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## The Nereididae (Polychaeta) from Australia – *Leonnates*, *Platynereis* and *Solomononereis*

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**ABSTRACT.** *Leonnates crinitus* n.sp., *L. bolus* n.sp. and *Platynereis uniseris* n.sp. are described from Northern Australia. A systematic account of *Leonnates*, *Platynereis* and *Solomononereis* known from Australia and a key to species recorded from Australia is provided.

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In this paper, the second in a series to describe the nereidid fauna of Australia, *Leonnates*, *Platynereis* and *Solomononereis* are discussed. We describe 11 species, three of which are new: *Leonnates crinitus* n.sp., *L. bolus* n.sp. and *Platynereis uniseris* n.sp. *Leonnates jousseaumei* Gravier and *Solomononereis marauensis* Gibbs are new records for Australian waters.

A key to the genera of nereidids occurring worldwide is given by Fauchald (1977). In the final paper of this series on Australian nereidids, a key to the genera and species occurring in Australia will be given.

The three genera discussed in this paper, belong to two groups identified by Fitzhugh (1987) as being closely related to one another. The two other genera in these groups *Perinereis* and *Ceratonereis* which are both extremely well represented in Australian waters, form the basis of other papers (Hutchings *et al.*, in press; Hutchings & Reid, in preparation).

We have used the terminology described in the first

paper on the Gymnonereidinae (Hutchings & Reid, 1990). The following abbreviations have been used in the text: AHF - Allan Hancock Foundation, Los Angeles, California (Polychaete collections now located at the Los Angeles County Museum); AM - Australian Museum, Sydney; BMNH - British Museum (Natural History), London; NMV - National Museum of Victoria, now Museum of Victoria, Melbourne; NTM - Northern Territory Museum, Darwin; QM - Queensland Museum, Brisbane; SAM - South Australian Museum, Adelaide; SSM - Naturhistoriska Riksmuseet, Stockholm; TASM - Tasmanian Museum, Hobart; USNM - National Museum of Natural History, Smithsonian Institution, Washington D.C.; WAM - Western Australian Museum, Perth. Non-Australian distributions are in most cases based on the literature, whereas Australian distributions are based upon material examined. Where information was available, depths and dates of collection are given with each specimen examined.

*Leonnates* Kinberg

*Leonnates* Kinberg, 1866: 168.–Fauchald, 1977: 89.

**Type species.** *Leonnates indicus* Kinberg, 1866, by original designation.

**Diagnosis.** Prostomium with 2 antennae, bi-articulate palps, 2 pairs of eyes. Oral ring of pharynx either smooth,

or with soft papillae. Maxillary ring with paragnaths or papillae. Four pairs of tentacular cirri, parapodia biramous. Notosetae homogomph spinigers, neurosetae heterogomph falcigers with coarsely serrated blades.

**Remarks.** Fauchald (1977) records that ten species of this genus have been described. No comprehensive revision of the genus has been undertaken. The majority of species have been described from the tropics.

**Key to Australian Species of *Leonnates***

- 1. Area V of pharynx with papillae .....*Leonnates stephensoni*
- Area V of pharynx without papillae ..... 2
- 2. Maxillary ring paragnaths of Areas I-II and III-IV in continuous bands .....*L. bolus* n.sp
- Maxillary ring paragnaths of each Area in discrete clusters ..... 3
- 3. Neuropodial falciger blades boldly serrated with pointed terminal tooth. Notopodial falcigers present posteriorly .....*L. jousseaumei*
- Neuropodial falciger blades finely serrated with blunt terminal tooth. Notopodial falcigers absent ..... 4
- 4. Area I of pharynx without paragnaths, Area III with 6-16 paragnaths .....*L. decipiens*
- Area I of pharynx with paragnaths, Area III with 25-40 paragnaths .....*L. crinitus* n.sp.

***Leonnates bolus* n.sp.**

Fig.1a-h

**Material examined.** HOLOTYPE: Northern Territory, Darwin Harbour, East Arm, 12°30'S 130°55'E, mangroves, 14 Dec. 1984, 1(NTM W2518) 50 mm long, 2 mm wide, 1.3 mm jaw length, 120 setigers, complete. PARATYPES: Western Australia, Admiralty Gulf, Port Warrender, 14°35'S 125°53'E, Oct. 1976, 1(WAM 422-86) 42 mm long, 3 mm wide, 1.6 mm jaw length, 68 setigers, incomplete; 1(USNM 127644) 52 mm long, 2.4 mm wide, 1.5 mm jaw length, 88 setigers, incomplete.

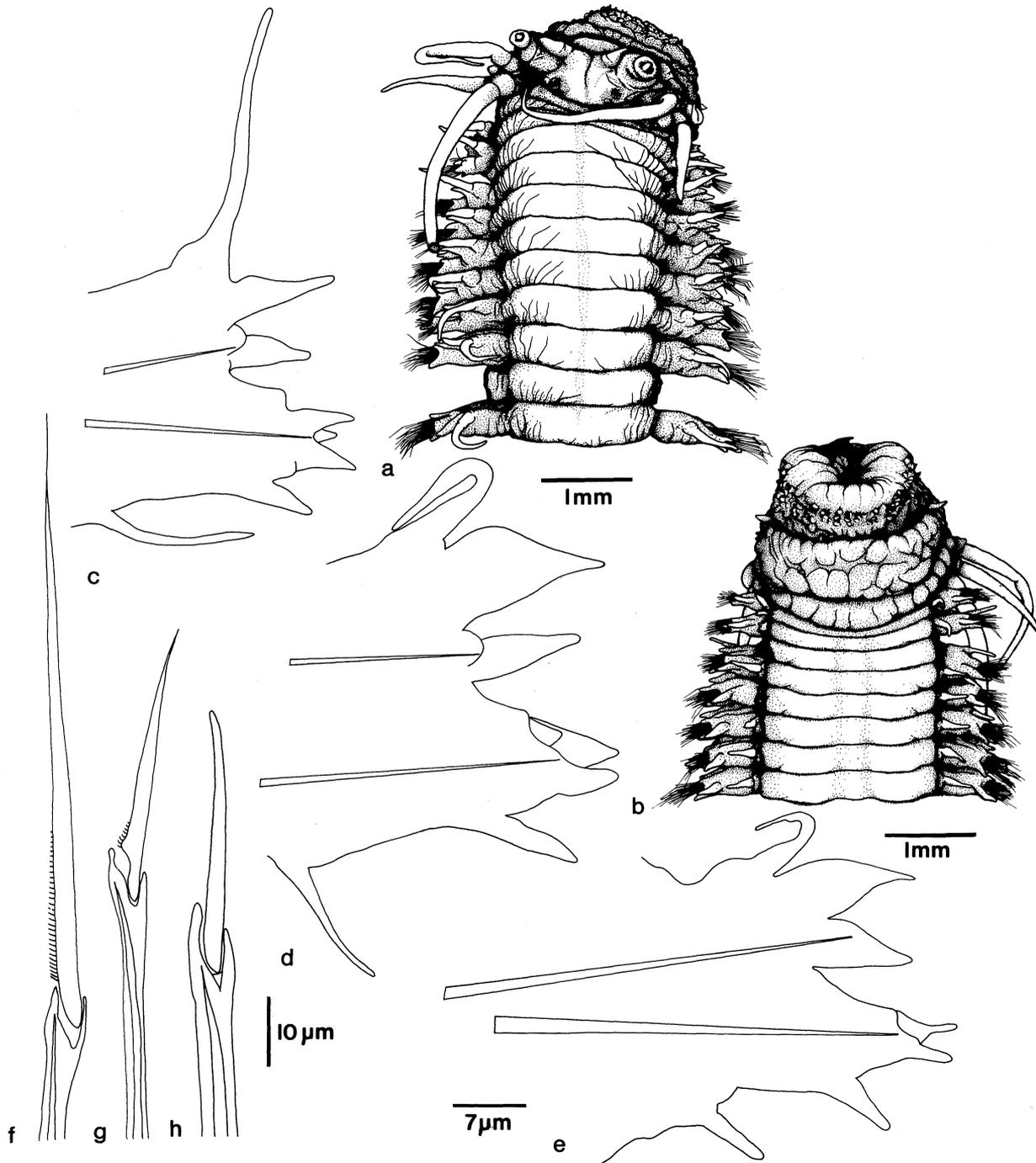
**Description.** Colour in alcohol cream. Prostomium rectangular with deep median furrow, eyes black with distinct lenses, anterior pair largest. Palps cylindrical

with globular palpostyles; antennae conical, extending to tip of palps (Fig.1a). Dorsalmost pair of tentacular cirri longest, broken in the holotype, extending approximately to setiger 19 on paratype material. Jaws robust, heavily sclerotised, with 10 fine teeth. Pharynx with paragnaths on maxillary ring arranged as follows: Area I = 18, II = 9, III = 35, IV = 9; paragnaths in Areas I-II in continuous band 2-3 deep, with paragnaths in Area II larger than those in Area I. Similar arrangement ventrally. Areas I-II and III-IV separated by gap laterally (Fig.1a-b). Oral ring with papillae arranged as follows: Area V = 0, VI = 2, VII-VIII = 8. Oral ring with papillae arranged in 2 rows, row of large blunt papillae in an evenly spaced band in centre of ring and row of small, conical, sharply pointed papillae close to intersection of oral and maxillary rings (Fig.1a-b).

