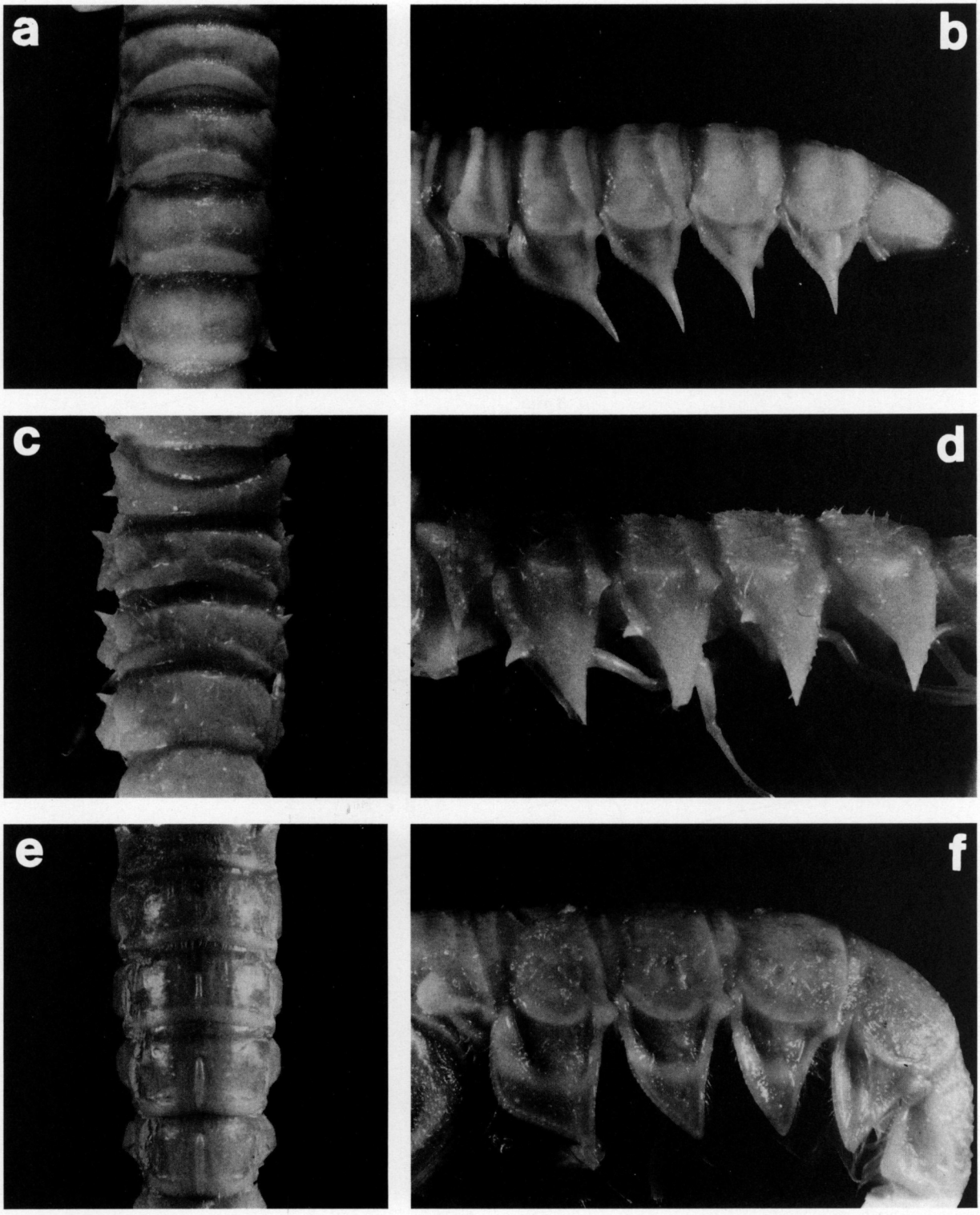

FIG. 8a-b. — *Nephropsis ensirostris* Alcock, ♀ 34 mm, MUSORSTOM 3, Philippines, Stn 128, 815-821 m (MNHN-AS 494) : Anterior part of the abdomen : a, dorsal view ; b, lateral view.

FIG. 8c-d. — *Nephropsis suhmi* Bate, ♀ 33 mm, *Vauban*, Madagascar, CH 131, 1 490-1 600 m (MNHN-AS 506) : Anterior part of the abdomen : a, dorsal view ; b, lateral view.

FIG. 8e-f. — *Nephropsis occidentalis* Faxon, ♀ 38 mm, Peru, 800 m (USNM 170556) : Anterior part of the abdomen : e, dorsal view ; f, lateral view.

