antennular segment about twice as long as wide (fig. 1B); basal antennal segment (basicerite) armed with small ventrolateral tooth not nearly reaching level of tip of stylocerite (fig. 1A); antennal scale with lateral margin variably concave, distolateral spine stout, overreaching blade (fig. 1B); major chela somewhat compressed, about 2.5 times as long as wide, dactylus with well-developed plunger, palm with longitudinal groove but no carina near margin proximal to fixed finger, with "saddle" proximal to adhesive plaque, shoulder proximal thereto rounded, shoulder proximal to fixed finger well developed rounded (fig. 1C, D); major cheliped with subdistal tooth on inferior flexor margin of merus (fig. 1E); minor chela about 4 times as long as wide, dactyl subequal to palm in length (fig. 1F); 2nd pereopod with proximal carpal article 1.3 times as long as 2nd (fig. 1G); ambulatory pereopods with dactyl pointed, simple, propodus bearing about 6 spines on flexor margin, merus unarmed (fig. 1H, I).

Distribution. — The biogeographical range for the species complex as a whole is Indo-West Pacific, from the Red Sea and South Africa to Japan, Australia and Hawaii (Anker & De Grave, 2016; Cunha et al., 2020). Previous records from Mozambique are by: Barnard (1926, 1950), Fourmanoir (1953), Macnae & Kalk (1958, 1969), Day (1974), all as *Alpheus crassimanus*.

Family HIPPOLYTIDAE Spence Bate, 1888
Genus *Latreutes* Stimpson, 1860
Latreutes mucronatus (Stimpson, 1860)
(fig. 2)

Rhynchocyclus mucronatus Stimpson, 1860: 28.
Latreutes Gravieri Nobili, 1904: 231; 1906a: 39, pl. 3 figs. 5-5a; 1906b: 41.
Latreutes mucronatus var. *multidens* Nobili, 1906c: 394; 1906b: 41, pl. 2 fig. 3.
Latreutes natalensis Lenz & Strunck, 1914: 320, pl. 21 figs. 1-11.
Latreutes mucronatus — Balss, 1914: 47, fig. 27; 1921: 10; Kemp, 1914: 101, pl. 3 figs. 8-15, pl. 4 figs. 1, 2; 1916: 296; Urita, 1926: 427; Boone, 1935: 195, fig. 53; Yu, 1935: 50; Holthuis, 1947: 60; Barnard, 1950: 706, fig. 131a; Johnson, 1962: 48; Hayashi & Miyake, 1968: 16, figs. 3a-b, 4; Ledoyer, 1969: 365, pl. 6, figs. 1a-11a; Monod, 1973: 24-32; Ghani & Tirmizi, 1991: 320, figs. 1-5; De Grave, 2007: 147; Al-Kandari et al., 2020: 260, fig. 6.
Latreutes mucronatus ? — Gurney, 1937: 398, figs. 134-137 (larvae).
non *Latreutes mucronatus* — Doflein, 1902: 638, pl.5 fig. 6 (= *L. planirostris* (De Haan, 1844))

Material examined. — RMNH.CRUS.D.58894: 2 ovigerous females, pocl. 2.4 and 2.8 mm, Inhaca Island, Barreira Vermelha, between *Thalassodendron ciliatum* (Forssk.) Hartog, 25.ix.1984, leg. J.H.C. Walenkamp, fcn X4140.

Comparative material. — RMNH.CRUS.D.1515: 1 ovigerous female pocl. 3.1 mm, Makassar Strait, 4°24′5S 118°47′5E, among seaweeds, 2.viii.1929, Snellius Expedition. — RMNH.CRUS.D. 16439: 1 ovigerous female pocl. 3.0 mm, 21-29.iv.1959, Polana Beach, Lourenço Marques

