

Gabon: W of Cap Santa Clara, Libreville, 45–47 m (Rossignol, 1962).

Genus *Glyptoxanthus* A. Milne Edwards, 1879

Glyptoxanthus A. Milne Edwards, 1879, in 1873–1881:253 [type-species: *Actaea erosa* Stimpson, 1859, by selection by Rathbun, 1930:263; gender: masculine].—Guinot, 1971:1072 [list of species].

* *Glyptoxanthus angolensis* (De Brito Capello, 1866)

Actaea angolensis.—Capart, 1951:157, fig. 59.—Longhurst, 1958:88.—Gauld, 1960:70.—Rossignol, 1962:117.

Actaea (Glyptoxanthus) angolensis.—Monod, 1956:296, fig. 361.—Serène, 1961:198 [listed].

Glyptoxanthus angolensis.—Forest and Guinot, 1966:77, fig. 6a, b.—Guinot, 1971:1073 [listed].

Glyptoxanthus angolensis.—Guinot, 1967d:556 [listed; erroneous spelling].

MATERIAL EXAMINED.—*Pillsbury Material*: Annobon: Sta 282, 18–37 m, nodular coralline algae, 1♂, 1♀ (L, W).

Other Material: Annobon: S coast, 01°28.5'S, 05°37.5'E, 35–55 m, 16 Jun 1967, F. Poinard, 1♂ (W).

DESCRIPTION.—Capart, 1951:158.

Figures: Capart, 1951, fig. 59; Monod, 1956, fig. 361; Forest and Guinot, 1966, fig. 6a,b.

Male Pleopod: Forest and Guinot, 1966, fig. 6a,b (Annobon).

Color: “Rouge orangé avec des taches plus claires” (Capart, 1951:158).

MEASUREMENTS.—Our specimens have carapace widths of 12, 17 and 25 mm.

BIOLOGY.—*Glyptoxanthus angolensis* is a shallow shelf species, occurring sublittorally in depths between 4–5 m and 40 m, with one record of 35–55 m. Like the West African species of *Paractaea*, habitats on rough bottom are preferred. The *Pillsbury* specimens were collected in nodular calcareous algae off Annobon, and the material collected by the *Calypso* (Forest and Guinot, 1966) was found on the following types of bottom: calcareous algae, 4–5 m; calcareous algae, sand and coral, 7–10 m; rocks and calcareous algae, 20 m; and rocks and coral, 15–40 m. Longhurst (1958) found the species on shelly sand in 25 m off Sierra Leone.

Ovigerous females have been recorded in January and June (Monod, 1956; Forest and Guinot, 1966).

DISTRIBUTION.—West African coast, from scattered localities between Senegal and Angola, including Annobon and São Tomé islands in the Gulf of Guinea; sublittoral, from 4–5 m to 40 m (also 35–55m). Monod (1956) summarized earlier records and reported material from Senegal, Sierra Leone, Congo (Congo Français), and Annobon; records in the literature since 1956 include the following:

Sierra Leone: No specific locality, in 25 m (Longhurst, 1958).

Ghana: Off Accra, sublittorally; Tenkpobo (as Tenpobo), intertidal (Gauld, 1960).

São Tomé: Off Ponta Diogo Nunes, 4–5 m (Forest and Guinot, 1966).

Annobon: 02°24'04"S, 05°36'45"E, 7–10 m; 01°25'12"S, 05°36'05"E, 20 m; and Isla Tortuga, NW coast, 15–40 m (Forest and Guinot, 1966).

Congo: Pointe Indienne (Rossignol, 1962).

Angola: No specific locality (Forest and Guinot, 1966).

Glyptoxanthus cavernosus (A. Milne Edwards, 1878)

Xantho vermiculatus.—Osorio, 1906:149 [Cape Verde Islands; see Forest and Guinot, 1966:79] [not *Cancer vermiculatus* Lamarck, 1818].

Actaea (Glyptoxanthus) cavernosa.—Monod, 1956:298, fig. 362 [Cape Verde Islands; references].—Serène, 1961:198 [listed].

Glyptoxanthus cavernosa.—Forest and Guinot, 1966:79 [Cape Verde Islands].

Glyptoxanthus cavernosus.—Guinot, 1967d:551, 553 [discussion], 556 [listed], fig. 31 [Cape Verde Islands]; 1971:1073 [listed].

DISTRIBUTION.—Known only from the Cape Verde Islands.

Glyptoxanthus corrosus (A. Milne Edwards, 1869)

Actaea (Glyptoxanthus) corrosa.—Monod, 1956:298 [Cape Verde Islands; references].

Glyptoxanthus corrosus.—Guinot, 1967d:556 [listed], fig. 21 [Cape Verde Islands]; 1971:1073 [listed].

DISTRIBUTION.—Cape Verde Islands.

Genus *Heteropanope* Stimpson, 1858

Heteropanope Stimpson, 1858a:33 [type-species: *Heteropanope glabra* Stimpson, 1858, by subsequent selection by Balss, 1933b:32; gender: feminine; name 1627 on *Official List*].

Heteropanope acanthocarpus Crosnier, 1967

Heteropanope acanthocarpus Crosnier, 1967:325, figs. 3, 4, 7-10, 28 [Dahomey]; 1971:570 [Congo].

DISTRIBUTION.—West Africa, from Dahomey (06°10'N, 02°27'E), 55 m, and off Pointe-Noire, Congo, 20 m.

Heteropanope tuberculidens Monod, 1956

Heteropanope tuberculidens Monod, 1956:265, figs. 309-313.—Gauld, 1960:70.—Crosnier, 1967:325, figs. 1, 2, 6, 27.—Uschakov, 1970:444, 455 [listed].

Heteropanope tubulicidens.—Longhurst, 1958:88 [erroneous spelling].

MATERIAL EXAMINED.—*Pillsbury Material*: None.

Other Material: Togo: 06°11'N, 01°28'30"E, 14-17 m, sand with gorgonians, mud, 17 Oct 1963, A. Crosnier, 1♂, 2♀ (W).

Congo: Pointe-Noire, 5-10 m, lobster net, 27 Jan 1967, J. Marteau, 1♂, 2♀, 1 juv (W).

DESCRIPTION.—Monod, 1956:265.

Figures: Monod, 1956, figs. 309-313; Crosnier, 1967, figs. 1, 2, 6, 27.

Male Pleopod: Monod, 1956, figs. 312, 313 (Ghana); Crosnier, 1967, fig. 27 (Guinea-Bissau).

Color: "Plus ou moins brun rouge, traces d'annelures aux pattes" (Monod, 1956:268).

MEASUREMENTS.—Our specimens have carapace widths of 2.6 to 5.2 mm.

REMARKS.—Our specimens agree well with accounts of this species, except that in our smaller specimens from the Congo the outer face of the chela is relatively smooth, and in one of the females from the same locality the tubercles on the palm are aligned in rows.

BIOLOGY.—*Heteropanope tuberculidens* is a sublittoral species living in relatively shallow water. Depth records for the species range from 0-2.5 m off Guinea (Uschakov, 1970) to 72 m off Sierra Leone (Longhurst, 1958); the latter is the only record for the species in depths below 25-30 m,

and the majority of depth records are from less than 20 m; records include: 0-2.5, 8-16, 10-12, 14-17, 15 (2X), 25-30, and 72 m. The species apparently prefers rough bottom; it has been recorded from bottom with coral; gravel, sand and shell; muddy sand with gorgonians; sand, rock or mud, and gorgonians; and shelly mud.

Ovigerous females have been collected in March, April, and June (Monod, 1956; Crosnier, 1967).

DISTRIBUTION.—Off West Africa, from a few localities between Guinea-Bissau and the Congo, in depths to 72 m, generally in less than 20 m. Records in the literature include the following:

Guinea-Bissau: Channel between Ilha de Rubane (as Rouban) and Ilha de Bubaque, Bissagos Islands, 25-30 m, and channel near Ilha de Sogá, Arquipélago dos Bijagós (as Bissagos Islands), 8-16 m (Monod, 1956; Crosnier, 1967).

Guinea: Conakry, 0-2.5 m (Uschakov, 1970). Between Île Tamara and Île de Corail, 10-12 m (Monod, 1956).

Sierra Leone: No specific locality, in 72 m (Longhurst, 1958).

Ghana: Off Accra, 15 m (Gauld, 1960). 2 mi [3 km] off Densu, near Accra, 15 m (type-locality) (Monod, 1956).

Togo: 06°11'N, 01°28'30"E, 14-17 m (Crosnier, 1967).

Congo: Off Pointe-Noire (Crosnier, 1967).

Genus *Leopoldius* Serène, 1971

Leopoldius Serène, 1971:908 [an invalid junior homonym of *Leopoldius* Rondani, 1843 (Insecta); type-species: *Parapilumnus leopoldi* Gordon, 1934, by original designation; gender: masculine].

REMARKS.—R. Serène has informed us (in litt.) that he will propose a replacement name for this genus.

**Leopoldius pisifer* (MacLeay, 1838), new combination

Parapilumnus pisifer.—Capart, 1951:146, fig. 53, pl. 3: fig. 18.—Sourie, 1954b:150.—Monod, 1956:254, figs. 298-301.—Longhurst, 1958:88.—Gauld, 1960:70.—Rossignol, 1962:117.—Guinot and Ribeiro, 1962:52.—Forest and Guinot, 1966:71.—Crosnier, 1969:535.—Uschakov, 1970:439, 455 [listed].—Takeda, 1974:216 [discussion].

Synonym.—*Pilumnus verrucosipes* Stimpson, 1858.

MATERIAL EXAMINED.—*Pillsbury Material*: Ivory Coast: Sta 46, 38–42 m, mud with dense *Jullienella*, 6♂, 5♀ (4 ov) (W). Sta 47, 37 m, bottom with *Jullienella*, 2♂, 2♀ (1 ov) (L).

Nigeria: Sta 248, 33 m, 1♂, 1♀ (L, W). Sta 253, 33–40 m, mud, 1♂ (L).

Other Material: Senegal: Les Almadies, Dakar, 0–0.5 m, under stones, 9 Jun 1964, F. M. Bayer, R. B. Manning, and L. B. Holthuis, 1♂, 1♀ (L). Gorée, lobster net, 15 Sep 1950, M. Paraiso, 27♂, 26♀ (12 ov) (W). Same locality, 6 Oct 1950, M. Keita, 2♂, 1♀ ov (W).

Congo: Pointe-Noire, rocks with gorgonians, 25 Jan 1967, A. Crosnier, 4♂ (W).

DESCRIPTION.—Capart, 1951:146.

Figures: Capart, 1951, fig. 53, pl. 3: fig. 18; Monod, 1956, figs. 298–301.

Male Pleopod: Capart, 1951, pl. 3: fig. 18 (Senegal); Monod, 1956, figs. 300, 301 (Senegal).

MEASUREMENTS.—Our specimens have carapace widths of 3 to 10 mm; the carapace widths of ovigerous females are 6 to 9 mm.

REMARKS.—As suggested by Takeda (1974:216), this species appears to belong to *Leopoldius* Serène, 1971, rather than to *Parapilumnus* Kossmann, 1877. In *L. pisifer* the carapace is covered with a thick coat, arranged more or less symmetrically, the lobes of the front are sinuous rather than truncated, the three posterior anterolateral teeth of the carapace are broad, not spiniform, and their borders are granulated, the greatest width of the carapace is at the level of the posteriormost tooth, the pereopods are short and irregularly carinate, and the lateral palatal ridges are completely absent.

This is the only species of *Leopoldius* to occur in the Atlantic; the remainder of the species are from the Indo-West Pacific region.

BIOLOGY.—Like *Nanopilumnus boletifer* (p. 145), *Leopoldius pisifer* is a shallow shelf species, living from the intertidal zone to a depth of 50 m; the majority of records in the literature are from depths of 30 m or less. It can utilize a wide range of substrates. Sourie (1954b) found it on shelly sand in the Baie de Dakar and Longhurst (1958) reported it from muddy sand in 22 m off Dakar. Uschakov (1970) reported it from hard sand bottom in depths greater than 20 m in clear water.

It was reported from rocks ornamented with gorgonians in 10 m off Pointe-Noire, and was taken by the *Calypso* on mud and shells in 18 m, on mud in 18–30 m and 50 m, on muddy sand with Foraminifera in 21–27 m, and on mud with *Arca* in 32 m (Forest and Guinot, 1966). The *Pillsbury* specimens were taken on mud or mud with *Jullienella*.

Ovigerous females have been recorded from all months (Monod, 1956; Forest and Guinot, 1966).

DISTRIBUTION.—West Africa, from Mauritania southward to Gabon, including Ilha do Principe in the Gulf of Guinea; and southern Africa, from South Africa and Mozambique (Barnard, 1954); intertidal zone to a depth of 50 m. Monod (1956) summarized earlier records and reported material from Mauritania, Senegal, Gambia, Guinea, Guinea-Bissau, Sierra Leone, Ghana, Gabon, and Principe. In addition the species has been reported from the following localities:

Senegal: Baie de Dakar (Sourie, 1954b). Dakar, 22 m (Longhurst, 1958).