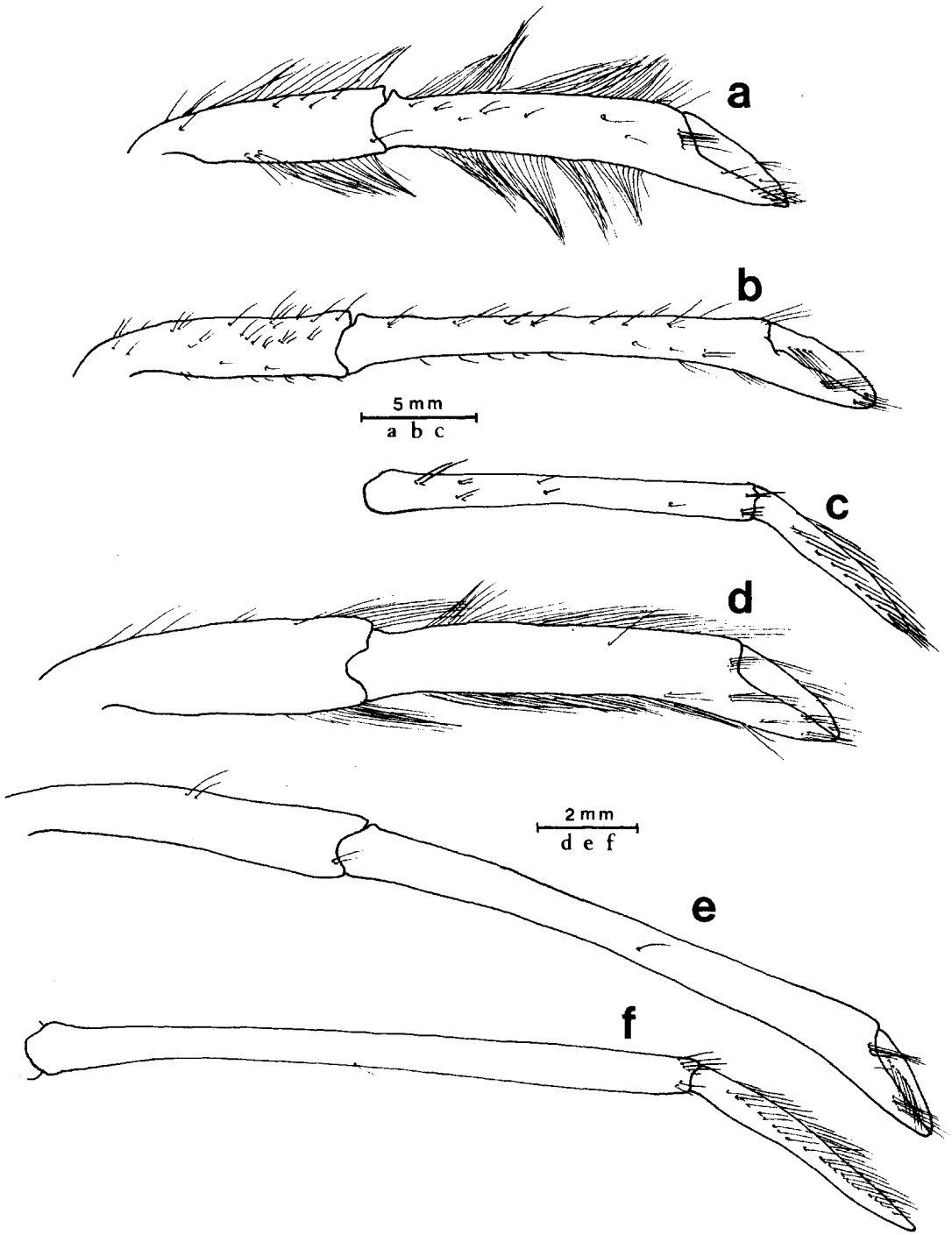

FIG. 9a-c. — *Nephropsis occidentalis* Faxon, ♀ 38 mm, Peru, 800 m (USNM 170556) : a, second pereiopod ; b, third pereiopod ; c, fourth pereiopod.

FIG. 9d-f. — *Nephropsis acanthura* sp. nov., paratype ♂ 30 mm, MUSORSTOM 5, New Caledonia, Stn 323, 970 m (MNHN-AS 517) : d, second pereiopod ; e, third pereiopod ; f, fourth pereiopod.

than the anterior border on the second segment. Telson bearing a strong, well-developed spine on the centre of the basal portion.

First pair of chelipeds with long setae but not densely pubescent. Merus with a subdistal spine dorsally and another on the inner anterior angle. Carpus with a long anterodorsal spine and another, smaller, anteroventral spine. A long spine on the inner anterior border near the articulation. Some thick granules scattered on the dorsal and outer margins. A strong spine medially on the dorsal border. Carpus of second pair of pereiopods somewhat smaller than hand length ; carpus of third pair of pereiopods two-thirds hand length. Dactyli of fourth and fifth pereiopods more than one-half propodus length.

Coxal process on second pair of pereiopods of males and females terminating in a sharp process. Coxae on third pair of pereiopods in males with a triangular projection the posterior portion of which is recurved, bearing some denticles or spines in some specimens. Thelycum of females raised, anterior border ending in a rounded lobe. Posterior incision broad.

Exopod of uropod with a conspicuous, well-developed diaeresis. Outer border of exopods and endopods terminating in a spine.

REMARKS. — *N. occidentalis* is similar to *N. acanthura* sp. nov., the only two species of the genus to have a dorsal spine near the anterior margin of the telson. However, the two species are differentiated by several characters (see below, p. 312).

SIZE. — The males examined measured 43 mm. The females were between 38 and 47 mm. FAXON (1893) reported a female that measured 119 mm total length and 51 mm carapace length.

DISTRIBUTION. — West coast of America from Mexico to Chile. Depths between 800 and 1 250 m.

Nephropsis acanthura sp. nov.

Figs 5 d, 9 d-f, 11 a-b, 16 d

MATERIAL EXAMINED. — **Madagascar.** *Vauban* : CH 109, 22°16.9′ S-42°56′ E, 1 200 m, 30.11.1973 : 9 ♂ 18 to 24 mm ; 5 ♀ 15 to 26 mm (MNHN-AS 510). — CH 142, 13°45.6′ S-47°34.2′ E, 1 250-1 300 m, 28.02.1975 : 1 ♂ 18 mm ; 3 ♀ 17 to 20 mm (MNHN-AS 511).

Philippines. MUSORSTOM 1: stn CP 49, 750-925 m : 1 ♂ 16 mm (MNHN-AS 516). — Stn CP 54, 975-1 075 m : 1 ♀ 19 mm (MNHN-AS 515).

MUSORSTOM 2 : stn CP 56, 970 m : 1 ♂ 36 mm (MNHN-AS 546).

New Caledonia. BIOCAL : stn CP 31, 23°08′ S-166°51′ E, 850 m : 1 ♀ 26 mm (MNHN-AS 514).

Chesterfield Islands. MUSORSTOM 5 : stn CP 323, 970 m : 2 ♂ 26 and 30 mm ; 2 ♀ 19 and 30 mm (MNHN-AS 513, 517). — Stn CP 324, 970 m : 2 ♀ 17 and 29 mm (MNHN-AS 512).

Australia. CIDARIS 1 : stn 3-1, 18°08.22′ S-147°48.05′ E, 1 044-1 067 m, 06.05.1986 : 1 ♂ 32 mm. — Stn 8-1, 18°07.82′ S-148°15.39′ E, 1 115-1 119 m : 1 ♀ 28 mm. — Stn 14-1, 17°49.45′ S-148°39.51′ E, 990-1 006 m, 08.05.1986 : 2 ♂ 21 and 32 mm. — Stn 15-4, 17°45.99′ S-148°39.09′ E, 958-964 m, 09.05.1986 : 3 ♂ 21 to 36 mm ; 1 ♀ ov. 34 mm (JCU).

TYPES. — The male from MUSORSTOM 2, Stn CP 56, 36 mm (MNHN-AS 546) has been selected as holotype. The female from BIOCAL, Stn CP 31, 26 mm (MNHN-AS 514) is the allotype. The other specimens are paratypes.

DESCRIPTION. — Carapace finely granulate and sparsely pubescent. Rostrum with a pair of strong lateral spines placed midway along its length. Rostrum more than one-half the length of the rest of the carapace. Median groove on rostrum terminating at the level of the lateral rostral spines. Subdorsal carinae granulate with some small spines on the posterior portion placed somewhat behind the level of the supraorbital spine and reduced to small granules in some specimens. Sometimes one or two small postsupraorbital spines or acute granules. Distance between the level of the supraorbital spines and the gastric tubercle around one-half the distance between the gastric tubercle and the postcervical groove. Postcervical, cervical, and hepatic grooves distinct, the postcervical groove passing the dorsal midline. Carinae on the posterior portion of the carapace poorly developed. Distance between the orbital border and the postcervical groove somewhat more than twice the distance between the postcervical groove and the posterior border of the carapace.