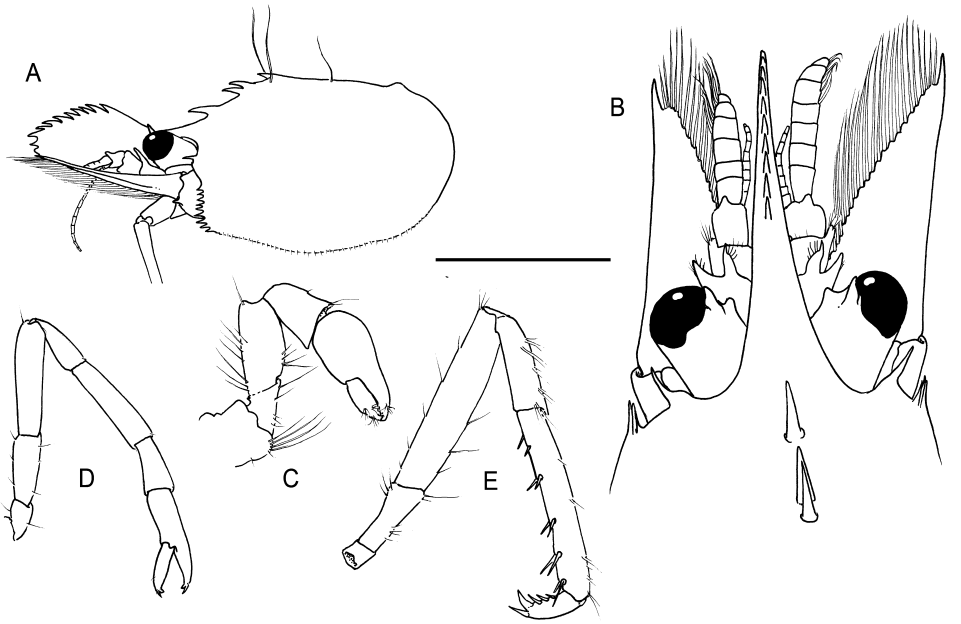

Fig. 2. *Latreutes mucronatus* (Stimpson, 1860), ovigerous female, pocl. 2.8 mm (RMNH.CRUS.D.58894). A, Carapace with anterior appendages, lateral aspect; B, anterior carapace with appendages, dorsal aspect; C, right first pereiopod, lateral aspect; D, right second pereiopod, lateral aspect; E, right third pereiopod, lateral aspect. Scale A = 2 mm; B-E = 1 mm.

(= Maputo), Portuguese East Africa (= Mozambique), leg. A.C. van Bruggen and W.H. van Bruggen.

Remarks. — The smaller specimen has three post-orbital teeth and the larger specimen four (fig. 2A), which is in accordance with specimens from Madagascar (Ledoyer, 1969), Pakistan (Ghani & Tirmizi, 1991), Persian Gulf (De Grave, 2007), Kuwait (Al-Kandari et al., 2020) and part of the material from South India (Kemp, 1914), contrasting to specimens from other populations in its geographical range including the holotype from Hong Kong with only one postorbital tooth. This led several authors (De Grave, 2007; Al-Kandari et al., 2020) to suggest that *L. mucronatus* might be a species complex. The rostra of the present specimens reach the distal margin of the scaphocerite, are orbicular with a strong keel, both with 10 dorsal and 2 ventral teeth; the carapace bears a strong slender antennal tooth (fig. 2A, B); the dorsal surface of the carapace bears several long simple setae (fig. 2A); the anterolateral margin of the carapace has eight acute teeth in both specimens; the eyestalks bear a distinct acute anterodorsal process on the border near the cornea and an anteromedian obtuse tubercle (fig. 2B); the basal segment of the antennular peduncle has a distinct acute anterodorsal process (fig. 2B); the stylocerite is rounded; the scaphocerite has the lateral margin slightly concave, the

mesial margin is slightly convex oblique with the distal margin very small (fig. 2B); the first pereiopod has the carpus slightly longer than broad (fig. 2C); the second pereiopod has the 3-jointed carpus with the middle segment about twice as long as the first and third segments (fig. 2D); the third pereiopod has the merus unarmed, the propodus with several single or paired spines on the flexor margin, the dactylus is stout with the unguis more slender than the distal accessory tooth, the flexor margin bears three spines increasing in size distally (fig. 2D).

The specimen described by Monod (1973) from New Caledonia somewhat resembles *Latreutes bicornis* (Kemp, 1925) in the dentition of the carapace and rostrum. The stylocerite is distally acute whereas this is rounded in specimens of *L. mucronatus* described by Kemp (1914, pl. 3 fig. 12) and Ledoyer (1969, fig. 7a) and the specimens at hand.

The long simple setae on the dorsal surface of the carapace have been noted in literature only for specimens with 3-4 postorbital teeth on the carapace (Ledoyer, 1969; Al-Kandari et al., 2020). This might be another indication that these specimens with 3-4 postorbital dorsal teeth belong to another species in the species complex. The specimens from Makassar Strait (RMNH.CRUS.D.1515) and Mozambique (RMNH.CRUS.D.16439) that were studied for comparison are similar to the holotype described by Dana (1852a, b) from Hong Kong in having only one postorbital dorsal tooth and are without the long simple setae on the dorsal surface of the carapace.

Biology. — There is a distinct sexual dimorphism in several characters including the dentition of the rostrum (see Kemp, 1914). In general, the males are slenderer than the females. Most records of the species are from shallow water areas with sea weeds. The species has been recorded once as an associate of a jellyfish (Hayashi & Miyake, 1968).