Guinea: No specific locality, in depths greater than 20 m (Uschakov, 1970). 09°40'N, 14°05'W, 18 m, and 09°36'N, 13°57'W, 18–30 m (Forest and Guinot, 1966).

Ivory Coast: 05°02.5'N, 05°25'W, 21–27 m (Forest and Guinot, 1966).

Ghana: Tenkpobo (as Tenpobo), Christiansborg, Apam, Winneba and Axim, rarely sublittoral to 37 m (Gauld, 1960). 04°40'N, 02°08'W to 04°39'N, 02°05'W, 50 m (Forest and Guinot, 1966).

Nigeria: Off the mouths of the Niger River, 04°03'N, 06°12'E, 32 m (Forest and Guinot, 1966).

Gabon: W of Libreville, 20–40 m (Rossignol, 1962).

Congo: Baie de Pointe-Noire, 6–8 m (Rossignol, 1962). Pointe-Noire, 10 m (Crosnier, 1969).

Angola: Baía da Caota, Benguela, 13 m and 30 m (Guinot and Ribeiro, 1962).

Genus *Menippe* de Haan, 1833

Menippe de Haan, 1833:21 [type-species: *Cancer rumphii* Fabricius, 1798, by subsequent designation by Glaessner, 1929:253; gender: feminine].—Guinot, 1971:1076 [list of species].

Menippe nodifrons Stimpson, 1859

Menippe nodifrons.—Frade, 1950:11, 26 [Congo].—Capart, 1951:138, fig. 49 [Guinea].—Monod, 1956:222, figs. 244–

248 [Senegal, Guinea, Sierra Leone, Ghana, Rio Muni; references].—Longhurst, 1957:374 [Sierra Leone].—Rossignol, 1957:82 [Congo].—Buchanan, 1958:20 [Ghana].—Longhurst, 1958:88 [Sierra Leone].—Gauld and Buchanan, 1959:127 [Ghana].—Gauld, 1960:70 [Ghana].—Rossignol, 1962:116 [Congo].—Guinot and Ribeiro, 1962:50 [Angola].—Monod, 1967:180, pl. 17: fig. 3 [no material].—Le Loeuff and Intès, 1968, table 2 [Ivory Coast].—Guinot, 1968b:156 [discussion].—Uschakov, 1970:445, 446, 447, 455 [listed; Guinea].—Guinot, 1971:1076 [listed].

Menippe nanus.—Capart, 1951:140 [discussion].

Menippe.—Gauld and Buchanan, 1959:128 [Ghana].

SYNONYMS.—*Menippe rudis* A. Milne Edwards, 1879; *Menippe nanus* A. Milne Edwards and Bouvier, 1898.

DISTRIBUTION.—Eastern Atlantic from the Cape Verde Islands and Senegal to Angola; western Atlantic from Florida to Brazil (Rathbun, 1930); littoral and sublittoral, from shore to about 20 m.

Genus *Microcassiope* Guinot, 1967

Microcassiope Guinot, 1967c:358 [type-species: *Xanthodes rufopunctatus* A. Milne Edwards, 1869, by original designation; gender: feminine]; 1971:1076 [list of species].

* *Microcassiope minor* (Dana, 1852)

FIGURE 30

Xantho minor Dana, 1852b:169; atlas, 1855, pl. 8: fig. 7.—Miers, 1881a:214; 1886:124 [listed].

Pilumnus granulimanus Stimpson, 1871a:143 [Cuba].

Micropanope granulimanus.—Rathbun, 1930:439, pl. 180: figs. 1, 2 [western Atlantic records].

Micropanope granosa.—Chapman and Santler, 1955:374.

Micropanope rufopunctata.—Monod, 1956:313, figs. 386–392.—Gauld, 1960:70.—Guinot and Ribeiro, 1962:59.—Monod, 1963, fig. 34 [no material].—Ribeiro, 1964:10.—Forest and Guinot, 1966:81.—Chace, 1966:639, fig. 8.—Guinot, 1967c:348 [discussion], 358 [listed].—Le Loeuff and Intès, 1968, table 1.—Türkay, 1976b:61 [listed], 69.

Microcassiope rufopunctata.—Guinot, 1967c, figs. 10, 15; 1971:1076 [listed].

Xanthodes rufopunctata.—Guinot, 1967c:359 [listed].

Xanthodes rufopunctatus.—Garth, 1968:314 [discussion].

Microcassiope granulimanus.—Guinot, 1971:1076 [listed; considered to be distinct from *M. rufopunctata*].

SYNONYMS.—*Xanthodes rufopunctatus* A. Milne Edwards, 1869; *Xanthodes granosus* A. Milne Edwards and Bouvier, 1898.

MATERIAL EXAMINED.—*Pillsbury Material*: Annobon: Sta 282, 18–37 m, nodular coralline algae, 3♂, 5♀, 2 juv (L, W).

Other Material: Madeira: Ponta de São Lourenço, 32°44'N, 16°44'W, littoral, rocky shore with tide pools, 29 Feb 1976, *Onversaagd* Sta 16, 1♀ (L). SE coast, near Canical, 32°44'N, 16°44'W, 0–22 m, shore collecting, snorkeling, diving, 11 Mar 1976, *Onversaagd* Sta 48, 1♂ (L).

Cape Verde Islands: Porto da Praia (as La Praya), São Tiago, 10–30 m, Jun–Jul 1883, *Talisman*, syntype of *Xanthodes granosus* A. Milne Edwards and Bouvier, 1898, 1♂, 1♀ (L, W).

Annobon: S coast, 01°28.5'S, 05°37.5'E, 35–55 m, 16 Jun 1967, F. Poinsard, 1♀ (W).

DESCRIPTION.—A. Milne Edwards and Bouvier, 1900:87.

Figures: Monod, 1956, figs. 386–392.

Male Pleopod: Monod, 1956, figs. 387–392 (Azores, Cape Verde Islands); Chace, 1966, fig. 8 (St. Helena, Curaçao, Cape Verde Islands); Guinot, 1967c, fig. 15 (Cape Verde Islands).

MEASUREMENTS.—Our specimens have carapace widths of 2.5 to 9.1 m.

REMARKS.—In his account of the Crustacea of the U.S. Exploring Expedition, Dana (1852b:169) described a small xanthid crab that had been collected at Madeira or the Cape Verde Islands, *Xantho minor*. His account is based on an ovigerous female 2.1 lines long, 3.1 lines wide (approximately 4.5 × 6.6 mm):

Near *X. parvulus* [= *Eurypanopeus blanchardi*]. Carapax anteriorly areolate, areolets slightly raised, 2M, 3M, 5L, 6L circumscribed behind; antero-lateral margin thin, four-toothed, three posterior teeth subtriangular. Anterior feet of moderate size, subequal, carpus and hand above slightly granulous, hand exteriorly faint granulo-costate, and above sulcate, moveable finger not armed with a large basal tooth. Eight posterior feet sparsely pubescent.

Two small species of xanthids, both formerly placed in *Micropanope*, are now known to live in the Cape Verde Islands and one or more of the more northern islands or island groups, Madeira, the Azores, and the Canary Islands: *Microcassiope rufopunctata* (A. Milne Edwards, 1869) and *Nanocassiope melanodactyla* A. Milne Edwards, 1867). Earlier authors have identified *Xantho minor* with

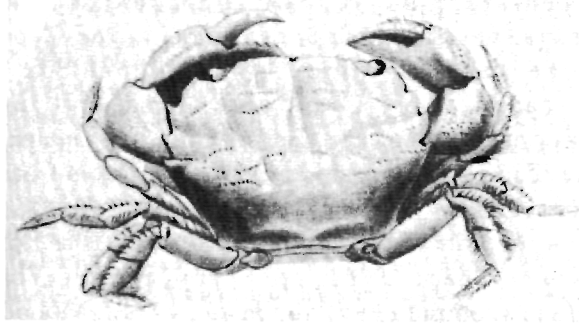


FIGURE 30.—*Microcassiope minor* (Dana) (from Dana, 1852b, pl. 8: fig.7).

one or the other of these species without adopting the specific epithet *minor*. A third small species of xanthid, also at one time placed in *Micropanope*, *Coralliope parvula* (A. Milne Edwards, 1869), also occurs in the Cape Verde Islands; that species, as noted above, has but three anterolateral teeth whereas *X. minor* was described as having four, and has an additional inner spine on the carpus of the chela; the spine is absent in *X. minor*.

Miers (1886:124) listed *Xantho minor* with other species now assigned to *Xantho* sensu stricto, and retained both *melanodactyla* and *rufopunctata* in *Xanthodes*, the genus to which they were assigned in Milne Edwards' original accounts.

A. Milne Edwards and Bouvier (1898:190), in their description of *Xanthodes talismani* [= *Coralliope parvula*], pointed out similarities between that species and *Xantho minor*:

Cette espèce se rapproche beaucoup du *Xantho minor* Dana, de Madère et des îles du Cap Vert; mais cette dernière appartient à un genre différent; sa dent antérieure est encore nette, sa carapace est dépourvue de touffes de poils, ses pinces sont un peu costulées et il n'y a pas d'épines sur le bord interne du carpe.

Later A. Milne Edwards and Bouvier (1900:93) repeated this observation in their account of *Xanthodes talismani*, in spite of the fact that on p. 85 of the same work they identified *Xantho minor* Dana, 1852 with *Xanthodes melanodactylus* A. Milne Edwards, 1867 (and used the junior synonym!) and on page 87 of the same work reported *Xanthodes melanodactylus* var. *rufopunctata* and noted: "il y a probablement lieu d'y rattacher [that mate-

rial] plus spécialement le *Xantho minor* de Dana." They also synonymized Dana's *Xantho parvulus*, which we believe should be identified with *Eurypanopeus blanchardi*, with *Xanthodes melanodactylus*.

Monod (1956:320, in synonymy) identified *Xanthodes melanodactylus* var. *rufopunctatus* of A. Milne Edwards and Bouvier, 1900, with *Micropanope melanodactyla*. Three females from one of the lots (in 75 m) reported by A. Milne Edwards and Bouvier and labeled *Xanthodes melanodactylus* var. *rufopunctata* are in the collection of the Smithsonian Institution; they are *Nanocassiope melanodactyla*.

Monod (1933b:519) pointed out the multiple use of the epithet *minor* by A. Milne Edwards and Bouvier and further noted: "En fait la figure de *Xantho minor* donnée par DANA semblerait plutôt représenter *Xanthias granosus* [= *Microcassiope rufopunctata*] ou *X. tuberculatus* [= *Monodaeus couchii*] que *X. melanodactylus*. L'examen du type est indispensable."

We believe that Monod (1956:314, synonymy) was correct in identifying *Xantho minor* Dana with *Xanthodes rufopunctatus* A. Milne Edwards. Dana's account mentioned the small size, the well-marked regions, the triangular anterolateral teeth of the carapace, the granular chela lacking a large basal tooth, and, in addition, clearly showed in his plate 8: figure 7 (see Figure 30) several transverse lines of granules on the carapace. All of these features are characteristic of the species now known as *Microcassiope rufopunctata*. We believe that the older name, *Microcassiope minor* (Dana, 1852), must be used for the species.

Chace (1966:639), in recording this species from Saint Helena in the south central Atlantic, showed that *Pilumnus granulimanus* Stimpson, 1871, from the western Atlantic, placed in *Micropanope* by Rathbun (1930), is conspecific with *M. minor* (as *M. rufopunctata*); the latter is now known to have a relatively wide range on both sides of the Atlantic. Guinot (1971:1076), in her summary of nomenclatural changes resulting from her studies of the xanthids, removed *M. granulimanus* from the synonymy of *M. minor* without stating her reasons. She noted: "Cette espèce a été mise en synonymie

avec *Micropanope rufopunctata* par CHACE (1966, p. 639, fig. 8), mais pour l'instant nous la maintenons séparée de l'espèce ouest-africaine."

In discussing the distribution patterns of some Atlantic-East Pacific xanthids, Garth (1968:314) was in error in stating that *Microcassiope* did not occur in the western Atlantic. It is represented there by *M. minor* (as *Micropanope granulimanus*). Garth apparently was misled by the omission of this species in Guinot's (1967c:358) original account of *Microcassiope*.

A male syntype of *Xanthodes granosus* (see "Synonyms") is in the collection of the National Museum of Natural History, Smithsonian Institution, under catalog number USNM 22956. A female syntype is in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden, under Crust. D.1564.

BIOLOGY.—Off West Africa, *Microcassiope minor* lives from the intertidal zone to a depth of ca 220 m. Of the recent records for which depth is available, 19 out of 26 (or 73%) are from depths of 10 m or less, and seven (or 27%) are from depths ranging from between 15 and 45 m to ca 220 m (15–40 m, 43–45 m, and ca 220 m). Eight of the 19 shallower collections are from shore. Forest and Guinot (1966:84) pointed out that *Nanocassiope melanodactyla* (as *Micropanope melanodactyla*) and *Microcassiope minor* both are common in the Gulf of Guinea, where they may occur together, but that the former lives in deeper water generally on less stable substrates whereas "la seconde, plus littorale, a souvent été capturée dans la zone intercotidale ou jusqu'à une dizaine de mètres, principalement sur des fonds durs, roches et coraux," a statement borne out by the capture of these two species off the offshore islands of the Gulf of Guinea. The deepest record is that of Türkay (1976b) from Madeira, in ca 220 m on a telegraph cable; he also recorded specimens from the littoral zone, under stones.