Anterior notopodia with broad based, conical dorsal ligule, narrow, shorter conical median ligule and long

tapering dorsal cirrus that greatly exceeds length of dorsal ligule (Fig.1c-d). Low, rounded superior lobe present. Neuropodia with narrow, conical superior and inferior lobes; superior lobe slightly shorter than inferior lobe. Postsetal lobe conical, shorter than acicular lobes. Ventral ligule short, conical. Narrow tapering ventral

cirrus. Median and posterior parapodia with lobe proportions as for anterior parapodia but with all lobes decreased in size. Anal cirri long, fine, as long as last 12 setigers. Notosetae homogomph and heterogomph spinigers; neurosetae homogomph and heterogomph spinigers; neurosetae homogomph and heterogomph spinigers in supra-acicular fascicle, heterogomph



**Fig.1.** *Leonnates bolus* n.sp. Holotype: (a) anterior end, dorsal view; (b) anterior end ventral view; (c) parapodium 3, anterior view; (d) parapodium 20, anterior view; (e) parapodium 50, anterior view; (f) homogomph spiniger, parapodium 20 (neuropodium, supra-acicular fascicle); (g) heterogomph spiniger, parapodium 20 (neuropodium, subacicular fascicle); (h) paratype: (WAM 422-86), heterogomph falciger, parapodium 3 (neuropodium, subacicular fascicle).

spinigers in subacicular fascicle (Fig.1f-g). Subacicular fascicle of far anterior parapodia with 2 smooth, long-bladed heterogomph falcigers (Fig.1h). Spinigers of 2 types, long and short bladed. Spinigers in middle, anterior and ventralmost positions of subacicular fascicle short bladed.

**Variation.** Paratypes are pink-brown in colour. The following variation in paragnath and papillae counts is found:- maxillary ring paragnaths: Area I = 14-18, II = 12-14, III = 28-36, IV = 8-10; oral ring papillae: Area V = 0, VI = 2, VII-VIII = 8-9 (with 4 small and 4-5 large papillae). Maxillary ring paragnaths form continuous band with individual Areas not well defined. Neurosetae numerous. Falcigers present in the neuropodia of parapodia 3 of one paratype only. Falcigers not present in parapodia 10 of any paratypes. It appears that these falcigers are confined to far anterior setigers and are few in number.

**Remarks.** The species can be readily distinguished from other species of *Leonnates* in the unusual arrangement of pharyngeal papillae and paragnaths. The latter are arranged in two broad bands and the former composed of large blunt and small, sharply pointed papillae which are widely spaced. *Leonnates bolus* n.sp. can be distinguished from *L. decipiens* Fauvel, 1929 by the greater number of paragnaths occurring on Area III.

**Habitat.** Mangroves. The holotype (NTM W2518) was found inside mounds made by the burrowing lobster, *Thalassina squamifera* de Man. Specific habitat details for the paratypes are not available.

**Distribution.** Australia (Northern Australia, from Admiralty Gulf Western Australia 14°35'S 125°53'E to Darwin Harbour 12°30'S 130°55'E).

**Etymology.** The specific name *bolus* from the latin meaning 'lump of earth' refers to the *Thalassina* mound in which the holotype was found.

### *Leonnates crinitus* n.sp.

Fig.2a-g

**Material examined.** HOLOTYPE: Queensland, Cairns, Trinity Bay, 16°25'S 145°27'E, intertidal, 10 Dec. 1974, 1(QM GH4683), 62 mm long, 2.0 mm wide, 1.5 mm jaw length, 99 setigers, incomplete. PARATYPES: Queensland, Cairns, Trinity Bay, 16°25'S 145°27'E, intertidal, 10 Dec. 1974, 1(QM GH4684), (BMNH ZB1989.30), (USNM 123355). Paratypes range from 20-29 mm long, 2.0-2.2 mm wide, 1.8-2.0 mm jaw length, 33-47 setigers. All paratypes incomplete.

**Non-type material.** Northern Territory, Port Essington, Wangewanja Cove, 11°23'S 132°09'E,

intertidal, 13 Sept. 1985, 1(NTM W3348); Cobourg Peninsula, Trepang Bay, 11°07'S 113°58'E, 5 m, 15 Sept. 1981, 3(NTM W00388). Queensland, Proserpine, 20°24'S 148°35'E, intertidal, (QM G10498); Moreton Bay, Bramble Bay, 27°25'S 153°20'E, 2.5 m, Dec. 1973 (QM GH4038). Specimens range in size up to 80 mm long, 3.2 mm wide, 2.7 mm jaw length, 146 setigers, complete.

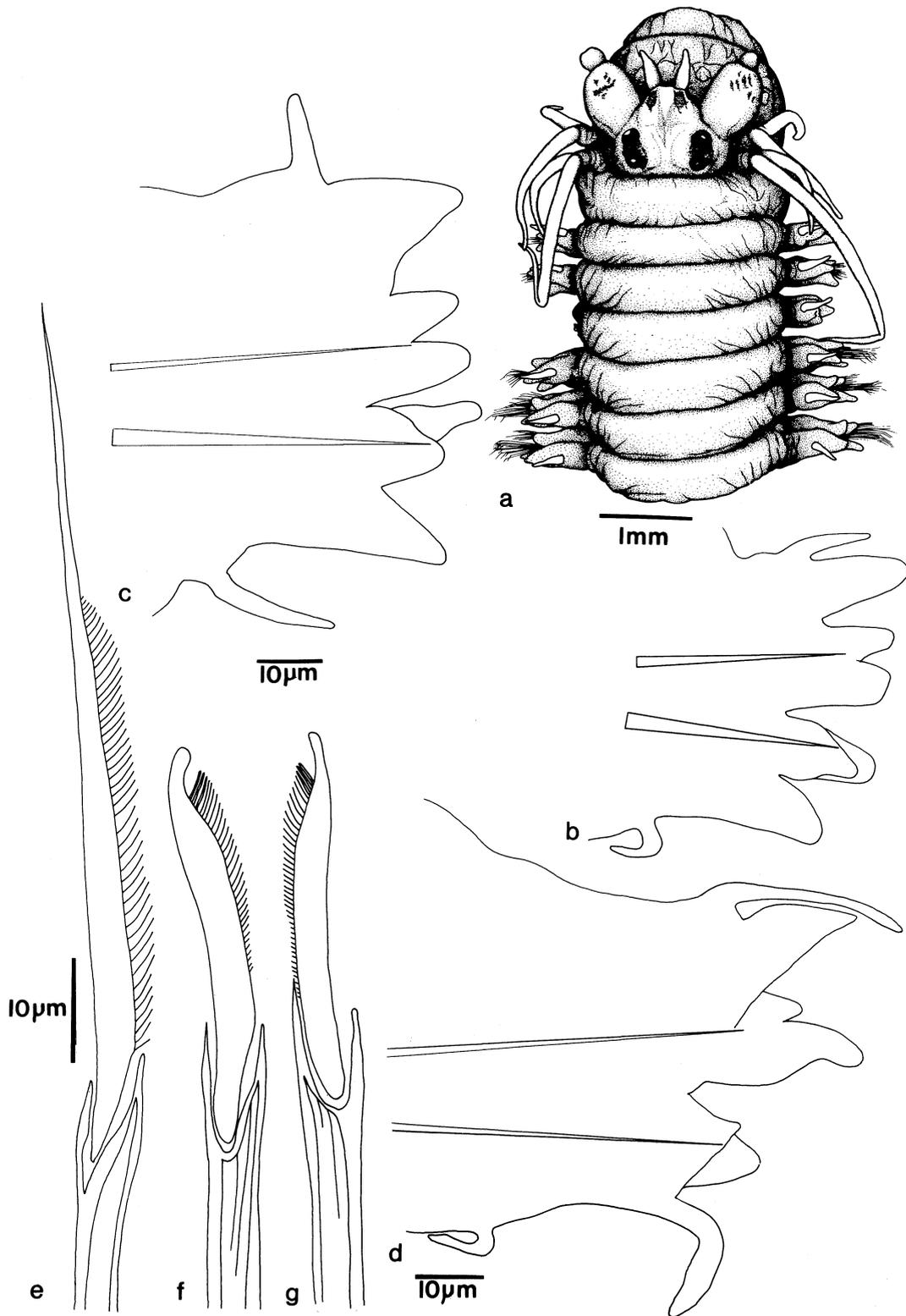
**Description.** Colour in alcohol pink to pale brown. Anterior edge of prostomium with rust-brown pigmentation. Dorsal ligules with pale brown glandular areas, especially prominent in median and posterior parapodia. Prostomium trapezoidal, eyes round, of approximately equal size with distinct lenses. Palps long, cylindrical with long, digitiform palpostyles. Paired antennae extend slightly short of palps. Dorsalmost pair of tentacular cirri longest, extend to setiger 7 (Fig.2a). Jaws slender with straight cutting edge. Pharynx with paragnaths on maxillary ring arranged as follows: Area I = 1, II = 13, III = 40, IV = 19. Papillae on oral ring arranged as follows: V = 0, VI = 1 large rounded papillae, VII-VIII = 8 in single row.