Distribution. — Indo-West Pacific, from the western and northern Indian Ocean: Red Sea (Nobili, 1906b), Kuwait (Al-Kandari et al., 2020), Arabian Gulf (De Grave, 2007), Djibouti, Gulf of Aden (Nobili, 1904, 1906a,b), Madagascar (Ledoyer, 1969), Durban, South Africa (Lenz & Strunk, 1914; Barnard, 1950), Pakistan (Ghani & Tirmizi, 1991), South India (Kemp, 1914), Andaman Islands (Kemp, 1916), Java, Indonesia (Nobili, 1906b), Makassar Strait and Aru Islands, Indonesia (Holthuis, 1947), Banka Island, Indonesia (Boone, 1935), Gulf of Thailand (Balss, 1914), Singapore (Johnson, 1962), Hong Kong (Stimpson, 1860), South Korea, Yellow Sea (Balss, 1914), Pehntaiho, Yellow Sea (Yu, 1935), Qingdao, Yellow Sea (Urita, 1926), Great Barrier Reef, Australia (Gurney, 1937), Cape Jauber, West Australia (Balss, 1921), Japan (Balss, 1914; Hayashi & Miyake, 1968).

Previously recorded from Mozambique by Barnard (1950).

Latreutes pymoeus Nobili, 1904
(fig. 3)

Latreutes pymoeus Nobili, 1904: 231; Chace, 1997: 69 (listed); De Grave, 1999: 21, figs. 2, 3; Penha-Lopez et al., 2007: 879-884.

Latreutes pygmaeus (erroneous spelling) — Nobili, 1906a: 37, pl. 3 fig. 4-4h; 1906b: 41; Kemp, 1914: 99, pl. 2 figs. 7, 8, pl. 3 figs. 1-7; 1916: 396; 1925: 330; Balss, 1921: 10; Barnard, 1947: 385; 1950: 707, fig. 131c; Johnson, 1962: 48; 1979: 45 (listed); Macnae & Kalk, 1958: 75, 80; Ledoyer, 1969: 70, pl. 6 figs. 1-12, pl. 16A; 1984: 17-20, fig. 5; McNeill, 1968: 20; Macnae & Kalk, 1969: 75; Zarenkov, 1971: 179; Wadley, 1978: 17, fig. 8f; Holthuis, 1978: 50; Kensley, 1981: 27 (listed); Hayashi, 1986: 21; 1994: 97, fig. 253f; Kalk, 1995: 80.

Material examined. — RMNH.CRUS.D.58895: 1 female, pocl. 2.3 mm, Inhaca Island, littoral in front of Barreira Vermelha, between the seagrass; 10.i.1986; leg. J.H.C. Walenkamp, fcn X4207. — RMNH.CRUS.D.58896: 1 male, pocl. 3.0 mm, 1 damaged specimen pocl. 3.4 mm, Inhaca Island, Barreira Vermelha, between *Thalassodendron ciliatum* (Forssk.) Hartog, 25.ix.1984, leg. J.H.C. Walenkamp, fcn X4140.

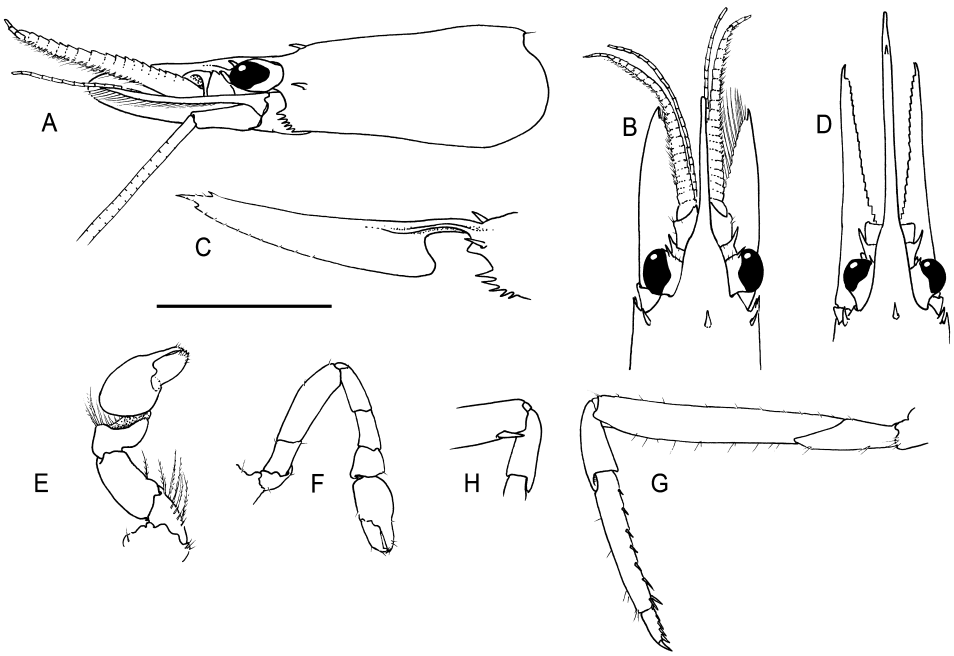

Fig. 3. *Latreutes pymoeus* Nobili, 1904, A, B, E, male, pocl. 3.0 mm, C, D, damaged specimen, pocl. 3.4 mm (RMNH.CRUS.D.58896). A, Carapace with anterior appendages, lateral aspect; B, D, anterior carapace with appendages, dorsal aspect; C, rostrum and anterior part carapace, lateral aspect; E, right first pereiopod, lateral aspect; F, right second pereiopod, lateral aspect; G, right third pereiopod, mesial aspect; H, idem, lateral aspect distal part merus and carpus. Scale A-D = 2 mm; E-G = 1 mm.