Off West Africa, ovigerous females have been collected in June (Forest and Guinot, 1966). Chace (1966) recorded ovigerous females from Saint Helena in January and April.

DISTRIBUTION.—Atlantic Ocean. Eastern Atlantic from the eastern Mediterranean (see Lew-

insohn and Holthuis, 1964:59, for records), the Azores, the Canary Islands, Madeira, the Cape Verde Islands, the African mainland from Spanish Sahara, Ivory Coast, and Ghana, and the offshore islands of the Gulf of Guinea, Principe, São Tomé, and Annobon; central Atlantic from Saint Helena (Chace, 1966); western Atlantic from the Bahamas, Cuba, Curaçao, and Islas Los Roques (Chace, 1966); intertidal to a depth of ca 220 m, commoner in shallower water. Monod (1956) summarized earlier West African records and reported material from the Azores, the Canary Islands, the Cape Verde Islands, and Ghana. Other West African records in the literature include the following:

West Africa: No specific locality (Monod, 1963).

Azores: Pasteleiro, Feteira, and Horta, Ilha do Faial, intertidal (Chapman and Santler, 1955).

Madeira: Porto do Funchal, ca 220 m, on telegraph cable; Ilhéu do Gorgulho, littoral; between Ponta da Garajau and Ponta da Oliveira, 5–6 m (all Türkay, 1976b).

Cape Verde Islands: No specific locality (Guinot, 1967c). Baixo João Leitão, 25 m (Guinot and Ribeiro, 1962; Ribeiro, 1964). Porto da Praia (as La Praya), São Tiago (Chace, 1966).

Spanish Sahara: 21°05'N, 17°14'W, 43–45 m (Forest and Guinot, 1966).

Ivory Coast: Lagoon of Abidjan, 05°16'N, 04°01'20"W, (Forest and Guinot, 1966). Off Jacquelineville, 40 m (Le Loeuff and Intès, 1968).

Ghana: Off Tenkpobo (as Tenpobo), littoral; off Accra, 37 m (Gauld, 1960).

Principe: Ilhéu Carço, 2–8 m; Ponta da Mina, beach (Forest and Guinot, 1966).

São Tomé: 00°20'N, 06°46'E, 10 m; Ponta Diogo Vaz, W coast, 0–6 m; Praia de Santa Catarina, W coast, 3–10 m; off São Tomé, 8 m; off Ponta Diogo Nunes, shore and 4–5 m; in front of Ponta Oquedelrei, 6 m; Morro Peixe, 2–6 m; Ilhéu das Cabras, shore; in front of the harbormaster's office, shore; in front of Praia Lagarto, 5–6 m (all Forest and Guinot, 1966).

Annobon: No specific locality (Guinot, 1967c). 01°24' 04"S, 05°36'45"E, 7–10 m; 01°25'12"S, 05°36'05"E, 20 m; Isla Tortuga, NW coast, 15–40 m (all Forest and Guinot, 1966).

Saint Helena: Rupert's Bay, 0–75 m; James Bay (Chace, 1966).

Genus *Monodaeus* Guinot, 1967

Monodaeus Guinot, 1967c:369 [type-species: *Xantho couchii* Couch, 1851, by original designation; gender: masculine]; 1971:1074 [list of species].

***Monodaeus couchii* (Couch, 1851)**

Xantho couchii Couch, 1851:13.

Medaeus couchi.—Monod, 1956:310, figs. 383, 877, 878.—Pérès, 1964:20.—Forest and Guinot, 1966:80.—Crosnier, 1967:331, figs. 13, 14.—Zariquiey Alvarez, 1968:400, figs. 9, 15e, 133, 134a [Spain; references].—Crosnier, 1970:1215 [listed], 1216.

Micropanope (?) *couchi*.—Forest and Gantès, 1960:352.

Xantho couchi.—Pérès, 1964:27, 28, 29.—Guinot, 1967c:348, 349, 371 [all discussion], 373 [listed].—Maurin, 1968a:19, 116 [Spain, Mediterranean].—Forest, 1976:66 [discussion].

Monodaeus couchi.—Guinot, 1967c:372 [discussion], figs. 23, 32 [Spain]; 1971:1074 [listed].—Türkey, 1976a:25 [listed], 38, fig. 24 [Portugal, in part].—Forest, 1976:68 [discussion].

SYNONYM.—*Xantho tuberculatus* Bell, 1852.

MATERIAL EXAMINED.—*Pillsbury Material*: None.

Undaunted Material: South-West Africa: Sta 106, 225 m, 1♀ (L).

Other Material: Morocco: Off Cap de Mazagan, 33°40'N, 08°45'W, Agassiz trawl, 28 Mar 1976, *Onversaagd* Sta 154, 1♂ (L).

DESCRIPTION.—A. Milne Edwards and Bouvier, 1894:33.

Figures: A. Milne Edwards and Bouvier, 1899, pl. 3: figs. 3–15.

Male Pleopod: Monod, 1956, figs. 877, 878 (Senegal).

MEASUREMENTS.—Carapace width of our male 11 mm.

BIOLOGY.—*Monodaeus couchii* is a sublittoral species, occurring on the outer shelf and slope to a depth of at least 1300 m (Türkey, 1976a). It was found by Pérès (1964) off Morocco on a bottom with a coral bank and sponges on rock, 460 to 490 m; on muddy sand, partially consolidated, 295 to 340 m; and on bathyal mud in 333 to 360 and 260 to 500 m. It was taken by the *Calypso* (Forest and Guinot, 1966) on sand, mud and shells in 64 m and on sand and shells in 73 to 80 m. Crosnier (1967) reported it from 80 m on pebbles.

DISTRIBUTION.—Eastern Atlantic, from England southward to Angola, including the Mediterranean; sublittoral, in depths between about 60 m to at least 1300 m. Monod (1956) reported material from Senegal; since 1956 the species has

been recorded from the following West African localities.

Morocco: Agadir, 60–130 m (Forest and Gantès, 1960).—35°47'N, 06°35'W, 460–490 m; 35°19'N, 06°32'W to 35°28.8'N, 06°39.2'W, 333–360 m; 35°17.5'N, 06°10.3'W to 35°13.9'N, 06°36.2'W, 295–340 m; and 34°39.6'N, 06°54.5'W to 34°33.5'N, 06°56'W, 260–500 m (Pérès, 1964). 33°34.2'N, 09°19.8'W, 1300 m, and 31°01'N, 10°16'W, 360–375 m (Türkey, 1976a).

Liberia: 05°21.5'N, 09°45.5'W, 73–80 m, and 04°34.5'N, 08°31'W, 64 m (Forest and Guinot, 1966).

Ivory Coast: S of Vridi, 80 m; SW of Vridi, 200–300 m; and S of Grand-Bassam, 100–300 m (Crosnier, 1967).

Congo: Pointe-Noire and off Pointe-Noire, 04°57'S, 11°22'E, 160 m (Crosnier, 1967).

South-West Africa: 17°18'S, 11°24'E, 225 m (Crosnier, 1970).

***Monodaeus rectifrons* (Crosnier, 1967)**

? *Paraxanthias* sp.—Capart, 1951:163.

Medaeus rectifrons Crosnier, 1967:331, figs. 16–24, 29.—Guinot, 1967c:371 [listed].—Crosnier, 1969:531.—Forest, 1976:66 [discussion].

Monodaeus rectifrons.—Guinot, 1967c:371, 372, 373 [all discussion]; 1971:1074 [listed].—Forest, 1976:68 [discussion].

MATERIAL EXAMINED.—*Pillsbury Material*: None.

Other Material: Congo: Off Pointe-Noire, 255 m, 2 Apr 1968, A. Crosnier, 1♀ (W).

DESCRIPTION.—Crosnier, 1967:332.

Figures: Crosnier, 1967, figs. 16–24, 29.

Male Pleopod: Crosnier, 1967, figs. 24, 29 (Congo).

MEASUREMENTS.—The carapace width of the only specimen examined is 24 mm.

BIOLOGY.—*Monodaeus rectifrons* is a deepwater species, occurring on the shelf and upper slope, in depths between 75 m and 255 m; there is one record from a depth of 100–400 m so the species may live somewhat deeper than 255 m. It has been taken on brown mud in 215–220 m (Capart, 1951); mud in 80–100 m (Crosnier, 1967); and sandy mud in 75 m and mud and rocks in 115 m (Crosnier, 1969).

DISTRIBUTION.—Gulf of Guinea, from off the Ivory Coast and the Congo, in depths between 75 m and 255 m (100–400 m). Records in the literature include the following:

Ivory Coast: SW of Grand-Bassam, 100–400 m (Crosnier, 1967).

Congo: 51.5 mi [83 km] WNW of Banana [Zaire], 05°50'S, 11°32'E, 215–220 m (Capart, 1951). Off Pointe-Noire, 80–100 m (type-locality) (Crosnier, 1967); in 255 m (Crosnier, 1969). 04°53'S, 11°38'E, 75 m; 05°00'S, 11°26'E, 115 m (Crosnier, 1969).

* *Monodaeus rouxi* (Capart, 1951)

Micropanope rouxi Capart, 1951:153, fig. 57, pl. 3: fig. 17.—Forest, 1965a:380.—Forest and Guinot, 1966:81.—Guinot, 1967c:348, 349 [discussion], 371 [listed].—Forest, 1976:66 [discussion].

Medaeus (?) *rouxi*.—Monod, 1956:312, figs. 384, 385.—Guinot and Ribeiro, 1962:58, fig. 26.—Crosnier, 1967: 335, figs. 25, 26. [Not *Medaeus rouxi* Balss, 1935.]

Medaeus rouxi.—Forest, 1959:15 [not *Medaeus rouxi* Balss, 1935].

Monodaeus rouxi.—Guinot, 1967c:371, 372, 373 [all discussion], fig. 24; 1971:1074 [listed].—Forest, 1976:68 [discussion].

MATERIAL EXAMINED.—*Pillsbury Material*: Liberia: Sta 68, 70 m, broken shell, 1♂ (W).

Ivory Coast: Sta 45, 73–97 m, 1♂ (L). Sta 49, 73–77 m, 1♂, fragments (L). Sta 50, 128–192 m, 1♂, 2♀ ov (W). Sta 62, 46 m, brown, branched and foliate Foraminifera, 1♂, 1♀ (L).

Nigeria: Sta 237, 101 m, coral ground, rough, 1♂ (L). Sta 239, 73 m, 1♀ (L).

Other Material: Ivory Coast: Off Sassandra, 11 m, 3 Apr 1964, Guinean Trawling Survey, Tr 22, Sta 1, 1♂ (L). 04°33'N, 06°36'W, 100–109 m, sand, mud, shells, rocks, 21 May 1956, *Calypto* Sta 16, 2♂, 3♀ (1 ov) (W).

Congo: Off Pointe-Noire, 04°56'S, 11°31'E, 95–97 m, trawl, 21–22 Sep 1965, 1♂ (W).

DESCRIPTION.—Capart, 1951:153.

Figures: Capart, 1951, fig. 57, pl. 3: fig. 17; Monod, 1956, figs. 384, 385; Guinot and Ribeiro, 1962, fig. 26; Crosnier, 1967, figs. 25, 26.

Male Pleopod: Capart, 1951, pl. 3: fig. 17 (Congo); Monod, 1956, fig. 385 (Congo); Guinot and Ribeiro, 1962, fig. 26 (Ivory Coast).

MEASUREMENTS.—Our specimens have carapace widths of 5 to 15 mm; the carapace widths of ovigerous females is 8 mm. Crosnier (1967:336) pointed out that this is a relatively small species; he examined one ovigerous female 6.6 mm wide, and the ovigerous female reported by Capart (1951) was only 6 mm wide.

BIOLOGY.—*Monodaeus rouxi* is an offshore species

which lives on the continental shelf and upper slope. It usually occurs in depths between 46 m and 215–220 m; the extremes of depth recorded so far, 11 m herein and ?500 m (Guinot and Ribeiro, 1962), require verification. Nine of the 14 available depth records are for depths below 100 m, and seven of those are for depths between 64 and 97 m. The five deeper records are 100–109 m, 101 m, 128–192 m, 215–220 m, and ?500 m. The species has been collected on brown mud in 215–220 m and on muddy sand and rocks in 80 m (Capart, 1951); mud, sand and compacted sand (sable construit) in 65–75 m, sand, mud, and shells in 64 m, and on sand, mud, shells, and rocks in 100–109 m by the *Calypto* (Forest and Guinot, 1966). In the latter depth a large series of 56 specimens was collected. The specimens taken by the *Pillsbury* were taken on brown, branching, and foliate Foraminifera in 46 m, on broken shell in 70 m, and on coral on rough bottom in 101 m.