Second to sixth abdominal sometimes with a conspicuous median carina covered with short but dense pubescence. Anterior border of abdominal pleura spineless. Anterior border of pleuron of second abdominal segment weakly convex, terminating in a long, acute point. Anterior borders of 3rd to 5th segments less convex than anterior border of second segment, also ending in a long, acute point. A strong dorsal spine near the base of the telson.

Merus of first pair of chelipeds with a subdistal dorsal spine. Carpus with a strong anterodorsal spine and another strong spine on the inner dorsal border midway along its length. Outer border without spines. A strong spine on the inner margin near the articulation with the palm. Carpus of second pair of pereiopods somewhat shorter than the palm ; carpus of third pair of pereiopods about two-thirds the size of the palm. Dactyli of fourth and fifth pereiopods less than one-half propodus length.

Coxal process on second pereiopod of males and females rounded. Coxal process on third pereiopod of males wide, with four-five sharp teeth, that of females toothless. Thelycum of females raised, anterior margin rounded. Posterior incision broad.

Exopod of uropod with a conspicuous, fully formed diaeresis. Outer border of exopods and endopods terminating in a spine.

REMARKS. — *N. acanthura* is closely related to *N. occidentalis* Faxon from the west coast of America. Both differ from all the other known species in the genus *Nephropsis* in having an erect dorsal spine near the anterior margin of the telson. The two species are differentiated by the following characters :

(a) Carapace smooth in *N. occidentalis*, with numerous small granules in *N. acanthura*.

(b) Rostrum more than one-half the length of the rest of the carapace in *N. acanthura*, clearly less than one-half in *N. occidentalis*.

(c) Anterior margin of second abdominal pleuron strongly convex in *N. occidentalis*, slightly convex in the new species. Furthermore, pleura of the second to fifth segments ending in a long, acute point in *N. acanthura* ; the points on these pleura shorter and less acute in *N. occidentalis*.

(d) Dactyli of fourth and fifth pereiopods less than one-half propodus length in *N. acanthura*, more than one-half in *N. occidentalis*.

ETYMOLOGY. — The name *acanthura* comes from the Greek, " akantha ", thorn, prickle, in reference to the erect dorsal spine on the telson.

SIZE. — The males examined ranged between 16 and 30 mm, the females between 15 and 30 mm.

DISTRIBUTION. — Off Madagascar, the Philippines, and New Caledonia, from 750 to 1 300 m.

Nephropsis stewarti Wood-Mason, 1873

Figs 5 e, 10, 11 c-d, 16 e

Nephropsis Stewarti Wood-Mason, 1873 a : 60 : 1873 b : 40, pl. 4 ; 1876 : 231 ; 1885 : 71. — A. MILNE EDWARDS, 1874 : pl. 20, figs 1-3. — ALCOCK & ANDERSON, 1896 : pl. 27, fig. 1 a ; 1899 : 286. — ANDERSON 1897 : 96. — ALCOCK, 1899 : 33 ; 1901a : 158 (key), 159. — LLOYD, 1907 : 3. — DE MAN, 1916 : 97, 111 (key). — BOUVIER, 1917 : 21. — BALSS, 1925 : 208.

Nephropsis stewarti - STEBBING, 1893 : 206. — THOMPSON, 1901 : 17. — ALCOCK, 1902 : 148. — CALMAN, 1925 : 21. — BOUVIER, 1925 : 412. — BARNARD, 1950 : 531. — ANONYMOUS, 1954 : 756, fig. 2179. — SEWELL, 1955 : 203. — HOLTHUIS, 1956 : 113 ; 1984 : unnumbered pages and figures. — HEMMING, 1959 : 285. — KUBO, 1965 : 629, fig. 1031. — SAKAI & YAMASHITA, 1968 : 43, fig. h. — BERRY, 1969 : 45. — NISHIMURA & SUZUKI, 1971 : 87. — CROSNIER & JOUANNIC, 1973 : 13. — BURUKOVSKY, 1974 : 109 (key) (ed. 1983 : 154). — MIYAKE, 1975 : 106, unnumbered figure ; 1982 : 77, pl. 26, fig. 1. — PHILLIPS *et al.*, 1980 : 66. — KENSLEY, 1981 : 29. — ABELE & FELGENHAUER, 1982 : 309, unnumbered figure. — GEORGE, 1983 : 19. — THOMAS, 1984 : 43. — BABA, 1986 : 153, 281, fig. 103.

Nephropsis stewartii - ALCOCK & ANDERSON, 1894 : 161. — RAMADAN 1938 : 124, fig. 1.

Nephropsis sp. - CHUN, 1900 : 366, unnumbered figure ; 1903 : 566, unnumbered figure.

MATERIAL EXAMINED. — **Madagascar.** *Vauban* : CH 21, 12°27.7′ S-48°12.5′ E, 600-605 m, 19.01.1972 : 1 ♂ 42 mm ; 2 ♀ 32 and 46 mm (MNHN-AS 471). — CH 23, 12°26.2′ S-48°13′ E, 600-605 m, 19.01.1975 : 9 ♂ 26 to 59 mm ; 7 ♀ 31