Comparative material. — RMNH.CRUS.D.42443 (as *L. pygmaeus*): many specimens, Surat Thani province, Ko Pha-Ngan, Gulf of Thailand, Thailand, 5.iv.1992, in seagrass bed, leg. Mrs. Somnuk Chaitiamvong, fcn 3.

Remarks. — As regards carapace armature, rostral morphology, anterior appendages, telson, and pereiopod characteristics (fig. 3A-G), the present specimens fall within the descriptions and variation noted by Nobili (1904, 1906a,b), Kemp (1914), Ledoyer (1969, 1984), and De Grave (1999). There is a great variation in the dentition of the rostrum. A rostrum without teeth and with the tip rounded (fig. 3A) was previously reported by Nobili (1906a, pl. 3 fig. 4), whilst a rostrum with few distal teeth and an acute tip (fig. 3C) seems to be rather common (Nobili, 1906a, fig. 4b-f; De Grave 1999, fig. 3).

Distribution. — Indo-West Pacific, from the Red Sea and East Africa to Australia, Japan, and Kiribati. Red Sea (Nobili, 1904, 1906a,b), Madagascar (Ledoyer, 1969), Delagoa Bay, South Africa (Barnard, 1947, 1950), Andaman Islands (Kemp, 1916), Nicobar Islands (Kemp, 1925), South India (Kemp, 1914), Singapore (Johnson, 1961, 1979), East Sumba, Indonesia (Holthuis, 1978), Japan (Hayashi, 1994), Hansa Bay, Papua New Guinea (De Grave, 1999), New Caledonia (Ledoyer, 1984), Tarawa Atoll, Gilbert Islands, Central Pacific (Hayashi, 1986), Low Isles, Great Barrier Reef, Australia (McNeill, 1968), Moreton Bay, Australia (Wadley, 1978), Cape Jaubert, West Australia (Balss, 1921).

Previous records from Mozambique are by Barnard (1950), Macnae & Kalk (1958, 1969), Kalk (1995) and Penha-Lopez et al. (2007).

Family PALAEMONIDAE Rafinesque, 1815
Genus *Cuapetes* Clark, 1919
Cuapetes cf. **ensifrons** (Dana, 1852)
(fig. 4)

Anchistia ensifrons Dana, 1852a: 25; 1852b: 580; 1855, pl. 38 fig. 1a-g; Müller, 1887: 471; Ortmann, 1894: 16.

Periclimenes (*Falciger*) *ensifrons* — Borradaile, 1917: 367, 370 (listed).

Periclimenes (*Ancylocaris*) *ensifrons* — Kemp, 1922: 209 (listed).

Periclimenes ensifrons — Borradaile, 1898: 382 (listed); Nobili, 1907: 359; Kemp, 1915: 282 (listed); Bruce, 1971: 5; 1976a: 145; 1976c: 476; 1984: 145 (listed); Devaney & Bruce, 1987; 230; Chace & Bruce, 1993: 111 (listed); Müller, 1993: 82 (listed); Li, 1997: 238; 2000: 180 (listed); 2001: 82; De Grave, 2000: 135.

Periclimenes (*Harpilius*) *ensifrons* — Holthuis, 1952: 11 (listed).

Kemponia ensifrons — Bruce, 2004: 9 (key), 15 (listed); Hayashi, 2005: 374 (key).

Cuapetes ensifrons — Okuno, 2009: 67 (listed); Poupin, 2010: 41; Poupin et al., 2013: 5, fig. 2B; Gan et al., 2015: 3; Fransen et al., 2022: 354.

non *Periclimenes ensifrons* — Nobili, 1899: 234. (= *C. seychellensis* (Borradaile, 1915), see Holthuis 1952: 67).

Material examined. — RMNH.CRUS.D.58897: 1 male, pocl. 2.8 mm, Inhaca Island, Barreira Vermelha, between *Thalassodendron ciliatum* (Forssk.) Hartog, 25.ix.1984, leg. J.H.C. Walenkamp, fcn X4140.