Anterior notopodia with conical dorsal ligules, shorter, conical median ligules and superior lobes (Fig.2b-c). Dorsal cirrus narrow, tapering, slightly shorter than dorsal ligule. Neuropodia with subconical acicular lobe and longer, digitiform postsetal lobe. Ventral ligule subconical, equal to postsetal lobe in length. Ventral cirrus delicate, tapering, half as long as ventral ligule. Notopodial and neuropodial lobes approximately equal length. Median and posterior parapodia (Fig.2d) with notopodial superior lobe and neuropodial acicular and postsetal lobes greatly reduced. Dorsal ligules with prominent glandular areas.

Notopodia with homogomph spinigers; neuropodia with homogomph spinigers and falcigers in supra-acicular fascicle (Fig.2f), homogomph and sesquigomph spinigers and homogomph and sesquigomph falcigers in subacicular fascicle (Fig.2e,g). Falcigers in dorsalmost position of subacicular fascicle homogomph, ventralmost falcigers sesquigomph. Neuropodial supra-acicular falcigers first present from setiger 18. Falcigers with curved, digitiform distal tooth. Blades distally boldly serrated; proximally teeth long and fine.

**Variation.** Based on paratypes and non-type material examined. Specimen QM GH1048 has brown bands of pigment on dorsum and ventrum, most prominent anteriorly. Glandular regions of dorsal ligules are dark brown to black. This specimen is gravid. The species vary in paragnath and papillae counts: maxillary ring paragnaths - Area I = 1-4, II = 7-18, III = 25-40, IV = 13-22; oral ring papillae - Area V = 0, VI = 1, VII-VIII = 7-9. Neuropodial supra-acicular falcigers first present from setigers 16-18.

**Remarks.** *Leonnates crinitus* n.sp. is very similar to *Leonnates decipiens* Fauvel, 1929 in the shape of the parapodia and falciger blades but may be distinguished



**Fig.2.** *Leonnates crinitus* n.sp. Holotype: (a) anterior end, dorsal view; (b) parapodium 3, anterior view; (c) parapodium 10, anterior view; (d) parapodium 50, anterior view; (e) sesquigomph spiniger, parapodium 10 (neuropodium, subacicular fascicle); (f) homogomph falciger, parapodium 20 (neuropodium, supra-acicular fascicle); (g) sesquigomph falciger, parapodium 20 (neuropodium, subacicular fascicle).

from *L. decipiens* by the presence of paragnaths in Area I. *Leonnates crinitus* n.sp. also has a greater number of paragnaths in Area III (25-40) than *L. decipiens* (6-16).

**Habitat.** Muddy sand, intertidal to 5 m, sometimes found inside rotting bark (NTM W3348).

**Distribution.** Australia (Northern Australia from Port Essington 11°23'S 13°09'E to Moreton Bay 27°25'S 153°20'E).

**Etymology.** The specific latin name *crinitus* meaning long-haired or fringed refers to the long, fine falciger teeth on the distal portion of the blade seen in this species.

### *Leonnates decipiens* Fauvel

*Leonnates decipiens* Fauvel, 1929: 180-182, fig.1.-Fauvel, 1930: 20-21, fig.5f-m.-1953: 171-172, fig.87a-g.-Day, 1967: 330, fig.14.11n-s.

**Material examined.** Northern Territory, Black Rocks Landing, 15°53'S 136°35'E, 13 m, 29 Apr. 1982, 1(NTM W213); Table Headland, 11°13.5'S 132°20'E, 3-4 m, 4 May 1982, 2(NTM W231); Sandy Island, 11°10'S 132°09'E, 13 m, 29 Apr. 1982, 1(NTM W227); Port Bremner, Danger Point, 11°8.5'S 132°18.8'E, 6-7 m, 1 May 1982, 3(NTM W222).

**Description.** Largest specimen 4.5 mm long, 2.0 mm wide, 110 setigers, incomplete. Colour in alcohol cream-brown with prominent glands visible in dorsal ligules. Longest tentacular cirri extends to setiger 6. Jaws with smooth cutting edge. Maxillary ring of pharynx with paragnaths arranged as follows: Area I = 0, II = 1-9 (usually 5-9), III = 6-16, IV = 4-12. Oral ring with papillae arranged as follows: Area V = 0, VI = 1 large papilla, VII-VIII = 4-5 papillae in single row. Anterior notopodia with conical dorsal and median ligules and slightly shorter, conical superior lobe. Dorsal cirrus slightly exceeds length of dorsal ligule. Neuropodia with conical acicular and postsetal lobes. Ventral ligule subconical, exceeds length of acicular lobes. Short tapering ventral cirrus. In posterior parapodia, notopodial ligules exceed neuropodial ligules in length. Notopodial ligule elongate, broad based, glandular, exceeds length of median ligule. Acicular lobe elongate, digitiform; postsetal lobe shorter, conical; ventral ligule long, conical. Ventral cirrus as for anterior setigers.

Notosetae homogomph spinigers; neurosetae with homogomph and sesquigomph spinigers and heterogomph falcigers. From setiger 13, subacicular neuropodia with sesquigomph falcigers with blunt truncated tip and teeth on distal one half to one third of blade.

**Remarks.** Our material has fewer paragnaths in Areas VII-VIII than Fauvel's (1953) material, but it agrees well in other respects to previous descriptions. Two females (NTM W227 and NTM W222) were gravid with no sign of epitokal modification. This species can be distinguished from *Leonnates crinitus* n.sp. as *L. decipiens* Fauvel, 1929 has no paragnaths in Area I and fewer paragnaths in Area III than *L. crinitus* n.sp.

This is the first time that this species has been reported from Australian waters. Type material could not be examined as the Museum D'Histoire Naturelle, Paris has a policy of not lending type material. The original description by Fauvel (1929) is comprehensive and the Australian material closely fits this description except for the fewer paragnaths present in Areas VII to VIII, which we believe represent variation within the species.

**Habitat.** Australian material found among coral rubble and sandy substrata.

**Distribution.** Australia (Northern Territory from Black Rocks Landing 15°53'S 136°35'E to Port Bremner 11°07'S 132°20'E), Congo, Gulf of Mannar (type locality), Mozambique, Suez, Sri Lanka.

### *Leonnates jousseaumei* Gravier

*Leonnates jousseaumei* Gravier, 1899: 234-237, figs 1-5.-Gravier, 1901: 160-164, pl.11, figs 34-37.-Fauvel, 1919: 400.-Horst, 1924: 150.-Fauvel, 1930: 19, fig.5a-e.-Fauvel, 1931: 43-44, fig.4a.-Fauvel, 1932: 85.-Fauvel, 1953: 169-170, figs 86d-f.-Day, 1967: 330-331.

**Material examined.** Western Australia, Dampier Archipelago, Rosemary Island, 20°03'S 116°10'E, 64 m, 4 Dec. 1979, 1(WAM 166-86); Fenelon Island, 14°02'S 125°43'E, 6 m, 8 Feb. 1988 2(AM W202841). Northern Territory, McCluer Island, 11°05'S 133°01'E, 8-10 m, 17 Oct. 1989, 1(NTM W00445); Sandy Island, 11°07'S 132°17.5'E, 6-7 m, 22 Oct. 1981, 2(NTM W212). Queensland, Princess Charlotte Bay, 14°07'S 143°09'E, 12-15 m, 23 Feb. 1979, 1(AM W202842); Lizard Island, 14°40'S 145°28'E, 21 Dec. 1986, epitokes swimming at surface, 8(AM W203041), 2(AM W203042), 6 m, 2 Dec. 1985, 1(AM W203043); One Tree Island, 23°30'S 152°05'E, 31 m, 2 Nov. 1974, 1(AM W7257); Moreton Island, Tangalooma, 27°00'S 153°00'E, 10 m, 25 Nov. 1976, 1(QM GH3924).