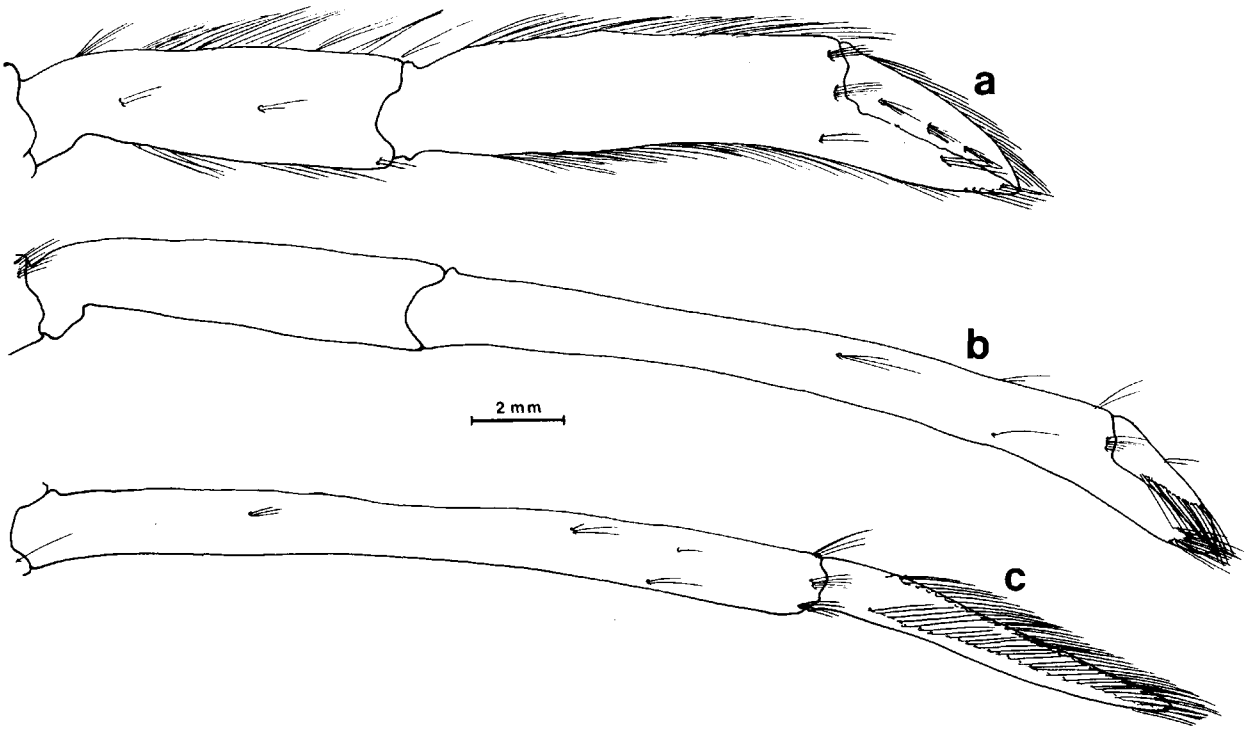

FIG. 10. — *Nephropsis stewarti* Wood Mason, ♀ 46 mm, *Vauban*, Madagascar, CH 21, 600-605 m (MNHN-AS 471) : a, second pereiopod ; b, third pereiopod ; c, fourth pereiopod.

and 56 mm ; 2 ♀ ov. 50 and 54 mm (MNHN-AS 470). — CH 33, 12°28.1′ S-48°12.2′ E, 600-605 m, 13.09.1972 : 2 ♂ 31 and 39 mm ; 2 ♀ 39 and 40 mm (MNHN-AS 435). — CH 48, 15°18′ S-46°12.1′ E, 480-510 m, 08.11.1972 : 1 ♂ 35 mm ; 1 ♀ 22 mm (MNHN-AS 433, 472). — CH 56, 23°36′ S-43°31.6′ E, 395-410 m, 26.02.1973 : 4 ♂ 36 to 42 mm (MNHN-AS 473). — CH 65, 23°35′ S-43°28.6′ E, 740-760 m, 29.02.1973 : 1 ♂ 59 mm (MNHN-AS 434).

Macareignes III : CH 3, 22°18.3′ S-43°05.6′ E, 350 m, 20.12.1985 : 4 ♂ 38 to 45 mm ; 2 ♀ ov. 42 and 43 mm ; 5 ♀ 40 to 43 mm (MNHN-AS 364). — CH 6, 22°27.5′ S-43°06.2′ E, 425-450 m, 21.12.1985 : 3 ♂ 29 to 35 mm ; 3 ♀ 28 to 39 mm (MNHN-AS 365). — CH 7, 22°17.4′ S-43°04.8′ E, 400-425 m, 22.12.1985 : 3 ♂ 27 to 37 mm (MNHN-AS 366). — CH 28, 22°30′ S-43°07′ E, 450 m, 15.01.1986 : 4 ♂ 27 to 37 mm ; 6 ♀ 28 to 40 mm (MNHN-AS 352). — CH 37, 22°26.5′ S-43°05.6′ E, 450-475 m, 21.01.1986 : 1 ♂ 47 mm (MNHN-AS 363). — CH 42, 22°22.9′ S-43°04.7′ E, 395-425 m, 22.01.1986 : 2 ♀ 38 and 39 mm (MNHN-AS 362). — CH 63, 22°26.8′ S-43°05.4′ E, 530 m, 20.12.1986 : 2 ♂ 57 and 66 mm (MNHN-AS 426). — CH 69, 22°21.9′ S-43°04.8′ E, 350-420 m, 21.10.1986 : 2 ♀ 40 and 42 mm (MNHN-AS 474). — CH 78, 22°20.5′ S-43°03.1′ E, 530 m, 24.01.1986 : 3 ♂ 36 to 57 mm (MNHN-AS 427). — CH 81, 22°22.8′ S-43°03.3′ E, 525 m, 25.10.1986 : 1 ♀ 51 mm (MNHN-AS 429). — CH 108, 22°15.4′ S-43°00.8′ E, 800 m, 26.11.1986 : 1 ♀ 45 mm (MNHN-AS 430). — CH 113, 22°11.3′ S-43°02.3′ E, 650 m, 27.11.1986 : 1 ♀ 23 mm (MNHN-AS 432). — CH 117, 22°15′ S-43°06.5′ E, 370 m, 28.11.1986 : 1 ♀ 41 mm (MNHN-AS 431). — CH 122, 22°16.8′ S-43°02.7′ E, 600 m, 30.11.1986 : 1 ♂ 47 mm ; 1 ♀ 51 mm (MNHN-AS 428). — CH 123, 22°16.7′ S-43°00.6′ E, 800 m, 30.11.1986 : 1 ♂ 71 mm ; 1 ♀ 50 mm (MNHN-AS 425).

Philippines. MUSORSTOM 1 : stn 47, 685-757 m : 1 ♂ 39 mm ; 1 ♀ 49 mm (MNHN-AS 475). — Stn 50, 415-510 m : 4 ♂ 22 to 36 mm ; 5 ♀ 14 to 30 mm (MNHN-AS 478, 480). — Stn 51, 170-200 m : 1 ♀ 27 mm (MNHN-AS 479).

MUSORSTOM 2 : stn CP 44, 760-820 m : 1 ♀ 70 mm (MNHN-AS 476). — Stn CP 75, 300-330 m : 1 ♀ 35 mm (MNHN-AS 482).