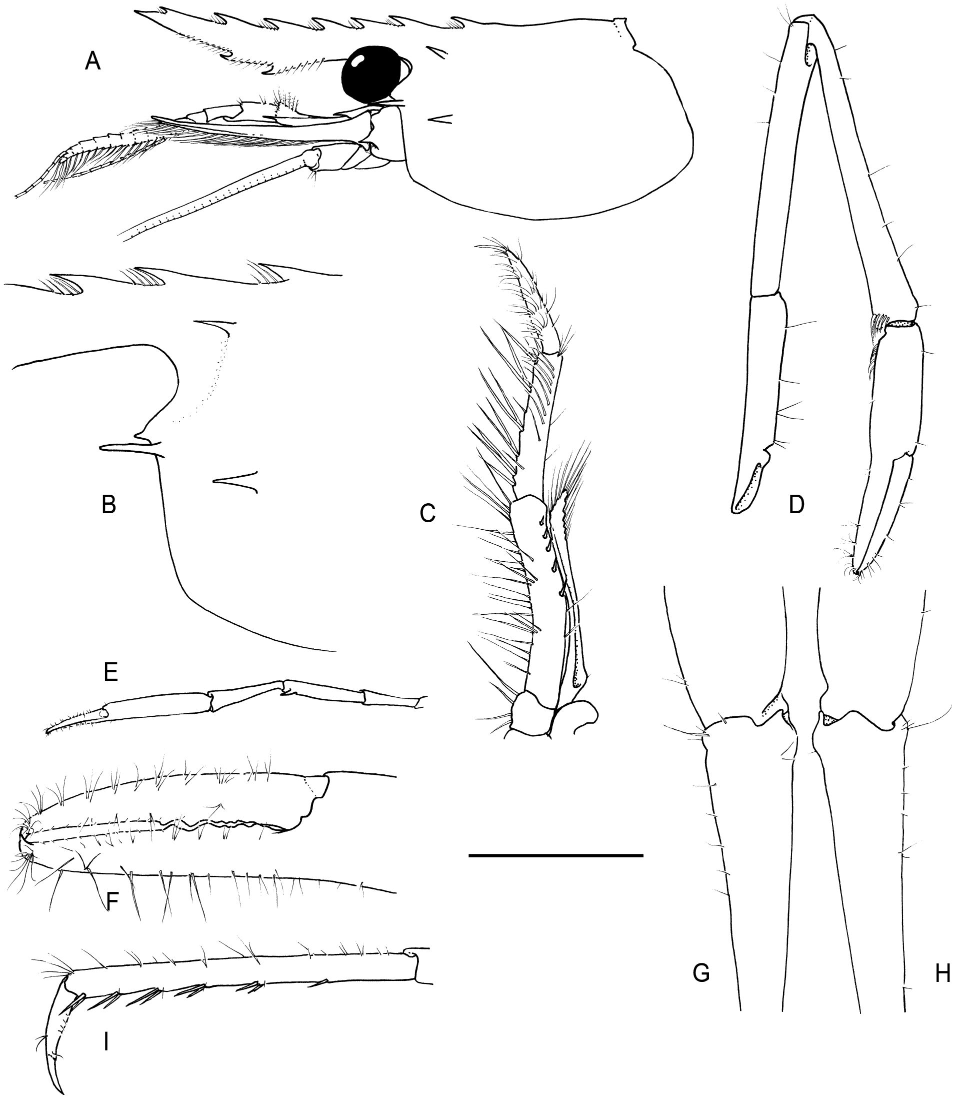

Fig. 4. *Cuapetes* cf. *ensifrons* (Dana, 1852), male, pocl. 2.8 mm (RMNH.CRUS.D.58897). A, Carapace with anterior appendages, lateral aspect; B, anterior part carapace; C, left third maxilliped; D, left first pereiopod; E, right second pereiopod, ventral aspect; F, idem, chela, mesial aspect; G, idem, carpal-propodal articulation, mesial view; H, idem, lateral view; I, left third pereiopod propodus and dactylus, lateral aspect. Scale A = 2 mm; E = 5 mm; B-D, F-I = 1 mm.

Comparative material of *C. longirostris* (Borradaile, 1915): RMNH.CRUS.D.15107: 4 specimens, Israel, Gulf of Aqaba, near Eilat, 7.vi.1956, leg. H. Steinitz. Seychelles. — RMNH.CRUS.D. 45485: pocl. 2.25 mm, NIOP-E, Sta. SEY.717, Bird Island, off E coast, 3°43′S 55°1′E, edge of bank, depth 10-12 m, scuba diving, leg. C.H.J.M. Fransen, 20.xii.1992. — RMNH.CRUS.D.45486: ovigerous female pocl. 1.69 mm, NIOP-E, Sta. SEY.720, E of Bird Island, 3°45′S 55°14′E, sediment

mainly *Halimeda*, depth 45 m, 1.2 m Agassiz trawl, 20.xii.1992. — RMNH.CRUS.D.45479: male pocl. 2.63 mm, NIOP-E, Sta. SEY.716, *N* of Aride Island, 4°11′S 55°40′E, calcareous nodules, depth 40 m, rectangular dredge, 19.xii.1992. — RMNH.CRUS.D.45480: ovigerous female, pocl. 2.50 mm, NIOP-E, Sta. SEY.713, S of Aride Island; 4°13′S 55°40′E, calcareous nodules, depth 35 m, rectangular dredge, 19.xii.1992. — RMNH.CRUS.D.45499: 2 males, pocl. 1.56 and 1.69 mm, NIOP-E, Sta. SEY.735, La Digue Island, S coast, 4°23′S 55°50′E, rocky shore, depth 10 m, scuba diving, on Alcyonaria, 23.xii.1992, leg. C.H.J.M. Fransen. — RMNH.CRUS.D.45487: ovigerous female, pocl. 2.25 mm, male, pocl. 1.94 mm, NIOP-E, Sta. SEY.780, Poivre Atoll, W rim, 5°46′S 53°18′E, reef slope, depth 10 m, scuba diving, under stones, l.i.1993.