**Description.** Material examined up to 70 mm long, 5.5 mm wide, 5 mm jaw length, 115 setigers. Colour in alcohol ranging from cream yellow to rust brown. Pharynx with paragnaths on maxillary ring arranged as follows: Area I = 0, II = 6-24, IV = 7-26. Area III = 3-10 paragnaths or papillae. Oral ring with papillae arranged as follows: Area V = 0, VI = 6-16, VII-VIII = 20-72 in 2-3 irregular rows. Longest tentacular cirri extends to setiger 6. Notopodia with dorsal cirri slightly longer than dorsal ligule, 3 conical, pointed, notopodial

ligules. Long, slender superior lobe slightly reduced in posterior setigers. Neuropodia with conical, acicular and slightly longer postsetal lobes, large, conical, ventral ligule and shorter ventral cirrus. These lobes are reduced posteriorly.

Notopodia with homogomph spinigers throughout, and few homogomph falcigers in far posterior setigers. Neuropodia with spinigers and falcigers. Falcigers with boldly serrated blades, distally curved with a pointed terminal tooth.

**Variation.** Some specimens, AM W20284 and the Lizard Island epitokes (AM W203041, AM W203042, AM W203043) have dark bands of brown pigmentation on the prostomium, peristomium and on a few anterior setigers. Epitokes also have a longitudinal band of brown pigmentation on the modified end of body. One female (AM W202841) is gravid with no sign of epitoky. Male epitokes collected in October/November showed modification of parapodial lobes and setae from setiger 12 onwards. The papillae present on Area III and sometimes Area IV are sclerotised to varying degrees. In some specimens (especially smaller ones) there is no evidence of sclerotisation, others are partially but none are fully sclerotised.

**Remarks.** Partial sclerotisation of the pharyngeal papillae has also been noted by Fauvel (1919) and Horst (1924). This species is very similar to *Leonnates nipponicus* (Imajima, 1972). From Imajima's description it appears that *L. jousseaumei* differs from *L. nipponicus* which has no notopodial falcigers in posterior setigers, no paragnaths in Area III and greater reduction of the notopodial superior lobe. This is the first record of the species from Australian waters, but it has already been reported from the Indo-Pacific. Type material is not available for loan from the Museum D'Histoire Naturelle, Paris, but Gravier's original description is expansive and our material agrees well with the original description.

**Habitat.** The Australian material was generally found amongst coral debris in 6 to 64 m. Two specimens (NTM W00445, AM W7257) were found inside sponge tissue in holes closely approximating the shape and size of the worm.

**Distribution.** Australia (Northern Australia from Rosemary Island Western Australia 20°03'S 116°10'E to Moreton Island, Queensland 27°00'S 153°00'E), Red Sea, Malay Peninsula, Madagascar, Indonesia, India, Gulf of Manna Pambam, Pakistan.

*Leonnates stephensoni* Rullier

*Leonnates stephensoni* Rullier, 1965: 174-177, fig.4A-I.—Hutchings & Murray, 1984: 36-37, fig.11.

**Material examined.** HOLOTYPE: Queensland, Moreton Bay, 27°25'S 153°20'E, 10 Feb. 1961, 1(AM W3790). Western Australia, Cockburn Sound, 32°11'S 115°43'E, 4 Aug. 1970, 2(WAM 516-86). Northern Territory, McArthur River, Black Rocks Landing, 15°53'S 136°35'E, 1 Aug. 1985, 1(NTM W3480); McArthur River, Curie Channel, 15°47'S 136°40'E, 7 Aug. 1985, 1(NTM W3111), 7 Aug. 1985, 1(NTM W3165), 7 Aug. 1985, 1(NTM W3174), 7 Aug. 1985, 1(NTM W3500). Queensland, Halifax Bay, 19°10'S 146°44'E, Jan. 1977, (AM W202000), 19°10'S 146°38'E, 5 m, Jan. 1977 (AM W202002), 10°10'S 146°37'E, 2 m, Jan. 1977 (AM W202003), 19°07'S 146°33'E, 2 m, (AM 202005); Shoalwater Bay, Triangular Island, 22°23'S 150°30'E, 1981-1982, 2(AM W202843); Auckland Creek, 23°50'S 151°16'E, 9 Feb. 1976, 1(AM W10258), Aug. 1988, 1(AM W13190); Gladstone Harbour, 23°51'S 151°16'E, 6 Nov. 1975 (QM G10536), 6 Nov. 1975 (QM G10538), 6 Nov. 1975 (QM G10541), 6 Nov. 1975 (QM G10542); Calliope River, 23°55'S 151°10'E, May 1976, 4(AM W13513), June 1976, 10+(AM W13515); Middle Bank, 25°47'S 153°07'E, 10 m, 13 Dec. 1962 (QM G4873); Moreton Island, 27°11'S 153°24'E, 15.3 m, 14 Dec. 1962 (QM G4874); Moreton Bay, 27°25'S 153°20'E, 27 m, Sept. 1972 (QM G10371), 7.6 m, Mar. 1970 (QM G10452), 33.5 m, Sept. 1972 (QM G12691); Brisbane River, 27°28'S 153°02'E, 19 Sept. 1975 (QM GH3980), 10 Apr. 1975 (QM GH3978); Peel Island, 6.4 m, Sept. 1971 (QM G10354), 9.5 m, June 1970 (QM G10365). New South Wales, Lake Macquarie, 32°59'S 151°38'E, Feb. 1979, 1(AM W17832), Jan. 1978, 1(AM W197749); Hawkesbury River, 33°33'S 151°16'E, 10 m, 7 May 1979, 1(AM W196446), 1(AM W196447).

**Description.** Material examined up to 40 mm long, 5.0 mm wide, 0.25-2.0 mm jaw length. Colour in alcohol cream-pale brown, often with conspicuous brownish glands in dorsal cirri and notopodial dorsal ligules. Dorsalmost pair of tentacular cirri longest extending up to setiger 12, remaining pairs shorter. Anterior pair of eyes reniform, posterior pair spherical. Jaws slightly crenulated on the cutting edge, without distinct teeth. Maxillary ring of pharynx with paragnaths arranged as follows: Area I = 0, II = 2, III = 0, IV = 2-3. Oral ring with papillae as follows: Area V = 3 small papillae, VI = 2 papillae, VII-VIII = approximately 20-33 irregularly arranged papillae.

Anterior notopodia with digitiform superior lobe, broad based, conical dorsal ligule, conical median ligule and slightly shorter, conical superior lobe. Neuropodia with conical acicular and postsetal lobes, acicular lobe projecting ventrally, postsetal lobe projecting dorsally. Postsetal lobe slightly longer than ventral ligule. Ventral cirrus slightly shorter than ventral ligule. In median and posterior parapodia, dorsal ligule expanded, notopodial superior lobe reduced. Ventral ligule exceeds acicular and postsetal lobes in length. Ventral cirrus narrow, tapering.

Notopodia with homogomph spinigers throughout. Neuropodia with homogomph spinigers and falcigers in supra-acicular fascicle, homogomph falcigers in subacicular fascicle. Falcigers long bladed, strongly denticulate with terminal rectangular projection.

**Habitat.** Sandy mud.

1866, by original designation.

**Distribution.** Australia (widespread north of 30°S; from Western Australia, Cockburn Sound, 32°11'S 115°43'E to New South Wales, Hawkesbury River, 33°33'S 151°16'E).

**Diagnosis.** Prostomium with 2 antennae, 1 pair of bi-articulate palps and 2 pairs of eyes. Pharynx with paragnaths on both rings, including cones and pectinate bars. Four pairs of tentacular cirri, parapodia biramous. Notosetae homogomph spinigers and falcigers. Falcigers sometimes simple. Neurosetae homogomph and heterogomph spinigers and heterogomph falcigers.

*Platynereis* Kinberg

*Platynereis* Kinberg, 1866: 177.—Wilson, 1985: 136.

**Remarks.** Fauchald (1977) indicates that 20 species have been described, and no revision of the genus has been undertaken.

**Type species.** *Platynereis magalhaensis* Kinberg,

**Key to Australian Species of *Platynereis***

1. Notopodial falcigers first present from setigers 3-5.  
Pectinate bars on oral ring long, in a single row .....*Platynereis uniseris* n.sp.
- Notopodial falcigers first present after setiger 12.  
Pectinate bars on oral ring usually in 2-3 short rows ..... 2
2. Simple, bifid notopodial falcigers present from setigers  
12-13 .....*Platynereis bicanaliculata*
- Simple falcigers absent ..... 3
3. Notopodial falcigers absent in adults. Dorsal cirri and  
notopodial dorsal ligules elongate posteriorly .....*Platynereis australis*
- Notopodial falcigers present posteriorly. Dorsal cirri  
and notopodial dorsal ligules not markedly elongate  
posteriorly ..... 4
4. Notopodial falcigers present posteriorly, usually from  
setiger 22 .....*Platynereis dumerilii antipoda*
- Notopodial falcigers posteriorly, from setigers 14-17 .....*Platynereis polyscalma*

***Platynereis australis* (Schmarda)**

*Heteronereis australis* Schmarda, 1861: 101-102, pl.31, fig.242.