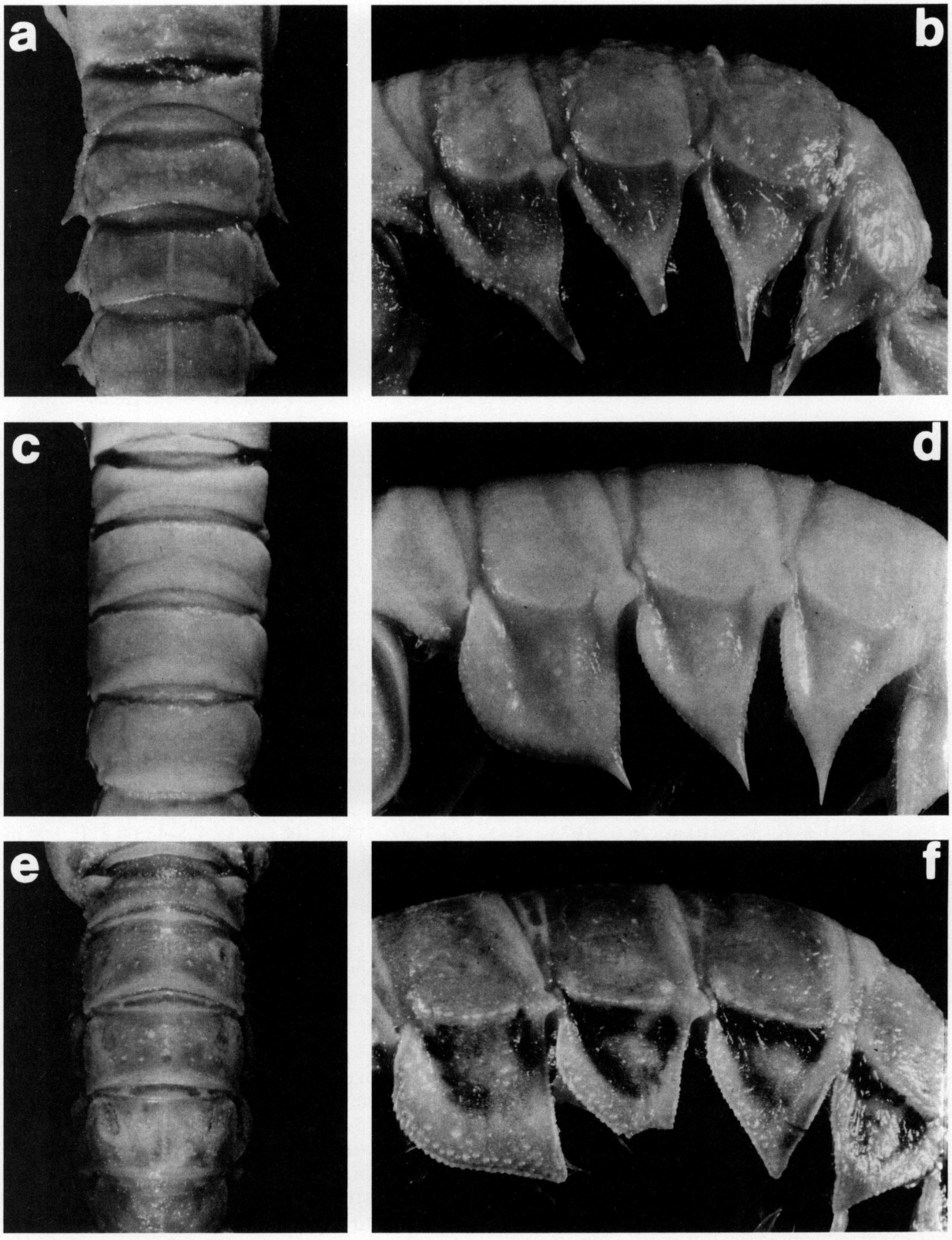

FIG. 11a-b. — *Nephropsis acanthura* sp. nov., holotype ♂ 36 mm, MUSORSTOM 2, Philippines, Stn 56, 970 m (MNHN-AS 546) : Anterior part of the abdomen : a, dorsal view ; b, lateral view.

FIG. 11c-d. — *Nephropsis stewarti* Wood Mason, ♂ 39 mm, *Vauban*, Madagascar, CH 33, 600-605 m (MNHN-AS 435) : Anterior part of the abdomen : c, dorsal view ; d, lateral view.

FIG. 11e-f. — *Nephropsis carpenteri* Wood Mason, ♂ 30 mm, Bay of Bengal, 357 m (BMNH 1894.5.4.4) : Anterior part of the abdomen : e, dorsal view ; f, lateral view.

MUSORSTOM 3 : stn CP 105, 398-417 m : 1 ♂ 38 mm (MNHN-AS 487). — Stn CP 118, 448-466 m : 1 ♀ 36 mm (MNHN-AS 486). — Stn CP 122, 673-675 m : 1 ♀ 15 mm (MNHN-AS 484). — Stn CP 123, 700-702 m : 1 ♂ 23 mm (MNHN-AS 488). — Stn CP 128, 815-821 m : 1 ♂ 42 mm ; 1 ♀ 56 mm (MNHN-AS 477). — Stn CP 135, 486-551 m : 1 ♀ 35 mm (MNHN-AS 485).

Albatross : stn 5260, 12°25'35" N-121°31'35" E, 428 m, 03.06.1908 : 1 ♂ 45 mm ; 1 ♀ 34 mm. — Stn 5537, 09°11' N-123°23' E, 470 m, 19.08.1909 : 1 ♂ 33 mm ; 1 ♀ 35 mm (USNM).

Gulf of Aden. JOHN MURRAY EXP. : stn 34, 13°05'36" N-46°24'42" E, 1 022 m, 16.10.1933 : 1 ♂ 57 mm (BMNH). — Stn 193, 13°06'12" N, 46°24'30" E, 1 061-1 080 m, 07.05.1934 : 1 ♀ 58 mm (BMNH 1937.12.7.210-215).

Andaman Sea : 11°31'46" N-92°46'40" E, 348-407 m : 1 ♂ 45 mm (BMNH 1894.5.11.3). — 11°31'40" N-92°46'40" E, 210-344 m : 1 ♂ 52 mm (USNM).

South Africa. *Africana* : stn TO5, 30°06.6' S-31°10.1' E, 474 m, 26.08.1986 : 1 ♀ 23 mm (ICM 1036).

DESCRIPTION. — Carapace slightly granulate. Rostrum with one pair of lateral spines located midway along the length of the rostrum. Rostral length sligthly longer than one-half the rest of the carapace. Median groove overreaching the lateral spines. Subdorsal carinae granulate, without spines. Supraorbital spine and antennal spine approximately the same size as the rostral spines. No postsupraorbital spine present. Distance between the gastric tubercle and the supraorbital spine, measured along the median line of the carapace, slightly less than one-half the distance between the gastric tubercle and the postcervical groove. Postcervical, cervical, and hepatic grooves distinct. Postcervical groove deep, crossing the median line of the carapace. Intermediate and lateral carinae also distinct. Distance between the orbital margin and postcervical groove more than 1.5 times the distance between the postcervical groove and the posterior border of the carapace.