Ovigerous females have been collected in May and December (Capart, 1951; Forest and Guinot, 1966; *Pillsbury*).

DISTRIBUTION.—West Africa, from scattered localities between Senegal and Angola, in depths between 46 m and 215–220 m (11 m to ?500 m). No material was available to Monod (1956). Records in the literature include the following:

West Africa: No specific locality (Forest, 1976).

Senegal: No specific locality (Forest, 1965a); in 65–75 m (Forest, 1959). 12°55.5'N, 17°33'W, 65–75 m (Forest and Guinot, 1966).

Liberia: 04°34.5'N, 08°31'W, 64 m (Forest and Guinot, 1966).

Ivory Coast: No specific locality (Guinot and Ribeiro, 1962; Forest, 1965; Crosnier, 1967). 04°33'N, 06°36'W, 100–109 m (Forest and Guinot, 1966).

Congo: 51.5 mi [83 km] WNW of Banana [Zaire], 05°50'S, 11°32'E, 215–220 m (Capart, 1951). Off Pointe-Noire (Crosnier, 1967).

Angola: 11 mi [18 km] W of Cap Ledo, 09°40'S, 13°02'E, 80 m (Capart, 1951). Benguela, ?500 m (Guinot and Ribeiro, 1962).

Genus *Nanocassiope* Guinot, 1967

Nanocassiope Guinot, 1967c:355 [type-species: *Xanthodes melanodactylus* A. Milne Edwards, 1867, by original designation;

gender: feminine]; 1971:1075 [list of species].—Takeda, 1976:85 [definition].

****Nanocassiope melanodactyla*
(A. Milne Edwards, 1867)**

Micropanope polita Rathbun, 1893b:238; 1930:440, fig. 70, pl. 180: figs. 3, 4.—Garth, 1946:459, pl. 77: fig. 4 [eastern Pacific; considered distinct by Guinot, 1971].

Panopeus tanneri Faxon, 1893:154 [eastern Pacific].

Xanthodes melanodactylus var. *rufopunctatus*.—A. Milne Edwards and Bouvier, 1900:87, pl. 16: figs. 4, 5 [part?] [not *Xanthodes rufopunctatus* A. Milne Edwards, 1869 = *Xantho minor* Dana, 1852].

Micropanope melanodactylus.—Capart, 1951:151, fig. 56, pl. 3; figs. 15, 16.—Chace, 1966:637, fig. 7 [Saint Helena].

Micropanope melanodactyla.—Monod, 1956:320, figs. 401–405.—Gauld, 1960:70.—Guinot and Ribeiro, 1962:60.—Ribeiro, 1964:12.—Forest and Guinot, 1966:83.—Guinot, 1967c:348 [discussion], 355 [listed].—Le Loeuff and Intès, 1968, table 1.

Xanthodes melanodactylus.—Guinot, 1967c:358 [listed].

Nanocassiope melanodactyla.—Guinot, 1967c, figs. 8, 13; 1971:1075 [listed].—Türkay, 1976b:61 [listed], 68.

Nanocassiope polita.—Guinot, 1971:1075 [listed].

MATERIAL EXAMINED.—*Pillsbury Material*: Liberia: Sta 70, 33 m, branched Foraminifera, 3♂, 1♀ ov (L).

Ivory Coast: Sta 42, 62–75 m, mud with brown, branched Foraminifera, 1♂ (W). Sta 46, 38–42 m, mud with dense *Jullienella*, 1♂, 2♀ (1 ov) (L). Sta 47, 37 m, bottom with *Jullienella*, 6♂, 9♀ (3 ov) (L).

Ghana: Sta 22, 51 m, rough bottom, 1♂, 1♀ (L). Sta 23, 42 m, foliate brown to orange bryozoans, 13♂, 7♀ (1 ov) (L). Sta 24, 35–37 m, dark red bryozoans, 2♂, 17♀ (6 ov), 1 juv (L, W).

Nigeria: Sta 250, 24 m, brackish water, mud, 1♀ (W).

Annobon: Sta 271, shore, sand beach, 1♂ (W). Sta 275, 9–69 m, rubble of coralline algae, 8♂, 8♀ (1 ov), 2 juv (L). Sta 282, 18–37 m, nodular coralline algae, 2♂, 1♀ (L, W). Sta 283, 51–55 m, nodular coralline algae, 42♂, 36♀ (7 ov) (W). Sta 284, 73 m, black basaltic rocks, 2♀ ov (L).

Other Material: Madeira: Porto da Abra, SE coast, 32°45'N, 16°41'W, to 12 m, diving, 13 Mar 1976, *Onversaagd* Sta 68, 1♂ (L). Near Canical, SE coast, 32°44'N, 16°44'W, 0–22 m, shore collecting, snorkeling, diving, 10 Mar 1976, *Onversaagd* Sta 39, 1 juv♂ (L). SE coast, 32°44'N, 16°41'W, 30 m, sand, marl, shell, gravel, clay, van Veen grab, 13 Mar 1976, *Onversaagd* Sta 67, 1♂ (L). Near Agua de Pena, SE coast, 32°41'N, 16°46'W, to 25 m, diving, 9 Mar 1976, *Onversaagd* Sta 27, 1♀ (L). S of Madeira, 32°38'N, 16°50'W, 98–105 m, triangular dredge, 16 Mar 1976, *Onversaagd* Sta 93, 1♂ (L).

Canary Islands: Estrecho de la Bocaina, 30 m, sand and rocks, 28 Jun 1883, *Talisman*, 1♂, 2♀ (L).

Cape Verde Islands: São Vicente, 75 m, 29 Jul 1883, *Talisman*, 3♀ (W) [labelled *Xanthodes melanodactylus* var. *rufopunctatus*].

Annobon: 01°24'S, 05°37.5'E, 11 Dec 1965, A. Crosnier, 2♂, 3♀ (W). 01°27'S, 05°35'50"E, 50–60 m, 11 Dec 1965, A. Crosnier, 2♂, 3♀ (W). 01°27'S, 05°35'48"E, 50–60 m, 11 Dec 1965, *Ombango*, A. Crosnier, 1♂, 8♀ (2 ov) (W).

DESCRIPTION.—Capart, 1951:152.

Figures: Capart, 1951, fig. 56, pl. 3: fig. 16; Monod, 1956, figs. 401–405.

Male Pleopod: Capart, 1951, pl. 3: fig. 16 (Angola); Monod, 1956, figs. 403–405 (Senegal); Chace, 1966, fig. 7 (Cape Verde Islands, Baja California, Cocos Island); Guinot, 1967c, fig. 13 (Senegal).

Color: “Coloration dans l'alcool, gris tacheté de rose; les doigts des chélicèdes parfois bruns, parfois noirs” (Capart, 1951:152).

MEASUREMENTS.—Our specimens have carapace widths of 2.5 to 13 mm; the carapace widths of ovigerous females ranges from 4 to 9 mm.

REMARKS.—Chace (1966:637–638) reported *Micropanope melanodactylus* from Saint Helena in the south central Atlantic and noted: “I agree with Monod (1956, p. 324) that *M. melanodactylus* is probably not a synonym of *Xantho minor* Dana, 1852b. Unfortunately, the type-specimen of Dana's species is probably no longer extant, and his name is therefore likely to remain a *nomen dubium* indefinitely.” We agree that *Xantho minor* cannot be identified with *Xanthodes melanodactylus*; we have identified it with *Microcassiope rufopunctata*, above.

We believe that Chace (1966:637) correctly synonymized *Micropanope polita* Rathbun, 1893, from the eastern Pacific, with *M. melanodactyla*. Guinot (1971:1075) did not accept this action, apparently preferring, without stating her reasons, to keep the two taxa separate. As Garth (1968:314) noted, discontinuous distribution between eastern Pacific and eastern Atlantic crabs is well documented at the generic level.

The relatively wide and transversely grooved front, the slender, sparsely setose pereopods, the posteriorly projecting posterolateral angles of the sixth abdominal somite of the male and the form of the gonopods are good diagnostic features of

this species. The front is transversely grooved in all specimens examined by us.

BIOLOGY.—*Nanocassiope melanodactyla* is a sublittoral, usually shallow shelf species that apparently prefers a bottom with coralline algae or Foraminifera on mud or muddy sand. Of 70 recent depth records for the species off West Africa, 56 or 80% are from depths of 50 m or less; two of those are from shore, the remainder in depths from 3–11 m to 40–54 m or 9–69 m. Of the 14 records from deeper water, two, 200 m and 225 m, are from depths greater than 100 m and the remainder range from 60 to 85 m. The deepest records in the literature are in A. Milne Edwards and Bouvier (1900), who provided 11 depth records. Only three of these are from depths of less than 50 m, three are from depths generally more than 50 m but less than 100 m (75, 80, and 80–115 m), and the remainder are 100–150 m, 110–180 m, 225 m, 355 m, and 627 m. The reliability of these deeper records is questionable, but the species may stray into water that deep. Subsequently, Türkay (1976b) recorded it from 80 m on a telephone cable in the harbor of Funchal; in other samples he recorded it from blocks of stone. It generally occurs in depths between 20 and 50 m, as pointed out by Forest and Guinot (1966:84). They compared the apparent habitat preferences of *N. melanodactyla* and *Microcassiope minor* and noted: "La première a été recueillie à des profondeurs comprises entre 9 et 65–75 m, mais surtout entre 20 et 50 m, sur des fonds meubles, le plus souvent parmi les algues calcaires."

Apparently this species spawns all year off West Africa. Ovigerous females have been collected in all months but April, August, and December (Capart, 1951; Monod, 1956; Guinot and Ribeiro, 1962; Ribeiro, 1964; Forest and Guinot, 1966; Pillsbury).

DISTRIBUTION.—Eastern Pacific, from Baja California, Mexico, Cocos Island, and the Galapagos Islands; central Atlantic, from Saint Helena and Ascension Island; and eastern Atlantic, from the Azores, Madeira, Ilhas Desertas, the Canary Islands, the Cape Verde Islands and Senegal south-

ward to Angola, including the offshore islands of the Gulf of Guinea, Principe, São Tomé, and Annobon; sublittoral, subtidal to a depth of more than 600 m. Monod (1956) summarized the literature and reported material from the Azores, Madeira, the Cape Verde Islands, the mainland from localities between Senegal and Gabon, and from the offshore islands of Principe and Annobon; other records, including those published since 1956, include the following.

Madeira: No specific locality (Dana, 1852b; Miers, 1881a). Funchal harbor, ca. 80 m; near Ponta da Garajau; between Ponta da Garajau and Ponta da Oliveira; and Ponta de São Lourenço (all Türkay, 1976b).

Cape Verde Islands: No specific locality (Dana, 1852b). Porto Grande, São Vicente (Chace, 1966). Baía de Fateixa, São Vicente, shore; Baía de Porto Grande, São Vicente, 4–6 m, 8 m, 8–10 m, 3–11 m (3.5–11 m); Baía do Tarrafal, São Tiago, 14–23 m and 9–17 m; Porto de São Francisco, São Tiago, 9 m; Porto da Furna, Brava, 6–20 m (all Guinot and Ribeiro, 1962; Ribeiro, 1964). Baía de Porto Novo, Santo Antão, 12 m; Porto Inglês, Maio (Ribeiro, 1964).

Senegal: No specific locality (Guinot, 1967c). 12°55.5'N, 17°33'W, 65–75 m (Forest and Guinot, 1966).

Guinea-Bissau: 10°19'N, 16°34'W, 60–73 m (Forest and Guinot, 1966).

Ivory Coast: Off Sassandra, 100 m (Le Loeuff and Intès, 1968).

Ghana: Off Accra, 10 m (Gauld, 1960). 04°40'N, 02°08'W, 48 m; 04°40'N, 02°08'W to 04°39'N, 02°05'W, 50 m; and 04°36.5'N, 01°31'W, 50 m (Forest and Guinot, 1966).

Principe: No specific locality (Guinot, 1967c). 01°35'N, 07°28'E, 45 m; 01°38'25"N, 07°22'05"E, 31 m; 01°38'35"N, 07°21'35"E, 35 m; 01°43'10"N, 07°28'20"E, 73 m; 01°43'N, 07°28'55"E, 37 m; off Tinhosa Grande (as Hermano Grande) Island, 12 mi [19 km] SSW of Principe, 01°20'45"N, 07°17'37"E, 25–40 m; in front of [Cais de] Santana, 11 m (all Forest and Guinot, 1966).

São Tomé: 00°20'N, 06°47'E, 40–54 m; 00°20'N, 06°46'E, 10 m; 00°25'40"N, 06°40'10"E, 50 m; 00°25'15"N, 06°43'05"E, 8–30 m; in front of Ponta de São Sebastião, 11 m (all Forest and Guinot, 1966).

Annobon: 01°27.5'S, 05°36.5'E, 35 m; 01°26'15"S, 05°35'40"E, 60 m; 01°25'10"S, 05°36'10"E, 20–25 m; N of San Antonio, 9 and 23 m (all Forest and Guinot, 1966).