*Platynereis magalhaensis* Kinberg, 1866: 177.—Hartman, 1954: 36.

*Platynereis australis*.—Knox 1951: 223-225, pl.49, figs 34-40.—Hartmann-Schröder, 1962: 427.—Day, 1967: 305, fig.14.4m.—Knox & Cameron, 1971: 28.—Imajima, 1972: 82-85, figs 21a-o, 22.

**Material examined.** New South Wales, Newport,

33°39'S 151°19'E, 10-12 m, 1(AM W202879); Long Reef, 33°45'S 151°19'E, 4(AM W4323); Manly, 33°48'S 151°17'E, 20 Jan. 1968, 1(AM W4321); Port Jackson, 33°50'S 151°17'E, 20(AM W4854) 20(AM W4855); Coogee, 31°29'S 142°12'E, Dec. 1921, 1(AM W4796); Merimbula, 36°54'S 149°54'E, 35 m, 16 Mar.1976, 1(AM W15761); Jervis Bay, Green Patch, 34°48'S 153°24'E, 20-30 m, 28 Feb. 1976, 1(AM W202881); Summer Cloud Bay, 30-50 m, 29 Nov. 1971, 5+(AM W202884); Twofold Bay, Munganno Point, 37°06'S 149°56'E, 3 m, 3(AM W202880). Western Australia, Cockburn Sound, 32°11'S 115°43'E, 2-3 m, 13 Feb. 1972, 2(WAM 51-72).

**Description.** Similar to *Platynereis dumerilii antipoda* in all respects except notopodial falcigers absent in adults and posterior dorsal cirri and notopodial dorsal ligules longer in *P. australis*.

**Remarks.** Type material has not been examined and has not been located in any major institution. Also no material is available from the type locality. The above specimens were all posteriorly complete, with posteriorly enlarged dorsal ligules and without notopodial falcigers. All specimens were large and presumably mature. The very close similarity between this species and *P. dumerilii antipoda* and the difficulty in distinguishing posteriorly incomplete specimens suggest that a detailed examination of these two species is needed to seek further distinguishing characters.

**Habitat.** Intertidal under rocks, algal holdfasts.

**Distribution.** Australia (eastern Australia from Newport 33°29'S 151°19'E to Twofold Bay 37°06'S 149°56'E). One specimen from Cockburn Sound, Western Australia. New Zealand, Auckland (type locality).

#### *Platynereis bicanaliculata* (Baird)

- Nereis bicanaliculata* Baird, 1863: 109.  
*Nereis Agassizi* Ehlers, 1868: 542-546 pl.23, fig.1.—Izuka, 1912: 160-162, pl.1 fig.9, pl.17 figs 9-11.  
*Nereis Platynereis Agassizi*.—Augener, 1927: 140-141.  
*Nereis dumerilii* Marenzeller, 1879: 123-125, pl.2 fig.4A,B.  
*Nereis Dumerilii*.—Izuka, 1912: 158-160, pl.17 figs 7,8.  
*Nereis (Platynereis) kobiensis* McIntosh, 1885: 210-212, pl.34 figs 3-6; pl.16a figs 2-4.  
*Nereis kobiensis*.—Izuka, 1912: 162-163, pl.17 figs 12,13.  
*Platynereis agassizi*.—Fauvel, 1936: 64-65.—Okuda, 1938: 93.—Okuda & Yamada, 1954: 185-186, fig.3G.  
*Platynereis bicanaliculata*.—Hartman, 1954: 36-39, figs 38,39.—Imajima & Hartman, 1964: 152-153.—Wu, 1967: 57-58, fig.5a-b.—Imajima, 1972: 76-79, figs 18A-M, 19A-E, 22.—Hutchings & Murray, 1984: 42.

**Material examined.** New South Wales, Port Stephens, Nelson Bay, 32°44'S 152°09'E, 27 July 1976, 1(AM W12586), 22 July 1976, 1(AW W12626), 27 July 1976, 1(AM W197870); Port Jackson, 33°50'S 151°17'E, Feb. 1910, 2(AM W68), Feb. 1910, 1(AM W70); Rose Bay, 33°52'S 151°16'E, Feb. 1910, 1(AM W85); Botany Bay, 34°00'S 151°11'E, 17 Jan. 1975, 1(AM W19033); Kurnell, 34°00'S 151°13'E, 25 May 1975, (AM W7952); Jervis Bay, Green Patch, 34°48'S 153°24'E, 1(AM W202828). South Australia, Flinders Island, 33°40.5'S 134°22.0'E, 17 m, 19 Apr. 1985, 7(MV F56465). Western Australia, Nornalup, 35°00'S 116°44'E, Sept. 1973, 3+(WAM 101-84).

**Description.** Tentacular cirri slender, longest extending to setiger 10. Jaws, heavily sclerotised with 6-7 teeth. Pharynx with short pectinate bars arranged as

follows: Area I = 0, II = 0, III = an oval patch, IV = conical group of short pectinate bars, V = 0, VI = 2-3 transverse rows of pectinate bars, Areas VII-VIII = 5 double transverse rows of pectinate bars. Parapodial lobes are conical anteriorly, conical posteriorly with dorsal cirri exceeding length of dorsal ligules throughout.

Notopodia with homogomph spinigers and 1-3 dark-brown simple falcigers from setiger 12-13. Falcigers bifid with hooked tips and distinct tendon. Neuropodia with homogomph spinigers and short-bladed heterogomph falcigers in supra-acicular fascicle and heterogomph spinigers and falcigers in subacicular fascicle.

**Habitat.** The Australian material was collected from under rocks, in sand, among kelp holdfasts, among calcareous algae, and among seagrasses *Zostera* and *Halophila*.

**Distribution.** Australia (south-eastern to south-western Australia from Port Stephens 32°44'S 152°09'E to Nornalup, Western Australia 35°00'S 116°44'E), Western Canada, Esquimalt Harbour, Vancouver (type locality) to Western Mexico, Hawaii, Japan, Taiwan.

#### *Platynereis dumerilii antipoda* Hartman

- Platynereis dumerilii antipoda* Hartman, 1954: 35-36, fig.33-37.—Russell, 1962: 5.—Hartmann-Schröder, 1979: 118.—Hartmann-Schröder, 1987: 49.—Hutchings & Rainer, 1979: 757-758.—Hutchings & Turvey, 1982: 141.—Wilson, 1985: 136-137.

**Material examined.** Queensland, Hervey Bay, Pialba, 25°17'S 152°50'E, 30 Mar. 1972, 2(AM W202898). New South Wales, Nambucca Heads, 30°39'S 153°01'E, 6 Jan. 1969, 1(AM W4850); Port Stephens, 32°34'S 152°09'E, 3(AM W4848), 27 July 1976, 1(AM W12432), 27 July 1976, 2(AM W12473); Lake Macquarie, 32°59'S 151°38'E, 31 Mar. 1971, many(AM W4722), 13 Sept. 1954, 1(AM W4849), 18 Sept. 1953, 1(AM W4853); Long Reef, 33°45'S 151°19'E, 19 Jan. 1968, 2(AM W4323), 6 Nov. 1922, 1(AM W4852); Middle Head, 33°33'S 151°18'E, 19 Dec. 1968, 10(AW W4851); Gunnamatta Bay, 34°05'S 151°09'E (QM G4094); Jervis Bay, Murrays Beach, 35°03'S 150°44'E, 25 Apr. 1972, 1(AM W194159), 17 Oct. 1972, 3(AM W194490); Merimbula, 36°54'S 149°54'E, 13 Dec. 1975, 1(AM W15776), 17 Feb. 1976, 1(AM W15777), 24 July 1975, 1(AM W15778). Tasmania, Bellerive, 42°52'S 147°22'E, Jan. 1979, 1(TASM K1002); Hobart, 42°53'S 147°19'E, 20 Feb. 1909, 1(TASM K1001); Bruny Cape, 43°30'S 147°09'E, 30 Mar. 1964, 1(AM W18183). South Australia, Encounter Bay, 35°35'S 138°45'E, 18 July 1988 8(AM W202823); Port Willunga, 35°16'S 138°28'E (SAM E2374); Sellicks Beach, 35°20'S 138°27'E, 16 Mar. 1979, 1(AM W18319); Kangaroo Island, 35°40'S 137°05'E, 5 Mar. 1989, many(AM W18325); Waldegrove Island, 33°36'S 134°37'E, 16 Mar. 1979, 1(AM W18319), St Francis Island, 32°31'S 133°18'E (SAM E312), (SAM E2375); West Island, 32°31'S 133°15'E (SAM E2376). Western Australia,

Rottneest Island, 32°00'S 115°30'E, 29 Nov. 1945, 3(AM W5708), 28 Nov. 1945, 20(AM W5721), 1-2 m, 30 June 1972, 4(WAM 67-72); Cockburn Sound, Woodman Point, 32°11'S 115°43'E, 20 Feb. 1972, 3+(WAM 505-86), 28 Feb. 1978, 3+(WAM 507-86), Sept. 1972, 3+(WAM 522-86); Carnarvon, 24°53'S 113°40'E, 17 June 1972, 1(AM W5473).