Second to sixth abdominal somites without longitudinal carinae dorsally. Tergum densely pubescent, unlike the greater part of the surface of the pleura, which is smooth and bright. Anterior margin of pleuron of second segment convex, ending in a long, sharp point. Anterior margins of pleura of 3rd to 5th somites less convex than the anterior margin of the pleuron on the 2nd somite, ending in a long, acute point. None of the anterior margins bearing a spine or tooth.

First chelipeds densely pubescent, mainly on the outer and upper surfaces of the merus, carpus, and chela. Chela about 1.7 times longer than high. Carpus with an anterodorsal and an anteroventral spine. Two spines on the dorsal margin, midway along the length of the carpus. Outer margin spineless. A spine on the inner anterior margin near the articulation of the palm. Carpus of second pereiopod slightly shorter then the palm. Carpus on third leg 0.6 times palm length. Dactyli of fourth and fifth legs about one-half as long as the propodus.

Coxa of second pereiopod in males and females bearing a small, rounded process. Process on coxa of third leg of males rounded and not very broad, ending in a single, high, sharp tooth on the outer surface near the articulation with the basis. A small, rounded process medially on the posterior border. Coxa in females rounded, without a process.

Thelycum of females raised, anterior border bilobate, the lobes separated by a wide incision. Posterior border with a deep incision, broader than that on the anterior border.

Outer lobe of uropodal protopodite ending in a spine. Inner lobe with a distinct spine. Uropodal exopod bearing a distinct and complete diaeresis.

REMARKS. — *N. stewarti* belongs to the group of species with one pair of lateral spines on the rostrum, no spines on the anterior borders of the abdominal pleurae, and a diaeresis on the exopod of the uropod.

The closest species are *N. rosea* Bate and *N. aculeata* Smith from the Western Atlantic and *N. carpenteri* Wood-Mason from the Bay of Bengal. These species are easily distinguished by the presence of a distinct median carina on the second to sixth abdominal tergites ; this median carina is absent in *N. stewarti.*

SIZE. — The males examined ranged between 22 and 71 mm, females between 14 and 70 mm. Ovigerous females from 42 mm.

DISTRIBUTION. — The species has been caught in the waters of Madagascar, Natal, Mozam-

bique, Kenya, the Gulf of Aden, the Andaman Sea, the Bay of Bengal, Indonesia, the Philippines, and Japan. Depths between 170 and 1 000 m. More abundant between 500 and 750 m (CROSNIER & JOUANNIC, 1973).

Nephropsis carpenteri Wood-Mason, 1885

Figs 5 f, 11 e-f, 12, 16 f

Nephropsis carpenteri Wood-Mason, 1885 : 70. — ALCOCK & ANDERSON, 1894 : 161 ; 1896 : pl. 27, figs 2, 2 a. — BOUVIER, 1925 : 412. — GEORGE & RAO, 1966 : 333. — BURUKOVSKY, 1973 : 109 (key) (ed. 1983 : 154). — PHILLIPS *et al.*, 1980 : 66.

Nephropsis Carpenteri - ALCOCK, 1899 : 33 ; 1901a : 158 (key), 160. — THOMPSON, 1901 : 17. — BALSS, 1914 : 83 ; 1925 : 208. — DE MAN, 1916 : 97, 112 (key). — BOUVIER, 1917 : 20.

MATERIAL EXAMINED. — **India.** Bay of Bengal, 357 m : 1 ♂ 30 mm ; 1 ♀ 42 mm (BMNH 1894. 5.4.4). — *Ibidem*, 353 m : 1 ♀ 38 mm (USNM). — Cochin, 24.03.1979 : 1 ♀ 40 mm (RMNH).

Burma. SW Rangoon, 250-320 m : 1 ♀ ov. 41 mm (RMNH 35849).

DESCRIPTION. — Carapace globose, with some small, scattered granules, more densely packed on the anterior half. Rostrum bearing only one lateral spine per side. Rostral length 0.3 times the length of the rest of the carapace. Spines moderately strong and placed slightly before or at the midpoint of the rostrum. Median groove slightly overreaching the lateral spines. Subdorsal carinae finely granulate, without spines. A supraorbital and an antennal spine similar to the rostral spines in size. No trace of a second postsupraorbital spine behind the supraorbital spine. Distance between the level of the supraorbital spines and the gastric tubercle, measured along the median line of the carapace, about one-third the distance between the gastric tubercle and the postcervical groove. Postcervical, cervical, and hepatic grooves distinct. Postcervical groove failing to pass the midline of the carapace. Lateral and intermediate carinae not very conspicuous.

Abdomen finely granulate and pubescent, with short setae, no spines on tergites and pleura. A low, median carina slightly visible on the second to sixth somites. Anterior margins of pleura granulate and spineless. Pleuron of first abdominal somite low and rounded. Anterior margin of pleuron of second abdominal somite rounded, terminating in a brief, rounded point. Anterior margins of the third to fifth somites convex, ending in an acute point.

Chelipeds granulate, heavily setose on the outer surface, especially on the chela and the carpus. Anterior border of merus bearing two spines, one on the outer border and another on the ventral border. One strong spine on the inner anterior margin. Carpus with one-three spines medially on the upper border. Anterior border with two spines, one dorsally and one ventrally. Sometimes a spine on the outer surface somewhat behind the midpoint of the anterior margin. A strong spine on the inner anterior margin near the articulation with the palm.

Carpus of second pereiopod more than two-thirds palm length. Carpus of third pereiopod around 1.5 times longer than the palm. Propodus of fourth pereiopod twice as long as the dactylus.

Coxal process of second pereiopod of males and females gently rounded. Coxal process of third pereiopod of males slightly flattened, with one spine near the articulation with the basis and another spine medially on the posterior border. In females a single spine near the articulation with the basis.

Thelycum of females raised, with the anterior border split into two lobes separated by a wide incision. Incision on posterior border wider than that on the anterior border.

Exopod of uropod with a distinct diaeresis. Outer border of exopods and endopods ending in a spine.

REMARKS. — *Nephropsis carpenteri* is closely related to *N. aculeata* Smith and *N. rosea* Bate from the Western Atlantic. All three species have a single pair of lateral spines on the rostrum, a median carina on the second to fifth abdominal tergites, a diaeresis on the exopod of the uropod, and a smooth, spineless anterior border of the pleuron on the second abdominal segment.