Comparative material of *C. demani* (Kemp, 1915): RMNH.CRUS.D.45577: 2 ovigerous females pocl. 3.0 and 3.7 mm, 1 male pocl. 3.5 mm, Indonesia, Kakaban Island, E of Borneo, 2.06′N 118.33′E, central Lake, in *Halimeda opuntia* meadows, leg. et don. A. Tomascik & T. Tomascik. — RMNH.CRUS.D.51698: 2 ovigerous females, pocl. 3.5 and 3.6 mm, India, Madras State, Parangipettai, Vellar estuary near Portonouo, 11°29′N 179°46′E brackish water, cast net and screen net, 21.iv.1983, leg. A. Ramasamy.

Comparative material of *C. grandis* (Stimpson, 1860): RMNH.CRUS.D.51559: 2 ovigerous females, pocl. 2.7 and 2.9 mm, 1 male, pocl. 3.3 mm, Philippines, Sogod Beach, Sogod, Bacacay, Albay Province, S.E. Luzon, 24.v.1986, leg. D.S. Balete, fcn C.052. — RMNH.CRUS.D.51561: female with abdominal bopyroid, pocl. 3.8 mm, ovigerous female, pocl. 3.0 mm, male, pocl. 2.8 mm, Philippines, Pogbilao Grande, near Barrio Polo Tulay, Buhangin Islands Luzon, 4.i.1980, leg. A.C.J. Burgers.

Remarks. — The specimen generally fits the description by Dana (1852a,b, 1855) except for the number of ventral rostral teeth which is 3 in the type specimens and 2 in the present specimen. The diagnosis of *C. ensifrons* given by Chace and Bruce (1993) based on more reports on the species gives a broader range in rostral dentition: R = 1-2 + 5-6/2-3. In the present specimen, the rostrum just reaches beyond the scaphocerite, bears seven dorsal teeth of which one is postorbital and one at the level of the orbit, and two ventral teeth at some distance of the tip (fig. 4A); supraorbital, antennal and hepatic spines are present (fig. 4A, B); infraorbital angle produced, pointed (fig. 4B); third maxilliped with ultimate segment slightly shorter than penultimate segment, penultimate segment slightly shorter than antepenultimate segment, antepenultimate segment with 5 spines on distolateral margin, exopod slightly longer than antepenultimate segment (fig. 4C); first pereiopods with carpus slightly longer than merus, chela as long as carpus, fingers slightly longer than palm (fig. 4D); second pereiopods with meri armed with distoventral acute tooth (fig. 4E); carpus with distomedial angular protuberance but not developed in a prominent tooth (fig. 4G, H), fingers somewhat shorter than palm with teeth in the proximal half (fig. 4F); ambulatory pereiopods with propodi with row of ventral spines of which those in distal part in pairs (fig. 4I); unguis simple, slender, slightly curved (fig. 4I); fifth pair of pereiopods almost reaching distal margin of scaphocerite with their dactyli.

Two other species of *Cuapetes* known from Mozambique possessing a supraorbital spine are *C. demani* (Kemp, 1915) and *C. grandis* (Stimpson, 1860) (see Barnard, 1955, 1958). These species differ from the present specimens in having

a prominent distomedial tooth on the carpus of the second pereiopods. Bruce (2004) questions the validity of *C. ensifrons* based on the variation in the armature of the second pereiopod carpus in *C. grandis***.** The presence of an acute distal tooth defines *C. grandis* (Stimpson 1860) whereas the absence of such tooth is characteristic for *C. ensifrons*. In material from Queensland Australia, Bruce (2004) observed both forms.

The Inhaca specimen is also similar to *C. longirostris* (Borradaile, 1915) which also occurs in the area (Fransen, 1994). This species also has a supra-orbital tooth as well as the distoventral tooth on the merus of the second pereiopods, but is without a distomedial tooth on the carpus of the second pereiopods. It differs from *C. ensifrons* in the first pereiopod having a relatively shorter chela which is 0.6-0.7 of the carpus length and the carpus distinctly longer than the merus (see Borradaile, 1917, plate 54, fig. 11a, as *Periclimenes* (*Falciger*) *affinis*; Kemp, 1922, fig. 53a, as *P.* (*Ancylocaris*) *proximus*; and Holthuis, 1958, fig. 1b). In *Cuapetes ensifrons* the chela of the first pereiopod is almost as long as the carpus and the carpus is only slightly longer than the merus (see Dana, 1955, plate 38, fig. 1). The material of *C. longirostris* from the Seychelles and Eilat used for comparison here has slightly more slender pereiopods and shows the shorter chelae of the first pereiopods in comparison to the carpus than in the present material. The third maxilliped in the specimens studied from the Seychelles and Eilat have a row of 4-5 spines in the distal half of the penultimate segment similar to the specimen from Inhaca.