**Description.** Material examined up to 30 mm long, 1.5 mm wide, 0.4-2.0 mm jaw length. Colour in alcohol, cream. Prostomium trapezoidal. Eyes with distinct lenses. Palps globular with rounded palpostyles. Dorsalmost pair of tentacular cirri longest extend up to setiger 12. Jaws robust with up to 9 teeth. Pharynx with pectinate bars arranged as follows: Area I = 0, II = 0, III = up to 3 groups of short bars, IV = 4-12 bars in up to 8 rows (often incomplete particularly toward the maxillary edge), V = 0, VI = 2-3 short bars, VII-VIII = 5 transverse groups in 2-3 rows (usually 2).

Anterior notopodia dome shaped in far anterior setigers, subconical from approximately setiger 10 onwards. Dorsal and median ligules of approximately equal length with small superior lobe. Dorsal cirri long, exceed length of dorsal ligule. Neuropodia with conical acicular and shorter conical postsetal lobe. Ventral ligule conical, slightly shorter than median ligule. Ventral cirrus slender, tapering, slightly shorter than ventral ligule. Posteriorly, dorsal ligule expanded, glandular at base, exceeds median ligule in length. Neuropodial acicular and postsetal lobes greatly reduced. Lobes digitiform rather than conical in shape.

Notopodia with homogomph spinigers throughout. Homogomph falcigers present midposteriorly, sometimes present from setiger 22, usually present from setiger 25-30 though extremely variable. Neuropodia with homogomph spinigers and heterogomph falcigers in the supra-acicular fascicle, heterogomph spinigers and falcigers in the subacicular fascicle. Notopodial falcigers long bladed, curved distally, sometimes with distal notch.

Live specimens (AM W202823) were pale green with red speckling on body; palps and cirri whitish; and orange around the eyes.

**Remarks.** As previously mentioned by Wilson (1985) the position at which notopodial falcigers first appear is variable and does not appear to be size related. This species is closest to *P. polyscalma* Chamberlin, 1919 but can be distinguished from it by the position at which notopodial falcigers are first present (usually at setigers 14-17 in *P. polyscalma* Chamberlin, 1919). A detailed examination of *Platynereis dumerilii* and its subspecies is needed to determine whether the subspecific status of the Australian and New Zealand *P. dumerilii antipoda* is justified or if it should be raised to full specific status. The differences between *Platynereis dumerilii* Audouin & Milne-Edwards, 1834, a cosmopolitan warm temperate species, and *P. dumerilii antipoda* Hartman, 1954 are largely qualitative and until a thorough revision of *P. dumerilii* is undertaken, it is not possible to ascertain

whether these differences are due to ecophenotypic or genotypic effects. A revision should also include the closely related species, *Platynereis australis* Schmarida, 1861, whose status needs to be verified.

**Habitat.** Australian specimens are usually associated with algae, seagrass or encrusting fauna such as bryozoans. Substrate generally muddy sand, and intertidal, though material has been collected to depths of 95 m (Wilson, 1985).

**Distribution.** Australia (south-eastern to south-western Australia from Nambucca Heads, New South Wales 30°39'S 153°01'E to Cape Peron, Western Australia 25°30'S 113°31'E), New Zealand. Russell (1962) recorded this species from Dunwich, south-east Queensland (27°30'S 153°24').

### *Platynereis polyscalma* Chamberlin

*Platynereis polyscalma* Chamberlin, 1919: 219-226, pl.30 figs 5-8, pl.31 figs 1-10, pl.32 figs 1,2.—Monro, 1931a: 18.—Fauvel, 1932: 114-116.—Gravier & Danton, 1934: 117-123, figs 114-124.—Hartman, 1940: 229-231, pl.38 figs 76-83.—Fauvel, 1953: 221-222, fig.112a-e.—Reish, 1968: 217-218.

*Nereis (Platynereis) integer* Treadwell, 1920: 595-597, figs 1-4.

*Nereis (Platynereis) [sic] polyscalma*.—Horst, 1924: 186-187.

**Material examined.** Western Australia: Cockburn Sound, 32°11'S 115°43'E, 28 Feb. 1978, 1(WAM 514-86); Kalbarri, 27°42'S 114°12'E, 1.5 m, 9 Jan. 1984, 4(AM W202831); Broome, Mangrove Point, 17°58.5'S 122°14.5'E, 28 Sept. 1984, 1(NTM W2139); Heywood Island, 15°20'S 124°20'E, 10 July 1988, 12(AM W202971). Northern Territory: Darwin, Casuarina Beach, 12°20.6'S 130°52.6'E, 9 Oct. 1973, many(NTM W1389); Nightcliff, 12°22.5'S 130°51'E, 0.5 m, 9 Sept. 1975, 4(NTM W240); Coral Bay, 11°11'S 132°03'E, 2-5 m, 16 May 1983, 10(NTM W00402); Port Bremner, Danger Point, 11°7.5'S 132°20'E, 1-2 m, 1 May 1982, 12(NTM W233); Oxley Island, 11°00'S 132°48.5'E, 15 m, 21 Oct. 1982, 1(NTM W00427). Queensland: Thursday Island, Torres Strait, 10°35'S 142°13'E, 29 June 1976, 2(AM W202892); False Orford Ness, 11°23'S 142°52'E, 3-4 m, 18 Dec. 1979, 1(AM W202833); Raine Island, 11°43'S 144°03'E, 2-8 m, 11 Feb. 1979, 2(AM W202834); Yonge Reef, 14°37'S 145°35'E, 25 m, 2(AM W202893); Lizard Island, Chinamen's Head, 14°40'S 145°27'E, Jan. 1976, 1(AM W202838); Cairns, 16°36'S 146°15'E, 201-110 m, 14 Oct. 1981, 1(AM W202837); Low Isles, 16°23'S 145°34'E, surface, Oct. 1931, 1(AM W2950); Townsville, Pallarenda Beach, 19°16'S 146°49'E, 7 Feb. 1978, 1(AM W18109); Hervey Bay, Point Vernon, 25°06'S 152°49'E, 5-15 m, 31 Apr. 1977 1(AM W202835); Triangular Island, Shoalwater Bay, 22°23'S 150°30'E, 1(AM W202895); Heron Island, 23°27'S 151°55'E, 22 July 1975, (QM GH3979), 1(AM W202830),

1(AM W202832); Wistari Reef, 23°29'S 151°53'E, 36 m, 1(AM W197107); Gladstone, 23°51'S 151°16'E, 6 Nov. 1975, (QM GH4003), (QM GH4015), 1974-1983, 1(AM W199347), 1(AM W199349); Caloundra, 26°48'S 153°08'E, 29 Mar. 1972, 1(AM W202894); Moreton Bay, 27°25'S 153°20'E, 1(WAM 16-85).

**Description.** Material examined up to 40 mm long, 2.0 mm wide, 0.35-2.5 mm jaw length. Tentacular cirri long and slender, longest extending to setiger 20. Jaws pale golden with darker brown cutting edge. Pharynx with the following arrangement of paragnaths: Areas I = 0, II = 0, III = up to 10 patches of pectinae in 2-4 rows, IV = crescentic area of 5-10 patches of pectinae in 3 or 4 rows, V = 0, VI = 2 curved rows of pectinae, the row closest to the maxillary ring shortest, VII and VIII = transverse series of 5 short patches.

Parapodial lobes all conical with exception of conical ventral ligule. Dorsal cirri exceed length of dorsal ligules. Notopodia with homogomph spinigers and falcigers. Homogomph falcigers initially present from setigers 12-22 (usually from setigers 14-17) and continue along entire length. Falciger blade terminally smooth with a minute boss. Distinct tendon extends from tip of hooked falciger blade to upper one third of blade, below which are fine teeth. Articulation of shaft and blade of this falciger very obvious. Homogomph spinigers decrease in number posteriorly. Neuropodia with heterogomph spinigers and falcigers. Falciger blades short, recurved.

Female epitokes with parapodial lobes modified from setiger 20 onwards, male epitokes modified from setiger 15 onwards.

**Remarks.** Material agrees well with Hartman's (1940) description of atokous specimens from Cape San Lucas and La Paz Bay, California and San Lorenzo Channel, Espiritu Santo Island. Epitokes agree well with Chamberlin's original description.