However, *N. carpenteri* can be differentiated from *N. aculeata* by the following characters :

(a) Rostrum about one-half the rest of the carapace in *N. aculeata*, one-third in *N. carpenteri.*

(b) Dorsorostral carina and median groove of rostrum more conspicuous in *N. aculeata.*

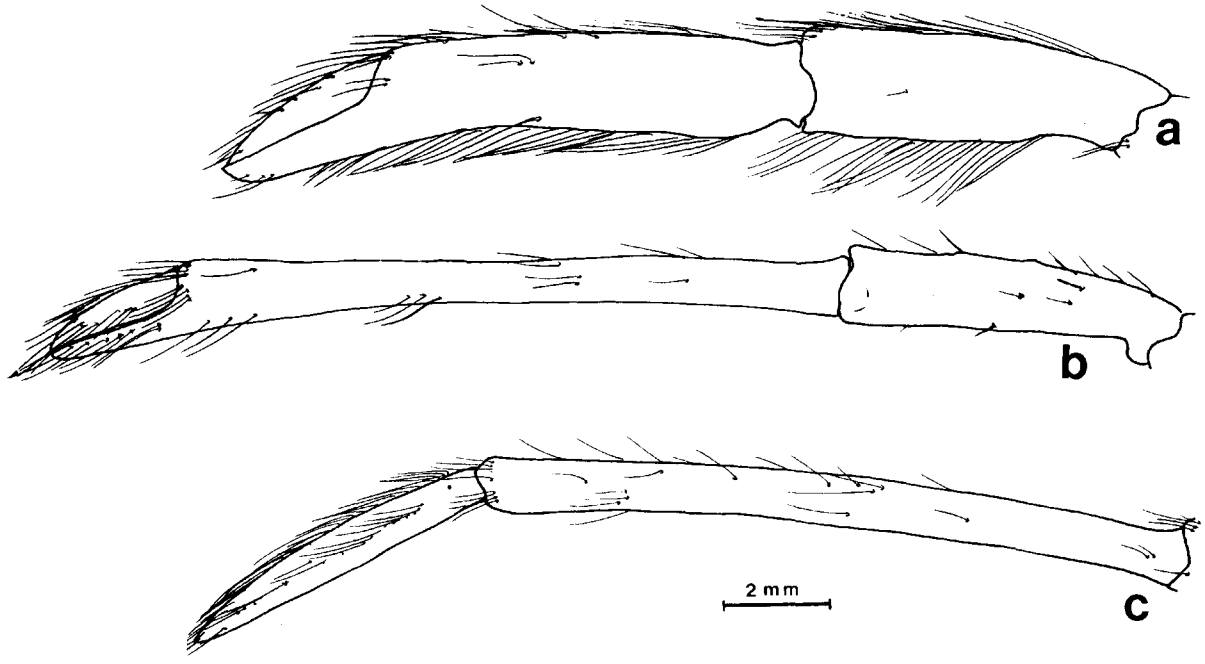

FIG. 12. — *Nephropsis carpenteri* Wood Mason, ♂ 30 mm, Bay of Bengal, 357 m (BMNH 1894.5.4.4) : a, second pereiopod ; b, third pereiopod ; c, fourth pereiopod.

(c) Anterior borders of pleura of second to fifth abdominal segments ending in a long, sharp point in *N. aculeata*, clearly more rounded, ending in a brief point, in *N. carpenteri.*

(d) Merus and carpus of first cheliped bearing more spines in *N. aculeata.*

(e) Carpus of second pereiopod shorter than the palm in *N. carpenteri*, longer in *N. aculeata.*

N. carpenteri can be differentiated from *N. rosea* by the following characters :

(a) Distance between the supraorbital spines and the gastric tubercle about one-third the distance between the gastric tubercle and post-cervical groove in *N. carpenteri*, more than one-half in *N. rosea.*

(b) A postsupraorbital spine behind the supraorbital spine present in *N. rosea*, absent in *N. carpenteri.*

SIZE. — The male examined measures 30 mm, the females between 40 and 42 mm.

DISTRIBUTION. — Known only from the Bay of Bengal at depths of 250-503 m.

Nephropsis malhaensis Borradaile, 1910

Figs 13 a-b, 14 c-d

Nephropsis malhaensis Borradaile, 1910 : 262. — DE MAN, 1916 : 97, 111 (key). — BOUVIER, 1917 : 21. — BALSS, 1925 : 208. — BURUKOVSKY, 1973 : 110 (key) (ed. 1983 : 154). — PHILLIPS *et al.*, 1980 : 66.

Nephropsis malhaersis - BOUVIER, 1925 : 409 (erroneous spelling).

MATERIAL EXAMINED. — **Indian Ocean : Saya de Malha**, 555-925 m : 1 ♀ holotype, 25 mm (CM-Cr 117).

DESCRIPTION. — Carapace finely granulate. Rostrum somewhat less than one-half the length of the rest of the carapace, with two lateral spines on the left side and only one on the right, on the proximal half of the rostrum. Median groove overreaching the anterior pair of lateral spines. Two subdorsal carinae more or less granulate, each with a spine smaller than the lateral rostral spines placed above the supraorbital spines. Latter strong and the same size as the