Angola: Baía Farta, Benguela, 22–28 m (Guinot and Ribeiro, 1962).

Saint Helena: Off Rupert's Bay, 0–75 m, 0–2 m (Chace, 1966).

Genus *Nanopilumnus* Takeda, 1974

Nanopilumnus Takeda, 1974:215 [type-species: *Medaeus rouxi* Balss, 1935; gender: masculine].

**Nanopilumnus boletifer* (Monod, 1956)

Parapilumnus boletifer Monod, 1956:260, fig. 302; 1963, fig. 36 [no material].—Forest and Guinot, 1966:72, fig. 5a,b—Takeda, 1974:216 [listed; transferred to *Nanopilumnus*].

MATERIAL EXAMINED.—*Pillsbury Material*: Annobon, Sta 275, 9–69 m, rubble of coralline algae, 1♀ ov (L).

DESCRIPTION.—Monod, 1956:260.

Figure: Monod, 1956, fig. 302.

Male Pleopod: Forest and Guinot, 1966, fig. 5a,b (São Tomé).

Color: Cream (Monod, 1956:261).

MEASUREMENTS.—Our ovigerous female has a carapace width of 5 mm.

BIOLOGY.—*Nanopilumnus boletifer* is a sublittoral species, with a recorded depth range extending from shore to 9–69 m. All depth records other than that of the *Pillsbury* are from depths of less than 12 m. The *Pillsbury* specimen was collected in the rubble of coralline algae. The following bottom types were noted for the *Calypso* collections (Forest and Guinot, 1966): rocks and coral; rocks and sand; mud and calcareous algae; and calcareous algae.

Ovigerous females have been collected in May, June, and July (Forest and Guinot, 1966; *Pillsbury*).

DISTRIBUTION.—West Africa, from the offshore islands of the Gulf of Guinea, Annobon (the type-locality), Principe, and São Tomé, from shore to a depth of 9–69 m, usually in 12 m or less. Records in the literature include the following:

Annobon: No specific locality, in 12 m (Monod, 1956).

Principe: Ilhéu Caroço, 2–8 m; Ilhéus dos Mosteiros, 3–10 m (Forest and Guinot, 1966).

São Tomé: Off São Tomé, 8 m; Baía de Ana de Chaves, 5 m; W of Ponta Diogo Nunes, shore; off Ponta Diogo Nunes, 4–5 m; in front of Ponta Oquedelrei, 6 m; Ilhéu das Cabras, 0–2 m; and in front of Praia Lagarto, 5–6 m (all Forest and Guinot, 1966).

Genus *Panopeus* H. Milne Edwards, 1834

Panopeus H. Milne Edwards, 1834:403.

REMARKS.—When H. Milne Edwards (1834:403) erected the genus *Panopeus*, he assigned two species to it, viz., *Panopeus herbstii* (a new species) and *Panopeus limosus* (a new combination based on *Cancer limosa* Say, 1817, a species now known as *Eurytium limosum* (Say)). Two other species were doubtfully assigned by H. Milne Edwards to the new genus: *Cancer trispinosus* Herbst, 1803, and *Cancer ochtodes* Herbst, 1783. In the synonymy of his *Panopeus herbstii* H. Milne Edwards cited *Cancer panope* Herbst (1801:40, pl. 54: fig. 5) and Say's (1817:58, pl. 4: fig. 3) use of Herbst's name *Cancer panope* for an East American species. H. Milne Edwards indicated that his material of *Panopeus herbstii* came from "les côtes de l'Amérique septentrionale."

H. Milne Edwards did not indicate a type-species for his genus *Panopeus*, and the first valid type selection that we know of is the one by E. Desmarest (1852:17), who stated: "*Panopeus*: genre américain, ayant pour type le *Cancer panope*, Herbst, que M. Milne Edwards nomme Panopé d'Herbst." The type-species of *Panopeus* thus is *Cancer panope* Herbst, 1801, as H. Milne Edwards, 1834, cited that species by name in the synonymy of *Panopeus herbstii*. That this type selection was most unfortunate is shown below.

As was first pointed out by S. I. Smith (1869a:278), *Cancer panope* Herbst, 1801, is an Indo-West Pacific species, different from the East American form which was figured by Say (1817) and described by H. Milne Edwards (1834). Von Martens (1872:87) examined Herbst's type material and came to the conclusion that Herbst's *Cancer panope* belongs to the genus *Menippe* de Haan, 1833; he also showed that the type locality of *Cancer panope* is Tranquebar, India, where the material was collected by Ingobert Karl Daldorff, an officer of the Danish garrison at Tranquebar (1790–1793) and a pupil of J. C. Fabricius for whom he collected (cf., Zimsen, 1964:12). Balss (1932:513) removed Herbst's species from *Menippe*

and placed it in the genus *Sphaerozius*; he pointed out that *Sphaerozius panope* is a rare species; apart from the type only three specimens were known to him.

Unpublished notes in the Division of Crustacea, National Museum of Natural History, Smithsonian Institution, Washington, D.C., made by the late Mary J. Rathbun, show that *Cancer panope* Herbst, 1801, is a junior subjective synonym of *Cancer scaber* Fabricius (1798:336). Miss Rathbun came to this conclusion after having examined the type-specimens of both species. Like Herbst's material of *C. panope*, the type-specimens of *Cancer scaber* were collected in India by Daldorff, and it thus is possible that the types of both species originally formed part of a single lot. The correct name of the species thus should be *Sphaerozius scaber* (Fabricius, 1798).

The acceptance of Desmarest's (1852) selection of *Cancer panope* Herbst as the type-species of *Panopeus* H. Milne Edwards, would cause an enormous confusion. Not only would the generic name *Sphaerozius* Stimpson, 1858 (type-species, designated in Opinion 85, *Smithsonian Miscellaneous Collections*, 73(3):17, 1925, *Sphaerozius nitidus* Stimpson, 1858) have to be replaced by the generic name *Panopeus* H. Milne Edwards, the well known and widely distributed genus of mud crabs now known as *Panopeus* would have to be given a different generic name. This genus is known from the eastern Atlantic (south coast of Portugal to Angola), both coasts of America (Massachusetts to Brazil and Lower California to Chile), and Hawaii; it consists of about 12 species, most of which live in the littoral zone and several are very common. The name *Panopeus* has been very consistently used for it. The only other name available for it is *Eupanopeus* Rathbun (1898:273; type-species, by original designation, *Panopeus herbstii* H. Milne Edwards, 1834), a name which has not been used since 1908.

In order to prevent the considerable confusion that a strict application of the Code would cause, Holthuis (1979b) has applied to the International Commission on Zoological Nomenclature to use their plenary power to set aside all type-selections

for the genus *Panopeus*. Having done so, he also asked the Commission to select as the type-species of that genus the species *Panopeus herbstii* H. Milne Edwards, 1834. In the meantime, as prescribed by the Code, the name *Panopeus* will be used by us in the sense in which it is currently employed by zoologists.

As pointed out above, *Panopeus herbstii* is a composite species, its syntypes consisting of (1) the North American material that H. Milne Edwards had before him when he described the species, (2) the North American material described and figured by Say (1817) under the name *Cancer panope* Herbst, and (3) the type-specimen of *Cancer panope* figured by Herbst (1801, pl. 54: fig. 5). The material under (1) presumably is the species now generally known as *Panopeus herbstii*, that under (2) is a mixture of *Panopeus herbstii* and *Neopanope texana sayi* (Smith, 1869) (cf. Rathbun, 1930:335, 369), and that under (3) is *Sphaerozius scaber* (Fabricius, 1798). In order to legalize the current use of the name *Panopeus herbstii* for the common large East American mud crab, Holthuis (1979b:159) selected as the lectotype of *Panopeus herbstii* the specimen from oyster beds of the east coast of the United States, that Say (1817, pl. 4: fig. 3) figured.

By these actions it will remain possible to use both the generic name *Panopeus* H. Milne Edwards, 1834, and the specific epithet *herbstii* H. Milne Edwards, 1834, in the accustomed sense.

* *Panopeus africanus* A. Milne Edwards, 1867

Panopeus africanus.—Frade, 1950:11, 26.—Capart, 1951:148, fig. 54, pl. 3: fig. 3.—Monod, 1956:325, figs. 406–415.—Rossignol, 1957:82, 83.—Longhurst, 1957:374, 375, 380, 382; 1958:88.—Gauld, 1960:70.—Forest and Gantès, 1960:352.—Rossignol, 1962:118.—Guinot and Ribeiro, 1962:61.—Forest and Guinot, 1966:84.—Zariquiey Alvarez, 1968:404, fig. 134b [Spain; references].—Uschakov, 1970:443, 444, 447, 455 [listed].—Hartmann-Schröder and Hartmann, 1974:15.—Powell, 1979:127.
Panopeus sp.—Monod, 1956:335, figs. 435–438.
Eupanopeus africanus.—Bott, 1964:30.

MATERIAL EXAMINED.—*Pillsbury Material*: Nigeria: Sta 1, Lagos harbor, shore, 4♂, 1♀ (W).

Other Material: Liberia: Rock Spring, Monrovia, O. F. Cook, G. N. Collins, 1♀ (W). Free Port area, Monrovia, oyster cultch, 22 Apr 1953, G. C. Miller, 1♂ (W). Locality same, 24 Apr 1953, 1♀ ov (W).

Dahomey: Lagoon of Lac Nokoué near Zogbo, W of Cotonou, 29 Mar 1964, H. Hoestlandt, 1♀ (L). Point XI Lagoon near Contonou, 29 Mar 1964, H. Hoestlandt, 1♂ (L). Zogbo Lagoon near Contonou, 10 Apr 1964, H. Hoestlandt, 1♀ (L).

Nigeria: Harbor of Lagos, 13 Jun 1963, A. R. Longhurst, 1♂ (L). S bank of mouth of Escravos River near Ajudaibo, Niger delta, 05°34.5'N, 05°11.75'E, 30 Jul 1975, C. B. Powell, 1 large ♂ (L). W of Forcados town, near confluence of Odimodi Creek and Forcados River, 05°22'N, 05°26'E, 28 Feb 1976, C. B. Powell, 14 specimens (L). Niger delta, between Brass and Port Harcourt, May–Aug 1960, H. J. G. Beets, 1♂ (L).

Gabon: No specific locality, Duparquet, syntype of *Panopeus africanus*, 1 dry ♂ (W, USNM 20263).

Congo: Pointe-Noire, intertidal, Mar 1965, A. Crosnier, 2♂, 4♀ (1 ov) (W).

Zaire: Banana, mouth of Congo River, American Museum Congo Expedition 1909–1915, Jul–Aug 1915, H. Lang, 4♂, 5♀ (1 ov) (W). Data same, Jul 1915, 5♂, 3♀ (1 ov) (W).

Angola: Luanda, W coast; American Museum Congo Expedition 1909–1915, 21 Sep 1915, H. Lang, 1♀, 2 juv (W). Between Luanda and Cuanza, 23 km from Luanda, 20 Jun 1967, G. Hartmann, 1♀ (L). Lobito, 1899, P. Kamerman, 1♂ (L).

DESCRIPTION.—Capart, 1951:148.

Figures: Capart, 1951, fig. 54, pl. 3: fig. 3; Monod, 1956, figs. 406–415.

Male Pleopod: Capart, 1951, pl. 3: fig. 3 (Congo); Monod, 1956, figs. 410–414 (Senegal, Sierra Leone, Ivory Coast).

Color: “Coloration gris foncé à brun; extrémité des pinces noir et blanc” (Capart, 1951:148). Rossignol (1957:83) gave a more detailed color description: “marron plus ou moins foncée. Chélipèdes: face externe et bord supérieur de la main, de même que le pouce et le doigt, tête de nègre (bouts de doigts jaunâtres). Face inférieure et bord inférieure de la main jaunâtres.”

MEASUREMENTS.—Our specimens have carapace widths ranging from 6 to 43 mm; the carapace widths of ovigerous females range from 17 to 30.5 mm.

REMARKS.—We suspect that Monod's *Panopeus* sp., a damaged male, 12 × 16 mm, from the Ivindo River, near Ogooué, a locality in a river

some distance from the sea in Gabon, actually can be identified with this species. One of the characters used by Monod to distinguish this specimen is the laterally directed fifth anterolateral tooth on the carapace, which is also somewhat upturned; it is curved upward in some of our specimens. Rathbun (1921:439) noted that “there is considerable variation in the shape of the lateral teeth of the carapace . . .,” and she figured one specimen (1921, fig. 19a) in which the posterior teeth are directed almost laterally. The front of Monod's specimen is damaged. The deep sinus between the first and second tooth shown by Monod is also figured by Rathbun for three different specimens.

The male pleopod of Monod's specimen, which seems to terminate in a club-shaped tip rather than in the trilobed apex typical of *Panopeus*, may be abnormal or damaged; the specimen is quite small, so it may just be undeveloped. A survey of the pleopods of species of *Panopeus* in the Smithsonian Institution, in which males of all species but *P. convexus* A. Milne Edwards, 1880, are represented, reveals that all of the other species in the genus have the typically trilobed male pleopod.