As the type material of *C. ensifrons* is no longer extant (Bruce, 2004), it will remain unclear what its taxonomic status is in relation to similar species like *C. grandis* and *C. longirostris*. As some differences with comparative material of the latter two species have been observed that agree with the diagnosis of *C. ensifrons*, the present specimen is here indicated as *C.* cf. *ensifrons*.

Distribution. — Réunion, Clipperton, Wallis & Futuna (Poupin, 2010), Europa Island (Poupin et al., 2013), Comoro Islands and Aldabra (Bruce, 1971, 1976a), Zanzibar (Bruce, 1976c), Dar es Salaam, Tanzania (Ortmann, 1894), Trincomalee, Sri Lanka (Müller, 1887), South China Sea (Li, 1997, 2001; Gan et al., 2015), Palawan, Philippines (Dana, 1852a,b, 1855), Papua New Guinea (De Grave, 2000), Japan (Hayashi, 2005), Enewetak (Devaney & Bruce, 1987), Amanu and Fakahina lagoons, Polynesia (Nobili, 1907). Due to the problematic status of the species, some of these records might be doubtful. Not previously recorded from Mozambique.

Cuapetes seychellensis (Borradaile, 1915)
(fig. 5)

Periclimenes ensifrons — Nobili, 1899: 234 (see Holthuis, 1952: 67).

Periclimenes tenuipes — Nobili, 1899: 235 (in part, female of 12 mm) (see Holthuis, 1952: 67).

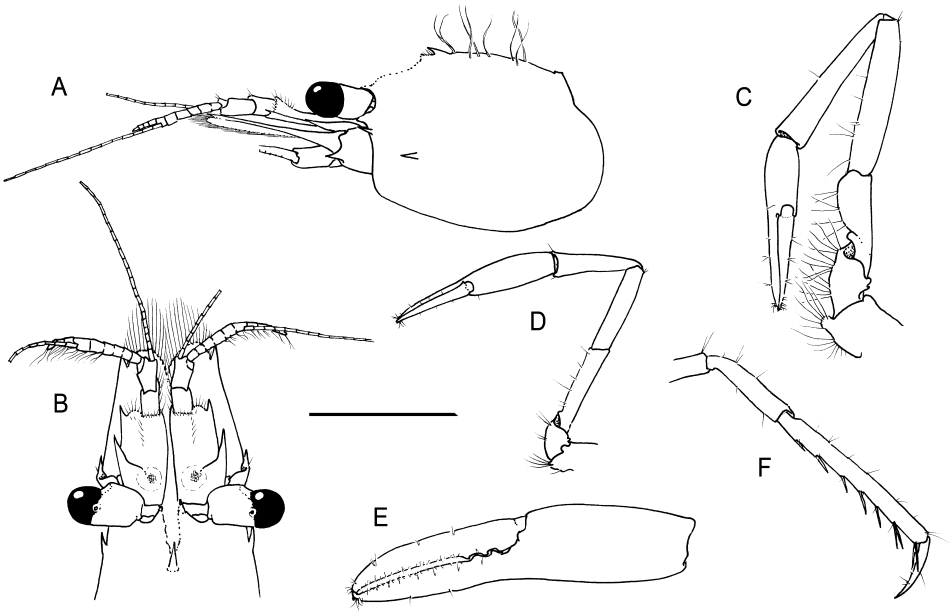

Fig. 5. *Cuapetes seychellensis* (Borradaile, 1915), ovigerous female (damaged, rostrum broken), pocl. 2.3 mm (RMNH.CRUS.D.58898). A, Carapace with anterior appendages, lateral aspect; B, anterior carapace with appendages, dorsal aspect; C, left first pereiopod, ventral aspect; D, left second pereiopod, ventral aspect; E, idem, chela, mesial aspect; F, left third pereiopod, mesial aspect. Scale A, B, D, F = 2 mm; C, E = 1 mm.

Periclimenes (*Falciger*) *seychellensis* Borradaile, 1915: 212; 1917: 375, pls. 54-55, fig. 14.
Periclimenes (*Ancylocaris*) *seychellensis* — Kemp, 1922: 176-178, figs 34-35, pl. 6, fig. 7.
Periclimenes (*Harpilius*) *seychellensis* — Holthuis, 1952: 66, fig. 13; Barnard, 1958: 17, fig. 5; Johnson, 1962: 58; 1968: xxi; 1979: 33; Ledoyer, 1968: 68-69, pl. 3, figs. 1B-10B, pl. 15C; 1969: 302, pl. 3, figs. 1B-10B, pl. 15C; 1970: 123, pls. 3, 15C; 1984: 33, fig. 14; Chace & Bruce, 1993: 121 (listed).
Periclimenes seychellensis — Bruce, 1971: 8; 1974: 192; 1976a: 146 (listed); 1976b: 11; 1976c: 480; 1978: 287 (listed); 1979: 228; 1981: 19; 1984: 146 (listed); 1990: 17, tab. 1, 19, tab. 2 (listed); 1991: 238, fig. 8; Holthuis, 1978: 49; Kensley, 1981: 25 (listed); Devaney & Bruce, 1987: 231; Li, 2001: 83; Jayachandran, 2001: 314-316, fig. 92 (listed).
Kemponia seychellensis — Bruce, 2004: 19 (listed).
Cuapetes seychellensis — Anker & De Grave, 2016: 412, fig. 83; Marin & Sinelnikov, 2016: 562, figs. 1b, 4-6.