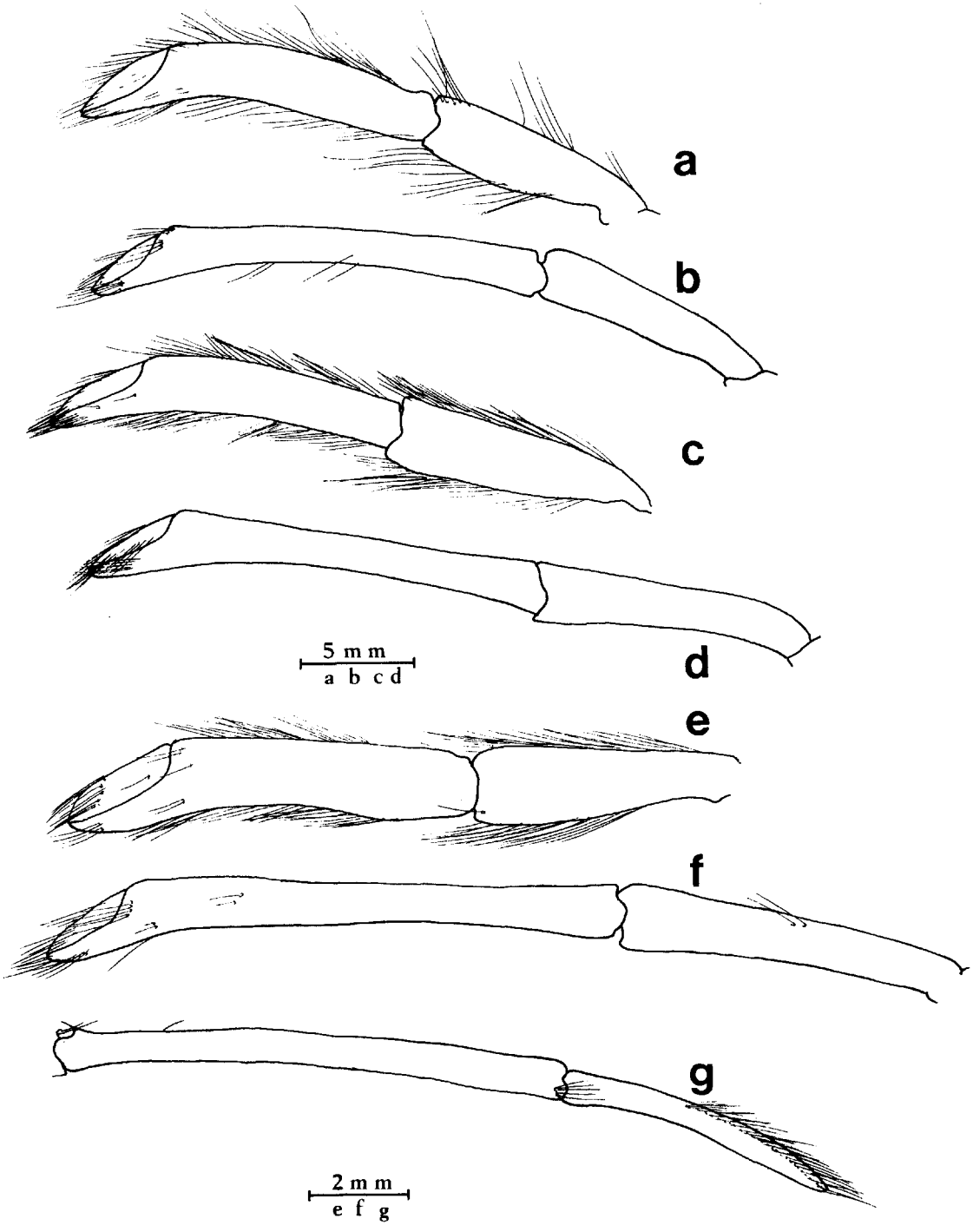

FIG. 13a-b. — *Nephropsis malhaensis* Borradaile, holotype ♀ 25 mm, Saya de Malha, 555-925 m (CM-CT 117) : a, second pereiopod ; b, third pereiopod.

FIG. 13c-d. — *Nephropsis atlantica* Norman, ♂ 25 mm, Triton Expedition, Faeroe Channel (BMNH) : c, second pereiopod ; d, third pereiopod.

FIG. 13e-g. — *Nephropsis sulcata* sp. nov., holotype ♂ 30 mm, MUSORSTOM 2, Philippines, Stn 56, 970 m (MNHN-AS 523) : e, second pereiopod ; f, third pereiopod ; g, fifth pereiopod.

antennal spine. One small postsupraorbital spine behind the supraorbital spine. Distance between the level of the supraorbital spines and the gastric tubercle, measured along the median line, 0.6 times the distance between the gastric tubercle and the postcervical groove. Intestinal tubercle high. Intermediate and intestinal carinae faint, lateral carina rather indistinct. Postcervical, cervical, and hepatic grooves distinct. Dorsomedian groove with two bumps (gastric and intestinal granules).

Abdomen finely granulate, without spines. No distinct median carina visible on 2nd to 6th somites. A more highly raised carina extending along the base of each pleuron. Terga and pleura without pubescence. Pleuron of first abdominal segment with a small, rounded anterior lobe. Anterior margin of second pleuron convex, with one small spine on the basal half. All pleura terminating in long, sharp points and bearing small granules on the margins. Sixth segment with an acute spine on the posterior surface of the pleuron.

First pair of pereiopods not setose. Merus with one anterodorsal and one anteroventral spine, similar in size. Carpus also bearing an anterodorsal and an anteroventral spine. On the outer surface two more spines a short distance behind the anterior margin, one closer to the anterodorsal spine and one closer to the anteroventral spine; an additional spine behind the upper of these two spines. A single spine present on the upper half of the inner surface some distance behind the anterior margin. Carpus of second pereiopod 0.8 times palm length. Carpus of third pereiopod slightly longer than one-half palm length. Dactylus of fifth pereiopod 0.6 times propodus length.

Thelycum of females raised. Posterior incision narrow. Two widely separated, longitudinal ridges in front the thelycum between the bases of the 2nd and 3rd legs.

Exopod of uropod with a distinct diaeresis. Outer lobe of uropodal protopod blunt, inner lobe bearing a slender spine.

REMARKS. — *Nephropsis malhaensis* is known exclusively from the type specimen, caught on the Saya de Malha Bank. No other specimen has yet been captured, and hence possible variations in its specific characters are still unknown.

N. malhaensis is close to *N. atlantica* Norman from the Eastern Atlantic and to *N. sulcata* sp. nov. from the Indian Ocean and Western Pacific. All three species have two pairs of lateral spines on the rostrum (the only known specimen of *N. malhaensis* has one of the four spines missing, fig. 14 c) and a diaeresis on the exopod of the uropod. Nevertheless, *N. malhaensis* can be readily differentiated from both these species by the absence of median carinae on the tergites of the 2nd to 5th abdominal segments, which are conspicuously present in the other species.

The most constant of the four differences with respect to *N. atlantica* pointed on by BORRADAILE (1910) is the absence of the median abdominal carinae, since the pubescence of the body and the spinulation of the carapace are subject to a certain amount of variation in *N. atlantica* (as is also the case in *N. sulcata*). The spinulation of the carapace in *N. malhaensis* is more similar to that observed in the specimens of *N. sulcata* taken off Madagascar. Moreover, the carpus of the second pereiopod is shorter than the length of the palm in *N. malhaensis*, equal to or slightly longer than the palm in *N. atlantica*. Additionally, the carpus of the third pereiopod is slightly longer than one-half of the palm length in *N. malhaensis*, but nearly 0.8 times palm length in *N. atlantica*.

The absence of median abdominal carinae relates this species to *N. stewarti* Wood-Mason, but this latter has only a single pair of lateral spines on the rostrum, and the anterior border of the pleuron of the second abdominal segment is smooth and distinctly more convex.

SIZE. — The only specimen caught to date is a female with a carapace length of 25 mm.

DISTRIBUTION. — Known only from the Saya de Malha Bank in the Southwestern Indian Ocean at depths of 555-925 m.

Nephropsis sulcata sp. nov.

Figs 13 e-g, 14 a-b, 15 a-b, 16 g

Nephropsis atlantica - WOOD-MASON, 1891 : 197, fig. 4. — ALCOCK 1894 a : 230; 1899 : 33; 1901 a : 158 (key). — ALCOCK & ANDERSON, 1894 : 162. — ANDERSON, 1897 : 96. — STEBBING, 1902 a : 34; 1902 b : 130; 1910 : 379. — GILCHRIST, 1918 : 48. — VON BONDE,