Monod (1956:329) commented on the absence of the red spot on the inner surface of the ischium of the third maxilliped in the specimen from Ivindo. That spot, characteristic of *P. africanus*, is not always present in species in which it is known to occur (A. B. Williams, pers. comm.).

The occurrence of Monod's specimen from Gabon in a river is consistent with the known habitat preference of *P. africanus* for lagoons and estuaries.

Monod (1956:329) noted the occurrence of a red spot on the inner surface of the ischium of the third maxilliped in this species, as well as in *Eurypanopeus blanchardi* (p. 130). That spot also is characteristic of the western Atlantic *P. herbstii* H. Milne Edwards, 1834. In that species, Williams (1965:197) noted that in a sample of almost 600 specimens from Beaufort, North Carolina, that spot was present in 100% of the males but only in 55% of the females. The significance of the spot is unknown.

BIOLOGY.—*Panopeus africanus* is a characteristic inhabitant of estuaries and lagoons along the West African coast; it may also occur littorally and sublittorally. Longhurst (1958) found it in Sierra Leone in estuaries as well as offshore to a depth of 140 m. It is rarely found far from the intertidal zone.

Longhurst (1957) found this species in the stomach contents of the following fishes in the Sierra Leone River: *Arius latiscutatus* Günther, *Pomadasyd jubelini* (Cuvier), *Diagramma macrolepis* (Boulenger), *Galeoides decadactylus* (Bloch), and *Cynoglossus senegalensis* (Kaup).

Apparently this species spawns all year. Oviparous females have been collected in January, March, April, July, and November (Capart, 1951; Monod, 1956; Rossignol, 1957; p. 147 herein).

DISTRIBUTION.—Eastern Atlantic, from S Portugal and SW Spain southward to Angola, including the offshore islands of Fernando Poo, Principe, and São Tomé; possibly introduced to Durban Bay, South Africa (Barnard, 1954, 1955). Shallow water, usually in estuaries and lagoons. Monod (1956) summarized earlier records and reported many specimens from localities between Mauritania and Angola. Since 1956 it has been reported from the following localities.

Morocco: Oued Bou Regreg (Forest and Gantès, 1960).

Guinea: Conakry, 0–2.5 m; Île Roume, Îles de Los, shore (Uschakov, 1970).

Sierra Leone: Sierra Leone River (Longhurst, 1957). Off Sierra Leone, 0–140 m (Longhurst, 1958).

Ghana: Ada; off Accra, 8 m (Gauld, 1960).

Nigeria: Elechi Creek, Port Harcourt, 04°47'15"N, 06°48'45"E (Powell, 1979).

Principe: No specific locality (Frade, 1950; Forest and Guinot, 1966). Rio Papagaio, shore (Forest and Guinot, 1966).

São Tomé: No specific locality (Frade, 1950).

Congo: Lagoon of Loango (Rossignol, 1957). W of Pointe-Noire (Rossignol, 1962).

Angola: Mangais, Lobito (Bott, 1964). Baía de Luanda, shore; Baía do Lobito, shore; Praia da Rocha, near Benguela, shore (Guinot and Ribeiro, 1962). Between Cacuaço and Lobito-Benguela (Hartmann-Schröder and Hartmann, 1974).

Genus *Paractaea* Guinot, 1969

Paractaea Guinot, 1969d:241 [type-species: *Xantho rufopunctatus* H. Milne Edwards, 1834, by original designation; gender: feminine]; 1971:1071 [list of species: *Actaea margaritaria* A. Milne Edwards, 1867, not included]; 1976:249 (revision).

REMARKS.—The eastern Atlantic *Actaea margaritaria* A. Milne Edwards, 1867, was listed under neither *Actaea* (p. 1070) nor *Paractaea* (p. 1071) by Guinot (1971), who noted (1969d:244):

Enfin, il convient de dire un mot de quelques autres espèces susceptibles d'entrer, après révision, dans le genre *Paractaea* gen. nov. En effet, un certain nombre d'espèces jusqu'à présent rattachées à *Actaea* et qui ne peuvent être conservées dans ce genre tel que nous l'avons délimité, offrent les mêmes caractères essentiels que les *Paractaea*. Il s'agit de *Actaea margaritaria* A. Milne Edwards, 1867, espèce est-atlantique.

In 1976 Guinot assigned *margaritaria* to *Paractaea*.

* *Paractaea margaritaria* (A. Milne Edwards, 1867)

Actaea margaritaria.—Capart, 1951:159.—Gauld, 1960:70.—Serène, 1961:197 [listed].—Rossignol, 1962:117.—Chace, 1966:637.—Forest and Guinot, 1966:77.—Guinot, 1969d:224, 251 [discussion].

Actaea (Actaea) margaritaria.—Monod, 1956:294, figs. 357–360.—Guinot and Ribeiro, 1962:56.—Ribeiro, 1964:9.

Paractaea margaritaria.—Guinot, 1976:251.

MATERIAL EXAMINED.—*Pillsbury Material*: Liberia: Sta 70, 33 m, branched Foraminifera, 1♀ (L).

Annobon: Sta 275, 9–69 m, rubble of coralline algae, 2♂ (W). Sta 282, 18–37 m, nodular coralline algae, 1♀, 3 juv (W). Sta 283, 51–55 m, nodular coralline algae, 3♂, 2♀ (L).

DESCRIPTION.—Capart, 1951:159.

Figures: Monod, 1956, figs. 357–360; Guinot, 1976, pl. 16: fig. 6.

Male Pleopod: Monod, 1956, figs. 358–360 (Ghana).

Color: "Rouge intense, une tache jaune en arrière des yeux" (Capart, 1951:159).

MEASUREMENTS.—Our specimens have carapace widths of 4 to 9 mm.

BIOLOGY.—*Paractaea margaritaria* is a sublittoral species, occurring on rough bottom in depths between 4–5 and 91 m. It has habitat preferences similar to those of *P. rufopunctata africana*; the two species were taken together at three stations by the *Calypso* (Forest and Guinot, 1966) and at two stations by the *Pillsbury*. Our material was collected on bottom with branched Foraminifera or the characteristic coralline algae found off Annobon. The *Calypso* specimens were taken in calcareous algae at four stations and on rocks and coral at two stations. Guinot (1976) reported one specimen from sand and gorgonians off Togo.

Off West Africa, ovigerous females have been collected in June and November (Guinot and Ribeiro, 1962; Ribeiro, 1964; Forest and Guinot, 1966). Chace (1966) recorded an ovigerous female from Saint Helena in April.

DISTRIBUTION.—West coast of Africa and Saint Helena (Chace, 1966). Off West Africa it is known from the Cape Verde Islands, Ghana, Gabon, and the offshore islands of the Gulf of Guinea: Annobon, São Tomé, and Príncipe; it has not previously been recorded from the African mainland as far north as Liberia. It is a sublittoral species, occurring in depths between 4–5 and 91 m. Monod (1956) reported material from Ghana and Annobon; since 1956 it has been recorded from the following:

Cape Verde Islands: No specific locality (Guinot, 1976). Porto da Praia, São Tiago (as La Praya) (Guinot, 1976). São Vicente (as Cap St. Vincent) (Guinot, 1976). Baía do Porto Grande, São Vicente, 3.5–11 m (Guinot and Ribeiro, 1962; Ribeiro, 1964).

Ghana: Off Accra, 15 m (Gauld, 1960).

Togo: No specific locality (Guinot, 1976).

Príncipe: 01°43'N, 07°28'55"E, 37 m (Forest and Guinot, 1966).

São Tomé: 00°20'N, 06°46'E, 10 m; Ponta Diogo Vaz, W coast, 30 m; off Diogo Nunes, 4–5 m (all Forest and Guinot, 1966).

Annobon: No specific locality, 12 m (Guinot, 1976). 01°27.5'S, 05°36.5'E, 35 m, and Isla Tortuga, NW coast, 15–40 m (Forest and Guinot, 1966).

Gabon: No specific locality, in 50 m (Guinot, 1976). Off Libreville, 45–57 m (Rossignol, 1962).

Congo: Baie de Pointe-Noire, 13 m (Guinot, 1976).

Paractaea monodi Guinot, 1969

Actaea (Actaea) rufopunctata.—Monod, 1956:293 [part] [not *Actaea rufopunctata* H. Milne Edwards, 1834].

Actaea rufopunctata.—Guinot, 1969d:250 [discussion] [not *Actaea rufopunctata* H. Milne Edwards, 1834].

Paractaea monodi Guinot, 1969d:259, fig. 33; 1971:1072 [listed]; 1976:250 [listed], fig. 7.—Türkay, 1976b:61 [listed], 67.

MATERIAL EXAMINED.—*Pillsbury Material*: None.

Other Material: Azores: No other data, paratypes, 1♂, 1♀ (W).

Madeira: S coast near Ponta da Oliveira, 32°39'N, 16°49'W, 0–20 m, diving, 15 Mar 1976, *Onversaagd* Sta 82, 1♂ (L).

Cape Verde Islands: São Vicente, 20 m, 26 Jul 1883, *Talisman*, paratype, 1♂ (W).

DESCRIPTION.—Guinot, 1969d:259.

Figure: Guinot, 1969d, fig. 33.

MEASUREMENTS.—Our specimens have carapace widths of 7 to 11 mm.

REMARKS.—Our specimen from the Cape Verde Islands, originally identified as *Actaea margaritaria*, may have been reported under that name by A. Milne Edwards and Bouvier (1900: 100, 101). Apparently this species and *P. margaritaria* were taken together by the *Talisman* off São Vicente.

The paratypes in the collection of the National Museum of Natural History, Smithsonian Institution, are cataloged under numbers USNM 22962 (Azores) and USNM 125482 (Cape Verde Islands).

BIOLOGY.—*Paractaea monodi* is a sublittoral species occurring from shallow water (0–20 and 10–30 m) to a depth of 100–150 m. The species was taken by the *Talisman* on sand, shells, and gravel and on coralline algae (“corallines”) (A. Milne Edwards and Bouvier, 1900). Türkay (1976b) recorded it from blocks of rock in Funchal harbor and, from another locality, in 5–6 m.

Ovigerous females have been collected off the Canary Islands in June and the Cape Verde Islands in July (A. Milne Edwards and Bouvier, 1900).

DISTRIBUTION.—Eastern Atlantic, from the

Azores, Madeira, Ilhas Desertas, the Canary Islands, the Cape Verde Islands, and the Mediterranean; for comments on material from Mediterranean localities see Guinot (1969d:260, 261). Guinot (1969d) summarized the literature. We have found only the following records published since then:

Madeira: Funchal harbor; between Ponta da Garajau and Ponta da Oliveira, 5–6 m (Türkay, 1976b).

Canary Islands: Arrecife, E of Lanzarote (Guinot, 1976).

Egypt: W of Abou Kir; Abou Kir bay region: Rosetta to Port Said (Ramadan and Dowidar, 1976).

**Paractaea rufopunctata africana* Guinot, 1976

Actaea rufopunctata.—Bouvier, 1906:496.—Balss, 1914:102.—

Crosnier, 1964:31.—Forest and Guinot, 1966:76.

Actaea (Actaea) rufopunctata.—Monod, 1956:293 [part].

Paractaea rufopunctata forme *africana* Guinot, 1969d:251, fig. 26; 1971:1071 [listed].

Paractaea rufopunctata africana Guinot, 1976:250, pl. 16: fig. 5.

MATERIAL EXAMINED.—*Pillsbury Material*: Annobon: Sta 275, 9–69 m, rubble of coralline algae, 3♂, 1♀ (L, W). Sta 282, 18–37 m, nodular coralline algae, 1♂, 1♀ (L).

DESCRIPTION.—Guinot, 1969d:246 (*P. rufopunctata rufopunctata*), 251 (*P. rufopunctata* forme *africana*).

Figures: Guinot, 1969d, fig. 26; 1976, pl. 16: fig. 5.

MEASUREMENTS.—Our specimens have carapace widths of 13 to 18 mm.

REMARKS.—In her revision of *Actaea* and *Paractaea*, Guinot (1969d) recognized *Paractaea rufopunctata rufopunctata* as an Indo-West Pacific taxon and introduced the infrasubspecific name, *africana*, with no standing in nomenclature, for the tropical eastern Atlantic population; she later validated the name in 1976. In her discussion of the problem she noted (1969d:251) that “il y aura lieu de revenir sur le statut des représentants ouest-africains de *rufopunctata*, en d’autres termes de décider si ceux-ci méritent bien de constituer une forme distincte de la *rufopunctata* typique.” Unfortunately, the *Pillsbury* material is not adequate for us to elucidate the problem.