Material examined. — RMNH.CRUS.D.58898: 1 ovigerous female (damaged, rostrum broken), pocl. 2.3 mm, Inhaca Island, Barreira Vermelha, between *Thalassodendron ciliatum* (Forssk.) Hartog, 25.ix.1984, leg. J.H.C. Walenkamp, fcn X4140.

Comparative material. — RMNH.CRUS.D.42515: 2 ovigerous females, pocl. 2.1 and 2.4 mm, Thailand, Surat Thani province, Ko Pha-Ngan, 15.viii.1992, in sea-grass bed, leg. Mrs. Somnuk Chaitiambong, fcn 13. — RMNH.CRUS.D.51572: 2 ovigerous females, pocl. 1.9 mm, Bir Swer, north of Ras el Burga, north Sinai coast of Gulf of Akaba, 6.xi.1976, leg. L. Fishelson. — RMNH.CRUS.D.51569: many specimens, Ilot Maître, Nouvelle Calédonie, 19.iii.1979, leg. M. Ledoyer, fcn N. Cal.7. — RMNH.CRUS.D.51571: many specimens, Sorgoritello near Tuléar, Madagascar, 19.ix.1962, leg. M. Ledoyer, fcn Tul.25.

Remarks. — Although the present specimen is lacking the rostrum, it fits the rather brief type description of the species by Borradaile (1915). The carapace bears an antennal and hepatic tooth and several long simple setae dorsally (fig. 5A); the eyestalks have an anterior obtuse tubercle (fig. 5B); the scaphocerite overreaches the antennular peduncle and has the distal margin of the lamina rather broad and the distolateral tooth reaching the distal margin of the lamina (fig. 5A, B); the first pereiopods are slender with merus, carpus and chela of equal length, fingers slightly longer than palm (fig. 5C); the second pereiopods are of equal length, slender, with carpus and merus of equal length, fingers slightly longer than palm, few teeth proximally on cutting edges (fig. 5D, E); ambulatory pereiopods with spines on ventral margin of propodus, dactylus simple slightly curved (fig. 5F).

Borradaile (1915, 1917) did not mention the tubercle on the eyestalk nor the long simple setae on the carapace. In his rather small specimen the distolateral tooth of the scaphocerite was overreaching the distal lamina and only the distal spines of the propodi of the ambulatory pereiopods were mentioned.

The description of specimens studied by Kemp (1922) from India and the Andamans is more extensive. The present specimen fits this description in all aspects although Kemp (1922) also did not mention the long simple setae on the dorsal surface of the carapace.

Marin & Sinelnikov (2016) redescribed the species based on specimens from Vietnam. The present specimen from Mozambique fits this description, including the presence of the long simple setae on the dorsal surface of the carapace.

The comparative material studied from Thailand and New Caledonia is similar to the specimen from Mozambique. The material from Madagascar differs in the absence of the long simple setae on the dorsal surface of the carapace and the rostra seem to be more straight than in the other material.

Distribution. — Distributed throughout the Indo-West Pacific: Seychelles (Borradaile, 1915; Bruce, 1971, 1984), Farquhar (Bruce, 1974), Gulf of Suez, Red Sea (Kemp, 1922), Zanzibar (Bruce, 1976c), Tanganyika (Bruce, 1976c), Kenya (Bruce, 1976b,c), Tulear and Nosy Bé, Madagascar (Ledoyer, 1968, 1969, 1970; Marin & Sinelnikov, 2016), Gulf of Manaar, Sri Lanka (Kemp, 1922), Port Blair, Andaman Islands (Kemp, 1922), Makassar Strait, Banda Sea, south of Ambon, Sulu Sea, and Kera near Timor (Holthuis, 1952), Melolo, East Sumba (Holthuis, 1978), Singapore (Johnson, 1962, 1979; Bruce, 1979; Anker & De Grave, 2016), Vietnam (Marin & Sinelnikov, 2016), South China Sea (Li, 2001), Papua New Guinea (Nobili, 1899), Heron Island, Australia (Bruce, 1981), Enewetak (Devaney & Bruce, 1987), New Caledonia (Ledoyer, 1984; Bruce, 1991).

Previous record from Mozambique by Barnard (1958).

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