**Habitat.** Australian material was collected amongst coral rock, weed, sand and mud and often associated with brown algae and *Halimeda*.

**Distribution.** Australia (north-western to north-eastern Australia in tropical to warm temperate waters, from Kalbarri, Western Australia 27°42'S 114°12'E to Moreton Bay, Queensland 27°25'S 153°20'E), widely distributed in the tropical Pacific and Indian Oceans. Type locality Funafuti Atoll, Ellice Island.

*Platynereis uniseris* n.sp.

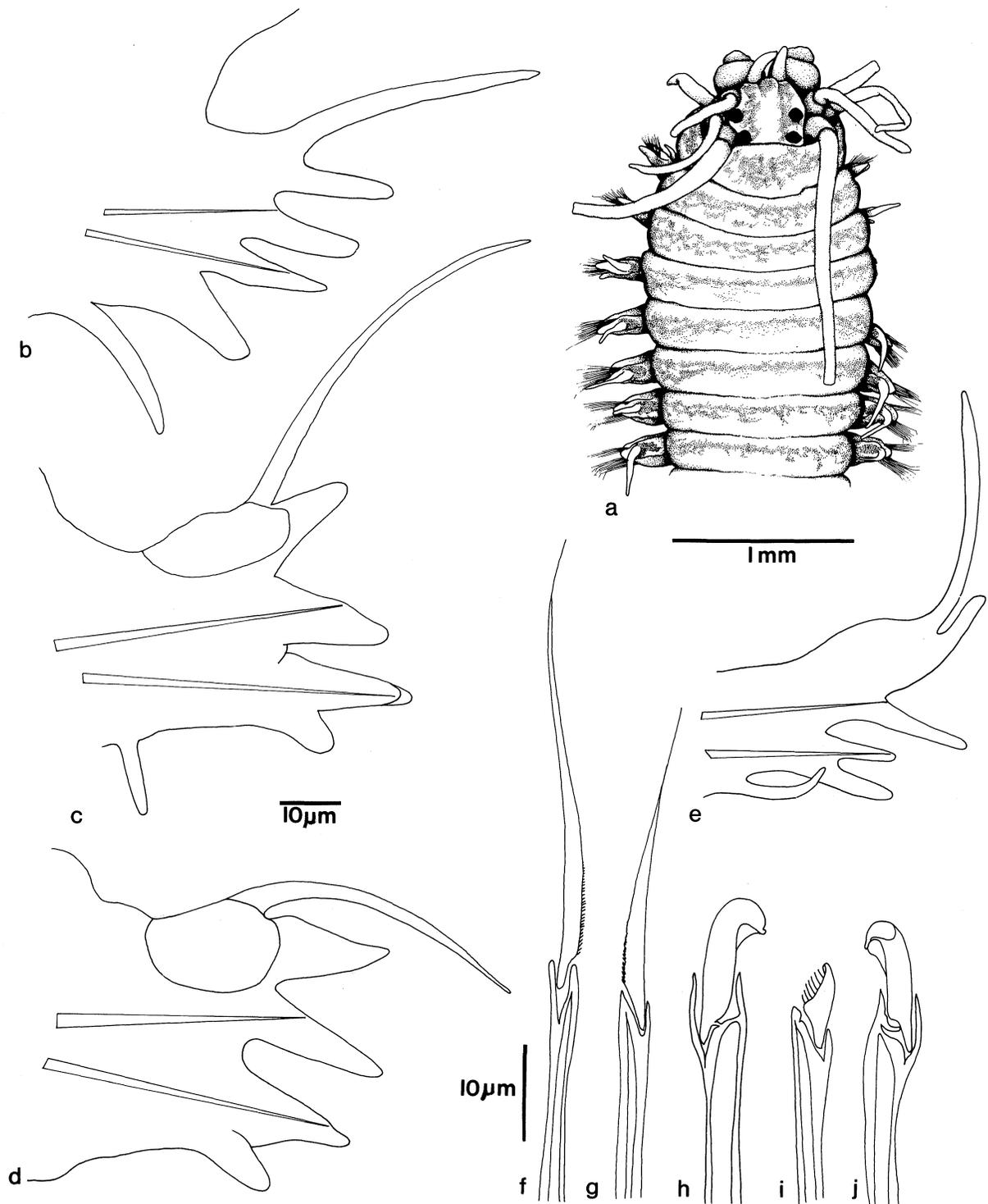
Fig.3a-j

**Material examined.** HOLOTYPE: Western Australia: Ningaloo, 22°42'S 113°40'E (AM W202882), 14 mm long, 1.1 mm wide, 0.75 mm jaw length, 54 setigers. PARATYPES: Western Australia: Ningaloo, 22°42'S

113°40'E, 2 Jan. 1974, 1(AM W202883), 1(AM W202884), 1(AHF POLY1495), 1(BMNH ZB1989.31), 1(NTM W 5356), 1(USNM 127643). Paratypes range from 14-16.5 mm long, 1.0-1.3 mm wide, 0.75-0.9 mm jaw length, 55-73 setigers. All type material complete.

**Non-type material.** Western Australia: Cape Peron, 25°30'S 113°31'E, 1(AM W203044); Point Quobba, 24°29'S 113°25'E, 7 Jan. 1984, 10(AM W202866); Ningaloo, 22°42'S 113°40'E, 2 Jan. 1974, 25(AM W202861), 3 m, 31 Dec. 1973, 15(AM W202886), 2 m, 1 Jan. 1984, 3(AM W202887); Cape Range National Park, Neds Camp, 21°58'S 114°02'E, 12 m, 2 Jan. 1984, 5(AM W202863), 2 m, 31 Dec. 1983, 10(AM W202864); North West Cape, Mangrove Passage, 21°33'S 115°21'E, July 1980, 3+(WAM 500-86); Dampier Archipelago, Kendrew Island, 20°29'S 116°32'E, 14 Oct. 1973, 1(WAM 117-75); Dampier Archipelago, Hungerford Bay, Rosemary Island, 20°29'S 116°35'E, 6 m, 1 Apr. 1987, 1(AM W202891), 14 Oct. 1973, 1(WAM 144-75), 28 Oct. 1973, 1(WAM 169-75); Kimberleys, Condillac Island, 14°06'S 125°33'E, 6 m, 16 July 1988, 1(AM W203003); Cassini Island, 13°57'S 125°37'E, 18 July 1988, (AM W203004). Northern Territory: Trepang Bay, 11°10'S 131°58'E, 16 Oct. 1981, 1(NTM W236). Queensland: Raine Island, 11°39'S 144°08'E, 1-2 m, 10 Feb. 1979, 2(AM W202885), 2-20 m, 13 Feb. 1979, 1(AM W202888); Yonge Reef, 14°37'S 145°38'E, Jan. 1975, 1(AM W202849), 13 Jan. 1985, 1(AM W202850), Jan. 1975, 2(AM W202859), Jan. 1975, 1(AM W202862); Lizard Island, 14°37'S 145°38'E, 28 Feb. 1974, 3(AM W202847); Heron Island, 23°27'S 151°55'E, 29 Sept. 1984 (QM GH3917); Herald Group, Northeast Cay, 22°07'S 152°17'E, 9 Nov. 1964, 2(AM W202848); Currumbin Beach, 28°08'S 153°29'E, Jan. 1985 (QM GH 3918). New South Wales: Collaroy Beach, 32°06'S 150°07'E, 28 Feb. 1974, 3(AM W202847). Unless otherwise specified, specimens collected intertidally.

**Description.** Material ranges in size up to 25 mm long, 3.4 mm wide with jaw length of 2.5 mm for 77 setigers. Cream-yellow in alcohol with faint brown pigmentation on prostomium. Light brown glandular patches on dorsal ligules and dorsolateral edge of setigers, especially prominent posteriorly. Prostomium ovoid with 2 pairs equal-sized round, black eyes with distinct lenses (Fig.3a). Palps globular with large round palpostyles. Antennae conical, slightly shorter than prostomium. Tentacular cirri blunt-tipped, dorsalmost pair longest extends to setiger 5. Jaws large, strongly curved, translucent brown with 6 large teeth. Pharynx with pectinate bars on maxillary ring arranged as follows: Area I = 0, II = 0, III = 8 short bars with 1 row on each edge closest to Area IV and 3 parallel rows of 2 bars each ventrally, Area IV = 3 straight bars in conical arrangement, basal row broken plus an indistinct, short 4th row on edge closest to jaws; oral ring: Area V = 0, VI = 1 long very slightly curved bar, VII-VIII = 5 long bars. Anterior parapodia with dorsal cirrus narrow, tapering, greatly exceeds length of dorsal ligule. Notopodia with dorsal and median ligules dome shaped from setigers 3-8 (Fig.3b), subconical after approximately setiger 8 (Fig.3c). Neuropodia with conical acicular and slightly shorter



**Fig.3.** *Platynereis uniseris* n.sp. Holotype: (a) anterior end, dorsal view; (b) parapodium 3, anterior view; (c) parapodium 10, anterior view; (d) parapodium 20, anterior view; (e) parapodium 50, anterior view; (f) homogomph spiniger, parapodium 20 (neuropodium, supra-acicular fascicle); (g) heterogomph spiniger, parapodium 20 (neuropodium, subacicular fascicle); (h) homogomph falciger, parapodium 20 (notopodium); (i) heterogomph falciger, parapodium 20 (neuropodium, subacicular fascicle); (j) homogomph falciger, parapodium 50 (notopodium).

postsetal lobe. Ventral ligule, as for notopodial ligules, dome shaped in far anterior setigers (Fig.3c) then subconical (Fig.3d). Ventral cirrus one half to two thirds as long as ventral ligule. Notopodial lobes exceed neuropodial lobes in length. Posterior parapodia with lobes subconical in shape. Dorsal ligule exceeds length of median ligule in far posterior setigers and becomes swollen at its base otherwise similar to notopodia (Fig.3e).