BIOLOGY.—Off West Africa this species occurs from the intertidal zone to a depth of at least 45 m; there is one *Pillsbury* record of 9–69 m. It was taken at 10 stations by the *Calypso* (Forest and Guinot, 1966): three were on or near (0–6 m) shore, two were from depths of 6–8 m, and five were from depths ranging from 15 (15–40 m) to 45 m. The species apparently prefers rough bottom; the coralline algae habitat common around the offshore islands of the Gulf of Guinea has yielded several specimens from both the *Calypso* and the *Pillsbury* collections. This species also was found in the following habitats by the *Calypso* (Forest and Guinot, 1966): sand and rocks; rocks and coral; rocks, calcareous algae, and coral. Crosnier (1964) found the species in sponges, coral and marl on rocky bottom with gorgonians off Cameroon.

Off West Africa, ovigerous females have been recorded in June (Forest and Guinot, 1966).

DISTRIBUTION.—West Africa. Guinot (1969d) recognized a forme *africana* for the population occurring off tropical West Africa, from the offshore islands of the Gulf of Guinea: São Tomé, Annobon, and Principe, which she elevated to subspecific status in 1976. She erred, however, in considering the West African population to be exclusively insular (1969d:251); Crosnier (1964) has reported the species from the continental shelf off Cameroon. Guinot (1969d:259, fig. 33) assigned material from the Cape Verde Islands to *Paractaea monodi* Guinot (p. 149). West African records for *P. rufopunctata africana* are as follows:

Cameroon: No specific locality (Crosnier, 1964).

Principe: 01°35'N, 07°28'E, 45 m; 01°43'N, 07°28'55"E, 37 m; and Ponta da Mina, beach (Forest and Guinot, 1966).

São Tomé: No specific locality (Bouvier, 1906; Guinot, 1969d). Ponta Diogo Vaz, W coast, 0–6 and 30 m; in front of São Tomé, 8 m; W of Ponta Diogo Nunes, shore; in front of Ponta Oquedelrei, 6 m (all Forest and Guinot, 1966).

Annobon: No specific locality (Balss, 1914). 01°25'12"S, 05°36'05"E, 20 m, and NW side, Isla Tortuga, 15–40 m (Forest and Guinot, 1966; Guinot, 1976).

The identity of the material from Ascension Island assigned to this species by Benedict (1893)

and Rathbun (1930) remains to be determined. That material will be studied in a review of the decapods of Ascension now underway by Manning in collaboration with Fenner A. Chace, Jr.

Genus *Paraxanthias* Odhner, 1925

Paraxanthias Odhner, 1925:85 [type-species: *Xanthodes notatus* Dana, 1852, by original designation; gender: masculine].—Guinot, 1971:1069 [list of species].

Paraxanthias eriphioides (A. Milne Edwards, 1867)

Paraxanthias eriphioides.—Monod, 1956:304, figs. 371–375 [Cape Verde Islands; references].—Guinot and Ribeiro, 1962:57 [Cape Verde Islands].—Ribeiro, 1964:10 [Cape Verde Islands].—Guinot, 1968a:718 [discussion]; 1971:1069 [listed].

Paraxanthias ?eriphioides.—Guinot, 1968a:720, figs. 48, 53 [Cape Verde Islands].

DISTRIBUTION.—Eastern Atlantic, from the Azores and the Cape Verde Islands; sublittoral, 10–85 m.

Genus *Pilumnopus* A. Milne Edwards, 1863

Pilumnopus A. Milne Edwards, 1863:289 [a genus without included nominal species; type-species: *Pilumnopus crassimanus* A. Milne Edwards, 1867, a subjective junior synonym of *Ozius serratifrons* Kinahan, 1858, by subsequent designation by Balss, 1933b:33, 34; gender: masculine; name 1643 on *Official List*, there dated 1867 in error].—Takeda and Miyake, 1969:119 [definition; list of Indo-West Pacific species].

**Pilumnopus africanus* (De Man, 1902)

Heteropanope (Pilumnopus) africana.—Monod, 1956:270, figs. 319–325.

Pilumnopus africanus.—Uschakov, 1970:455 [listed].

MATERIAL EXAMINED.—*Pillsbury Material*: Nigeria: Sta 224, Lagos, shore, sand beach, 1♀ (W).

Other Material: Liberia: Free Port area, Monrovia, oyster cultch, 13 Mar 1953, G. C. Miller, 1♂ (W).

Ivory Coast: Ile Chauve Souris, Lagune Ébrié, 4 Jan 1948, P. L. Dekeyser, 2♂, 2♀ (W).

Dahomey: Point XI Lagoon near Cotonou, brackish wa-

ter (31g Cl/liter), 24 Mar 1964, H. Hoestlandt no 7, 1♂ (L). Ganvié lagoon near Cotonou, brackish water (30g Cl/liter), 20 Mar 1964, H. Hoestlandt no 11, 2♀ (1 ov) (L). Zogbo lagoon near Cotonou, brackish water (31 g Cl/liter), 10 Apr 1964, H. Hoestlandt no 13, 1♂, 1♀ (L).

Nigeria: Coastal lagoon, Kuramo Water, Lagos, Aug 1963, Federal Fisheries Service, 1♂, 1♀ ov (L).

Gabon: Port-Gentil, J. H. Logemann, 1♂ (L).

DESCRIPTION.—De Man, 1902:2–7.

Figures: Monod, 1956, figs. 319–325.

Male Pleopod: Monod, 1956, figs. 322–325 (Ivory Coast).

MEASUREMENTS.—Our specimens have carapace widths of 4 to 17 mm; the ovigerous females have carapace widths of 9 to 10 mm.

REMARKS.—It is with some hesitation that we assign the young female specimen from the *Pillsbury* to this species, but the distinctly spiniform anterolateral teeth of the carapace and the granular upper surface of the palm of the chela suggest that the specimen cannot be identified with the similar *P. caparti*.

BIOLOGY.—*Pilumnopus africanus*, like *P. caparti*, is an inshore, estuarine, or lagoon species. All of the records of this species are from these kinds of inshore habitats; all of our specimens from Dahomey were taken from brackish water (30–31g Cl/liter).

Ovigerous females have been found in February, March and August (Monod, 1956; also herein).

DISTRIBUTION.—West Africa, from Guinea to Cameroon, in estuaries and lagoons. Monod (1956) summarized the earlier literature and reported on material from the Ivory Coast. The only mention of this species in the literature since 1956 is Guinea: No specific locality (Uschakov, 1970).

Pilumnopus caparti (Monod, 1956)

Pilumnopus africanus.—Capart, 1951:150, fig. 55, pl. 3: fig. 1 [not *Heteropanope africana* De Man, 1902].

Heteropanope (Pilumnopus) caparti Monod, 1956:268, figs. 314–318.—Rossignol, 1962:117.

Heteropanope caparti.—Gauld, 1960:70.—Longhurst, 1957:374; 1958:88.

MATERIAL EXAMINED.—*Pillsbury Material*: None.
Other Material: Nigeria, between Brass and Port Harcourt, Niger delta, May–Aug 1960, H. J. G. Beets, 1♂, 1♀ (L).

DESCRIPTION.—Capart, 1951:150.

Figures: Capart, 1951, fig. 55, pl. 3: fig. 1; Monod, 1956, figs. 314–318.

Male Pleopod: Capart, 1951, pl. 3: fig. 1 (Congo); Monod, 1956, figs. 316–318 (Ghana).

Color: According to Capart (1951:150) this species is “brun-rouge, les pinces plus claires, les doigts noirs à leur extrémité.”

MEASUREMENTS.—Our specimens have carapace widths of 4 to 11 mm.

BIOLOGY.—*Pilumnopus caparti* is an inshore, estuarine species; most of the material reported in the literature was collected at or near the mouths of rivers. Capart's (1951) material was taken in 6–8 m on brown, black mud, and one of Monod's specimens was taken from a beacon at a river mouth. Longhurst (1957) found this species in the stomach contents of *Arius latiscutatus* Günther in the Sierra Leone River and in 1958 characterized *P. caparti* as an estuarine, shallow shelf species; it was found on rocks, muddy sand, shelly mud, and sand. It also was reported by Longhurst in the latter paper from one shelf station in 72 m; that record appears to be questionable.

Ovigerous females have been collected in August (Capart, 1951).

DISTRIBUTION.—West Africa, from scattered localities between Sierra Leone and the Congo, usually in estuaries. Records in the literature include the following:

Sierra Leone: No specific locality, in estuaries (Longhurst, 1958). Freetown (Monod, 1956). Sierra Leone River (Longhurst, 1957).

Ghana: U.A.C. beach, Ada, River Volta (type-locality) (Monod, 1956; Gauld, 1960).

Cameroon: Mouth of Wouri (River) (Monod, 1956).

Congo: Mouth of Songololo River, Pointe-Noire (Rossignol, 1962).

Zaire: Crique de Banana, 06°01'S, 12°23'30"E, 6–8 m (Capart, 1951).

Genus *Pilumnus* Leach, 1815

Pilumnus Leach, 1815a:321 [type-species: *Cancer hirtellus* Linnaeus, 1761, by monotypy; gender: masculine; name 348

on *Official List*].—Takeda and Miyake, 1968:2 [list of Indo-West Pacific species].

Pilumnus hirtellus (Linnaeus, 1761)

Cancer hirtellus Linnaeus, 1761:493.

Pilumnus hirtellus.—Forest and Gantès, 1960:352 [Morocco].—Maurin, 1968a:107 [Mediterranean].—Zariquiey Alvarez, 1968:392, figs. 2g, 128c,d, 129f [Spain; references].—Christiansen, 1969:75, fig. 30, map 24 [Scandinavia].—Türkay, 1976b:61 [listed], 69 [Madeira].

SYNONYM.—*Pilumnus hirtellus ponticus* Czerniavsky, 1868.

DISTRIBUTION.—Eastern Atlantic, from Norway and British Isles southward to NW Morocco, Madeira, the Cape Verde Islands, Mediterranean; sublittoral, to a depth of 15–20 m.

Pilumnus inermis A. Milne Edwards and Bouvier, 1894

Pilumnus inermis.—Monod, 1956:247, figs. 291–295.—Longhurst, 1958:88.—Gauld, 1960:70.—Rossignol, 1962:117.—Crosnier, 1964:31.—Forest and Guinot, 1966:70.—Zariquiey Alvarez, 1968:391 [Portugal; references].—Ushakov, 1970:455 [listed].—Türkay, 1976a:25 [listed], 38, fig. 26 [Portugal in part]; 1976b:61 [listed], 69.

MATERIAL EXAMINED.—*Pillsbury Material*: None.

Other Material: Azores: Ilha do Faial, *Talisman*, syntype of *Pilumnus hirtellus* var. *inermis*, 1 damaged ♀ (W, USNM 22951).

Madeira: S of Madeira, 32°39'N, 16°49'W, 125–150 m, shells and shell agglomerates, triangular dredge, 16 Mar 1976, *Onversaagd* Sta 94, 1♂, 2♀, 1 juv (L).

Senegal: Around Dakar, 28 Jan 1941, Th. Monod, 1♂ (W).

DESCRIPTION.—A. Milne Edwards and Bouvier, 1894:40.

Figures: Monod, 1956, figs. 291–295.

Male Pleopod: Monod, 1956, figs. 293–295 (Senegal); Türkay, 1976a, fig. 26 (Morocco).

MEASUREMENTS.—Our specimens have carapace widths of 4.5 to 13 mm. The damaged female syntype has a carapace width of 11.6 mm.

BIOLOGY.—*Pilumnus inermis* is generally a sublittoral species; Monod (1956:249) recorded one specimen taken at a beach, but the majority of

the records in the literature are from depths below 4–5 m. Of the eight West African records in Monod (1956) for which depth is given, seven are from depths between 15 and 30 m. Indeed, literature records for this species suggest that it lives in shallower water in the Gulf of Guinea than it does in the northern part of its range. Nunes-Ruivo (1961) found the species in 350 m off Portugal, and Türkay (1976a) reported it in depths between 120 and 375 m off Morocco and (1976b) recorded it from ca 150 m, 220 m, and 110–440 m off Madeira. Forest and Guinot (1966: 71) pointed out that of 14 stations at which this species was taken by the *Calypso* in the Gulf of Guinea, 13 were in depths between 4–5 and 21 m.

This species, like most *Pilumnus*, prefers a rough bottom. Longhurst (1958) reported it from shelly sand off Sierra Leone, and Crosnier (1964) took it in sponges, coral and marl on rocky bottom with gorgonians off Cameroon. Rossignol (1962) reported it from muddy sand with *Antedon* off Pointe-Noire. The *Calypso* collected it from a variety of bottoms off São Tomé and Príncipe islands in the Gulf of Guinea, usually on coralline algae or a mixture of coralline algae and other substrates (Forest and Guinot, 1966).

Off West Africa, ovigerous females have been collected in February, March, April, June, and July (Monod, 1956; Forest and Guinot, 1966). Nunes-Ruivo (1961) reported ovigerous females taken off Portugal in August.

DISTRIBUTION.—Eastern Atlantic, from Portugal, the Azores, Madeira, the Cape Verde Islands, and the African coast from Morocco and Cabo Bojador, Spanish Sahara, southward to the Congo and possibly Gabon (that record based on material collected by Heurtel, whose localities are unreliable, as pointed out by Monod, 1956), including the offshore islands of the Gulf of Guinea, Príncipe and São Tomé; sublittoral, in 4–5 m to 400 m. Monod (1956) reported material from the Azores, Madeira, Spanish Sahara, Senegal, Guinea, Guinea-Bissau, Sierra Leone, Ghana, Príncipe, São Tomé, and Gabon; since then the species has been recorded from the following:

Madeira: No specific locality; Funchal harbor, ca. 150 m, 220 m, and 110–440 m (Türkay, 1976b).

Morocco: 33°19'N, 09°00'W, 120–180 m; 33°05.5'N, 09°18'W, 160–250 m; 31°35'N, 10°05'W, 150–160 m; 31°01'N, 10°16'W, 360–375 m (all Türkay, 1976a).

Guinea: No specific locality (Uschakov, 1970).

Sierra Leone: No specific locality, in 44–76 m (Longhurst, 1958).

Ghana: Off Accra, 15 m; Prampram; Dixcove (all Gauld, 1960).

Cameroon: No specific locality (Crosnier, 1964).

Príncipe: 01°42'30"N, 07°28'E, 21 m; 01°36'50"N, 07°22'10"E, 19 m; 01°43'10"N, 07°28'20"E, 73 m; between Ponta da Mina and Ilhéu Santana, 8–10 m and 10–12 m; in front of [Cais de] Santana, 11 m; in front of Praia Pequena, 5–6 m (all Forest and Guinot, 1966).

São Tomé: Off São Tomé, 5 m; 00°20'N, 06°46'E, 10 m; 00°25'15"N, 06°43'05"E, 8–30 m; Baía de Ana de Chaves, 5 m; in front of Ponta Oquedelrei, 6 m; in front of Praia Lagarto, 5–6 m; off Ponta Diogo Nunes, 4–5 m (all Forest and Guinot, 1966).

Congo: Pointe-Noire, 8–9 m (Rossignol, 1962).

* *Pilumnus perrieri* A. Milne Edwards and Bouvier, 1898

Pilumnus perrieri.—Capart, 1951:143 [discussion].—Monod, 1956:244, figs. 288–290.—Rossignol, 1962:117.—Forest and Guinot, 1966:70.—Uschakov, 1970:455 [listed].

MATERIAL EXAMINED.—*Pillsbury Material*: Ghana: Sta 23, 42 m, foliate brown to orange bryozoans, 1♀ (L). Sta 27, 33 m, 1♂, 1♀ ov (W).

Nigeria: Sta 248, 33 m, 1♂ (L).

Other Material: Guinea: Off Guinea, 30 m, 9 Mar 1953, J. Forest, 1♂ (W).

DESCRIPTION.—A. Milne Edwards and Bouvier, 1900:73.

Figures: Monod, 1956, figs. 288–290.

MEASUREMENTS.—Our specimens have carapace widths of 7 to 17 mm; the carapace width of the ovigerous female is 9 mm.

BIOLOGY.—*Pilumnus perrieri*, like *P. stebbingi*, is a sublittoral shelf species, apparently preferring rough bottom in water of moderate depth; Forest and Guinot (1966) reported that these species were taken together at five stations off Príncipe and Annobon by the *Calypso*. The *Pillsbury* specimens were collected on bottom with foliate brown to orange bryozoans. The *Calypso* specimens were

taken on mud; mud with *Arca*; mud, calcareous algae, and shell; rocks; and on calcareous algae (five stations). Rossignol (1962:117) noted that the species is "assez commun dans le coralligène et les fonds rocheux."

Ovigerous females have been collected in March and May (Monod, 1956; *Pillsbury*).

DISTRIBUTION.—West Africa, from scattered localities between the Cape Verde Islands and Senegal to Gabon; sublittoral, in depths between 20 and 91 m. Monod (1956) summarized the earlier literature and reported material from Senegal and Guinea; since 1956 the species has been reported from the following:

Guinea: No specific locality (Uschakov, 1970).

Nigeria: Off the mouths of the Niger River, 04°03'N, 06°12'E, 32 m (Forest and Guinot, 1966).

Principe: Between Ilhéu Caroço and Ponta do Pico Negro, 40 m (Rossignol, 1962). 01°38'25"N, 07°22'05"E, 31 m; 01°43'10"N, 07°28'20"E, 73 m; 01°43'N, 07°28'55"E, 37 m; in front of Baía de Santo Antonio, 50 m (Forest and Guinot, 1966).

Annobon: 01°27.5'S, 05°36.5'E, 35 m; N of San Antonio, 23 m (Forest and Guinot, 1966).

Rio Muni: W Corisco Bay, 40 m (Rossignol, 1962).

Gabon: W of Libreville, 45–57 m; W of Nyanga, 03°S, 65–70 m (Rossignol, 1962).

Pilumnus spinifer H. Milne Edwards, 1834

?*Pilumnus hirtellus*.—Capart, 1951:140, fig. 50 [Spanish Sahara] [not *Pilumnus hirtellus* Linnaeus, 1761].

Pilumnus spinifer.—Monod, 1956:251, figs. 296, 297 [Azores, Mauritania; references].—Zariquiey Alvarez, 1968:391, fig. 129a–e [Spain; references].—Christiansen, 1969:77, fig. 31, map 25 [Scandinavia].—Türkyay, 1976b:61 [listed], 69 [Madeira].

REMARKS.—There is a dry syntype of this species (USNM 20262), a male, carapace width 30.8 mm, from the Mediterranean, in the collections of the Smithsonian Institution.

DISTRIBUTION.—Eastern Atlantic, from Sweden, Portugal, Azores, Mediterranean, NW coast of Africa to Mauritania; sublittoral, to about 100 m.

* *Pilumnus stebbingi* Capart, 1951

Pilumnus stebbingi Capart, 1951:144, fig. 52, pl. 3: fig. 6.—Monod, 1956:241, 632, figs. 279–287.—Longhurst, 1958:

88.—Rossignol, 1962:116.—Guinot and Ribeiro, 1962:52.—Forest and Guinot, 1966:69.

MATERIAL EXAMINED.—*Pillsbury Material*: Ghana: Sta 24, 35–37 m, dark red bryozoans, 1♂ (L).

Annobon: Sta 283, 51–55 m, nodular coralline algae, 26♂, 39♀ (7 ov), 15 juv (L, W). Sta 284, 73 m, black basaltic rocks, 2♀, 2 juv (W).

DESCRIPTION.—Capart, 1951:144.

Figures: Capart, 1951, fig. 52, pl. 3: fig. 6; Monod, 1956, figs. 279–287.

Male Pleopod: Capart, 1951, pl. 3: fig. 6 (Angola); Monod, 1956, figs. 284–287 (Senegal, Guinea).

Color: Monod (1956:241) made the following observations on specimens from Guinea: "Epines rouges sur les pattes, qui sont annelées de rouge." Rossignol (1962:116) added: "Caractéristique par son tomentum épais, feutré, de couleur grise à gris-noir avec, sur les pinces, des tubercules épineux rouges."

MEASUREMENTS.—Our specimens have carapace widths of 3 to 13 mm; the carapace widths of ovigerous females is 10 to 12 mm.

REMARKS.—The ornamentation of the chelae in our specimens is very variable: some have only pink tubercles, others pink and white tubercles; in some specimens the entire outer surface of the chela is covered with tubercles, in others the tubercles are restricted to the upper half of the surface.

BIOLOGY.—*Pilumnus stebbingi* is a shelf rather than shore species, inhabiting moderate depths on relatively rough bottom. All but three of the 20 depth records in the literature are from depths between 30 and 73 m; the exceptions are 25–30 m (Capart, 1951), 10–25 m (Longhurst, 1958), and 23 m (Forest and Guinot, 1966). Capart's (1951) material was collected on rocks; rocks, gravel, and coral; and sandy, rocky green mud. In addition to several records of the species from the coralline algae off Principe and Annobon, the same habitat in which the *Pillsbury* collected a relatively large series off the latter island, Forest and Guinot (1966) reported the species from mud, shells, gorgonians and ascidians; mud and com-

pacted sand (sable construit); mud, shells, and *Cidaris*; and, either mud and shell or sand, rocks and coral and calcareous algae. Longhurst (1958) found the species on muddy shell or shelly sand.

Ovigerous females have been collected in May, June, and September (Monod, 1956; Forest and Guinot, 1966; *Pillsbury*).

DISTRIBUTION.—Off West Africa, from scattered localities between Spanish Sahara and Angola, including the offshore islands of Principe and Annobon; sublittoral, in depths between 10–25 m and 73 m. Capart (1951) reported material from Gabon and Angola, and Monod (1956) added records from Senegal, Guinea, Sierra Leone, Annobon, and Principe. Records in the literature since 1956 include the following:

Spanish Sahara: 21°05'N, 17°14'W, 43–45 m (Forest and Guinot, 1966).

Senegal: 12°55.5'N, 17°33'W, 65–75 m (Forest and Guinot, 1966).

Guinea-Bissau: 10°19'N, 16°34'W, 60–73 m (Forest and Guinot, 1966).

Sierra Leone: No specific locality, in 10–25 m (Longhurst, 1958).

Principe: 01°35'N, 07°28'E, 45 m; 01°38'25"N, 07°22'05"E, 31 m; 01°38'35"N, 07°21'35"E, 35 m; 01°43'10"N, 07°28'20"E, 73 m; 01°43'N, 07°28'25"E, 37 m (all Forest and Guinot, 1966).

Annobon: 01°27.5'S, 05°36.5'E, 35 m; N of San Antonio, 23 m (both Forest and Guinot, 1966).

Gabon: W of Nyanga, 65–70 m (Rossignol, 1962).

Cabinda: W of Cabinda, 55 m (Rossignol, 1962).

Angola: Luanda (Guinot and Ribeiro, 1966).

Genus *Platychelonion* Crosnier and Guinot, 1969

Platychelonion Crosnier and Guinot, 1969:725 [type-species: *Platychelonion planissimum* Crosnier and Guinot, 1969, by monotypy; gender: neuter.].—Guinot, 1971:1078 [transferred with a question mark to Geryonidae].

Platychelonion planissimum Crosnier and Guinot, 1969

Platychelonion planissimum Crosnier and Guinot, 1969:725, figs. 1–9 [Congo].

DISTRIBUTION.—Known only from the type-locality, Pointe-Noire, Congo, in 10–20 m.

Genus *Platypodiella* Guinot, 1967

Platypodiella Guinot, 1967d:562 [type-species: *Cancer spectabilis* Herbst, 1794, by original designation; gender: feminine]; 1971:1074 [list of species].

Platypodiella picta (A. Milne Edwards, 1869)

Cancer geographicus.—Monod, 1933b:548 [footnote, nomen nudum].

Platypodia picta.—Monod, 1956:299, figs. 363–367 [Senegal, Sierra Leone, Ghana, Congo; references].—Rossignol, 1957:83, fig. 3 [Congo].—Longhurst, 1958:88 [Sierra Leone].—Gauld and Buchanan, 1959:128 [Ghana].—Gauld, 1960:70 [Ghana].—Guinot and Ribeiro, 1962:57 [Cape Verde Islands].—Rossignol, 1962:117 [Congo].—Ribeiro, 1964:10 [Cape Verde Islands].—Forest and Guinot, 1966:79 [São Tomé].—Guinot, 1967d:562 [listed], 563 [discussion; transferred to *Platypodiella*].

Platypodiella picta.—Guinot, 1971:1074 [listed].

DISTRIBUTION.—West Africa, from the Canary Islands, the Cape Verde Islands, several mainland localities between Senegal and the Congo, and the offshore islands of Annobon and São Tomé in the Gulf of Guinea; shallow water, intertidal and sublittoral.

Genus *Pseudomeda* Guinot, 1968

Pseudomeda Guinot, 1968a:718 [discussion], 726 [type-species: *Meda* *africanus* Monod, 1956, by original designation; gender: masculine]; 1971:1069 [list of species].

* *Pseudomeda* *africanus* (Monod, 1956)

?*Paraxanthias eriphioides*.—Capart, 1951:161, fig. 61 [fide Guinot and Ribeiro, 1962:58] [not *Paraxanthias eriphioides* (A. Milne Edwards, 1867)].

Xanthias tuberculidens.—Capart, 1951, pl. 3: fig. 13 [fide Guinot and Ribeiro, 1962:58] [not *Xanthias tuberculidens* Rathbun, 1911].

Meda *africanus* Monod, 1956:306, fig. 380.—Longhurst, 1958:88.—Gauld, 1960:70.—Rossignol, 1962:118.—Guinot and Ribeiro, 1962:58, fig. 25.—Crosnier, 1964:34.—Forest and Guinot, 1966:80.—Crosnier, 1967:328, figs. 5, 11, 12, 15.—Guinot, 1968a:718 [discussion], 726, 727 [listed].

Pseudomeda *africanus*.—Guinot, 1968a:726 [discussion], 727 [listed], fig. 57; 1971:1069 [listed].—Williams, 1978:553, fig. 4a.