Notopodia with homogomph spinigers and 1-2 homogomph falcigers after setiger 4. Neuropodia with homogomph spinigers and heterogomph falcigers in supra-acicular fascicle, heterogomph spinigers and heterogomph falcigers in subacicular fascicle (Fig.3f-j).

Spinigers all short bladed with coarse teeth at base of blade. Notopodial falcigers strongly curved with a slightly hooked tip connected to a distinct tendon. Articulation of shaft and blade strongly marked.

**Variation.** Some specimens have brown pigmentation on prostomium and dorsum of anterior setigers. Tentacular cirri extend from setigers 7-13. Range in number of pectinate bars varies as follows: Area I=0, II=0, III=4-7 short bars, IV=4-7 (some partially broken bars), V=0, VI=1, VII-VIII=1-6.

Notopodial falcigers first present from setigers 3-5 (usually 4). Specimen lots AM W202864 and QM GH3917 are female epitokes with modification of parapodia and setae from setiger 21 onwards. A male epitoke, AM W202886, is modified from setiger 15 onward, and dorsal cirri on setigers 1-7 are greatly enlarged.

**Remarks.** This species is close to *P. calodonta* Kinberg, 1866, in the shape of the parapodia and in having notopodial falcigers, first present from the 4th or 5th setiger. However *P. uniseris* n.sp. can be distinguished from *P. calodonta* and other *Platynereis* species by the presence of a single row of long, pectinate bars in the oral ring. Comparison with the holotype of *Platynereis calodonta* (SSM 583) and specimens figured by Day (1934:fig.9b; 1967:figs 14.4e,f) showed the pectinate bars to be quite different. Pectinae in the holotype of *P. calodonta* are long toothed and in the form of discrete clusters, randomly arranged, not in distinct rows as in *Platynereis uniseris* n.sp., and bars are arranged in 2-3 rows in Areas VI to VIII in *P. calodonta*. Falciger blades of *P. calodonta* (SSM 583) appear to be more strongly hooked and pointed than in *P. uniseris* n.sp., otherwise the falcigers of the two species are very similar with a pronounced articulation.

**Habitat.** The species is often found in dead coral substrata amongst encrusting brown algae, coralline and filamentous algae. Some specimens (QM GH 3918), (AM W202847) found amongst pumice washed up on beaches and others have been found to co-occur with *Platynereis polyscalma*.

**Distribution.** Australia (Northern Australia from Rosemary Island, Dampier Archipelago 20°29'S 116°35'E to Herald Group, North East Cay, Queensland 22°07'S

152°17'E).

**Etymology.** The specific name *uniseris* refers to the single row of pectinate bars on the oral ring of the pharynx.

### *Solomononereis* Gibbs

*Solomononereis* Gibbs, 1971: 151.

**Type species.** *Solomononereis marauensis* Gibbs, 1971, by original designation.

**Diagnosis.** Prostomium with 2 antennae, 1 pair of bi-articulate palps and 1 pair of eyes. Four pairs of tentacular cirri, dorsal pairs of tentacular cirri long, ventral pairs much shorter. Pharynx with small rod-like paragnaths arranged in 8 discrete groups on maxillary ring; oral ring without paragnaths. Parapodia biramous with spinigers throughout. Notopodial and neuropodial falcigers in median and posterior setigers.

**Remarks.** This genus is monospecific and was originally described from the Solomon Islands, South Pacific by Gibbs (1971) and this is the first record of the genus from outside the type locality.

### *Solomononereis marauensis* Gibbs

*Solomononereis marauensis* Gibbs, 1971: 151-153, fig.8A-H.

**Material examined.** HOLOTYPE: Solomon Islands: Fintry Point, Nggela Island, 9°05'S 160°15'E (BMNH ZB 1970.32). PARATYPES: Solomon Islands: Sandfly Passage, (Florida Islands) 9°00'S 160°06'E 3(BMNH ZB 1970.33).

**Non type material.** Northern Territory: Rose River, Numbulwar tidal flats, 14°20'S 135°41'E, 7 June 1983, 1(NTM W1104); McArthur River, Curie Channel, 15°50'S 136°41'E, intertidal, 7 Aug. 1985 (NTM W3099), (NTM W3106), (NTM W3109), (NTM W3175), (NTM W3176), (NTM W3499), (NTM W3501), (NTM 3748); Gove Peninsula, Drimmie Arm, Mangrove Creek, 12°14'S 136°42'E, 1 June 1973, 1(NTM W537), 9 Jan. 1973, 1(NTM W618), 30 Oct. 1972, 1(NTM W621), 22 Mar. 1972, 1(NTM W622), 3 Nov. 1971, 1(NTM W623), 12 July 1972, several (NTM W625), 30 Oct. 1972, 1(NTM W1373). All specimens collected intertidally.

**Description.** All specimens incomplete, range in size up to 52 mm long, 3.0 mm wide, 118 setigers, 0.5-2.5 mm jaw length. Alcohol preserved specimens pale brown to cream with prominent brownish gland visible below

dorsal cirrus. Prostomium rectangular with antennae arising from extreme corners of distal margin. Palps globular with stout bi-articulate palpophores and small palpostyles. Peristomium relatively narrow. Longest tentacular cirri extends to setiger 20, shortest to setiger 3. Jaws with 8 teeth. Pharynx with paragnaths on maxillary ring arranged as follows: Area I = 1-7, II = 5-12, III = 2-10 medially and 0-7 paragnaths laterally, IV = 3-14; oral ring bare.

Anterior notopodia with elongate, narrow, dorsal cirrus which exceeds length of dorsal ligule. Dorsal and median ligules conical. Neuropodia with conical acicular lobe slightly longer, conical postsetal lobe. Ventral cirrus one half as long as ventral ligule. Posteriorly, dorsal ligule and ventral ligule greatly reduced. In far posterior setigers, dorsal ligule absent and ventral ligule persists as rudiment. Dorsal cirrus increases greatly in length in median and posterior parapodia; in parapodia 50, dorsal cirrus approximately two and a half times as long as dorsal ligule. Notopodia with homogomph spinigers throughout and homogomph falcigers in far posterior setigers. Neuropodia with homogomph and sesquigomph spinigers, and single heterogomph falciger in supra-acicular fascicle; heterogomph spinigers in subacicular fascicle. Falcigers with elongate blade with curved tip and distinct tendon.

**Remarks.** In the original description of *Solomononereis marauensis*, Gibbs records the number of paragnaths in each discrete group on the proboscis as 10-15 and the holotype has the following arrangement of paragnaths:- I = 2-3, II = bundle of 3-4, III = bundle of 7, IV = 5 bundles evenly spaced with each bundle consisting of several pegs closely adjacent to each other, bundle 1 = 5-6, 2=8, 3=8, 4=10, 5=7, bundles 1 and 5 consisting of larger peg-like paragnaths than in other bundles, bundle 3 is the mid central bundle, oral ring bare. The Australian material has the number of paragnaths increasing with the size of the specimen; however, our largest specimens, although similar in size to those examined by Gibbs, tend to have fewer paragnaths in Area IV. In our material the number of paragnaths on each Area varies as follows (greatest to least number of paragnaths): III>IV>II>I. Other characters, however, particularly of the parapodia and setae, agree well with the type material. This extends the distribution of this monospecific genus considerably, from the Solomon Islands, South Pacific to northern Australia.

**Habitat.** In Australia this species has been found in mangrove-lined creeks subjected to wide fluctuations in salinity. Specimens from the Solomon Islands were found in sticky mud above midtide level close to freshwater outflows.

**Distribution.** Australia (northern Australia from 14°20'S 135°41'E to 12°14', 136°42'E), Solomon Island (type locality).

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