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Accessory Publication

A revision of the Australian Trichobranchidae (Polychaeta)

Pat Hutchings and Rachael Peart

Invertebrate Division, The Australian Museum, 6 College Street, Sydney NSW 2010, Australia.

Email: path@austmus.gov.au

Abstract

The family Trichobranchidae is represented in Australian waters by ten species (*Artacamella dibranchiata*, *A. torulosa*, sp. nov., *A. tribranchiata*, sp. nov., *Terebellides kowinka*, sp. nov., *T. mundora*, sp. nov., *T. narribri*, sp. nov., *T. woolawa*, sp. nov., *Octobranchus myunus*, sp. nov., *Trichobranchus bunnabus*, sp. nov., *T. gorreekis*, sp. nov.) in four genera, of which nine species are new. Previously the ‘cosmopolitan species’ *Terebellides stroemii* Sars, 1835 had been widely reported from Australia; examination of material from near the type locality, Norway, revealed that the Australian material differed and represented four new species. *Terebellides stroemii* does not occur in Australian waters. *Terebellides stroemii* is redescribed. Additional characters are described for the genus which may also facilitate the separation of these species. A key to the genera and species present in Australia is given, as well as tables summarising the characters of all described species in these genera.

Methods

The following measurements were recorded for each animal: total length in mm, and width of anterior segments; initially also the number of segments was noted. However, in the material examined only the length measurements are given, together with an average width measurement for all material examined. The total number of segments was not found to be a useful character and segments were often poorly differentiated posteriorly, especially in small specimens, making accurate segment counts difficult, although they are given for type material. The presence or absence of coelomic gametes was noted, and in all cases sexually mature material was available for examination, ensuring we were describing adults. An * by the registration number indicates that coelomic gametes were visible in at least some of the registration lot, no sexual dimorphism was apparent, or morphologically differences between sexually mature and non sexually mature individuals. Additional material examined for each species is listed by state in a west– to– east direction. For species represented by a large number of individuals in the material examined section, only a selection of material is actually listed.

The following abbreviations have been used in the text, AM – Australian Museum, Sydney; BMNH – The Natural History Museum, London; LACM – Los Angeles County Museum, Los Angeles; MV – Museum Victoria, Melbourne; NTM – Northern Territory Museum, Darwin; QM – Queensland Museum, Brisbane; SAM – South Australian Museum, Adelaide; USNM – National Museum of Natural History, Washington, D.C.; WAM – Western Australian Museum, Perth; WU – Wroclaw University, Museum of Natural History, Poland.

Artacamella dibranchiata Knox & Cameron*Material examined**Types*

Holotype. Victoria: East Central Port Phillip Bay (38°10'S, 145°00'E) Area 61, Station 242, 20 m, silty sand, sediment, (MV F41758*)

Paratype. Data as for holotype (MV F41759*).

Other material. **Victoria**: East Central Port Phillip Bay, St Leonards (38°10.00'S, 144°44.87'E) 8.iv.1991, 11.6–13.5 m, sandy mud, 6(AM W25225*) 1(AM W25227) 1(AM W25228) 1(AM W25229) 1(AM W25330) 5(MV F87072*) 2(BMNH 1999.1085–1086*) 2(LACM-AHF*) 2(USNM 186057*) 7–20 mm long.

Artacamella torulosa, sp. nov.*Material examined*

Holotype. Queensland: near the mouth of Althaus Ck. Halifax Bay, north of Townsville (19°10'S, 146°37'E) i.1977 in 2–5 m, (AM W24124*), posteriorly incomplete, 10 mm long, 2 mm wide, with 28 segments.

Paratypes. **Queensland**: near the mouth of Althaus Ck. Halifax Bay, north of Townsville (19°10'S, 146°37'E) i. 1977 in 2–5 m, 1(AM W24118*) posteriorly incomplete, 13 mm long, 10 mm wide; 7(AM W24121*) 3–11 mm long, 0.5–1 mm wide, 19–48 segments; 1(AM W24127*) 8 mm long, 1 mm wide, 30 segments; 8(AM W24122*) 3–9 mm long, 1–1.5 mm wide, 19–51 segments; 2(AM W24115*) 12 & 14 mm long, 1.5 mm wide, 52–56 segments; 2(BMNH 1999.1092–1093*) 11 & 12 mm long, 2 mm wide, 35–37 segments; 1(LACM-AHF POLY 1926*) 13 mm long, 2 mm wide, 60 segments; 1(USNM 186054*) 12 mm long, 2 mm wide, 64 segments.

Other material. **Western Australia**: NW Shelf, off Port Hedland: (19°43'54"S, 117°54'30"E) 22.ii.1983, 53 m, 2(AM W24140*) incomplete, 3 & 7 mm long; (19°59'S, 117°51'12"E) 22.iv.1983, 40 m, 1(AM W24141) 6 mm long; (19°04'48"S, 118°50'42"E) 29.vi.1983, 84 m, 1(AM W24142*) 9 mm long; (19°55'30"S, 117°56'06"E) 26.viii.1983, 43 m, 1(AM W24143) 7 mm long; (19°29'36"S, 118°52'12"E) 30.viii.1983, 39 m, 2(AM W24144*) incomplete, 4 & 8 mm long; (19°58'48"S, 117°51'24"E) 26.x.1983, 41 m, 1(AM W24145) 6 mm long. **Victoria**: Western Bass Strait, 5 km SSW of Cape Otway (39°07'S, 143°14'36"E) 20.xi.1981, 84 m, sandy shell, 1(MV F78668*) 4 mm long; 59 km WNW of Cape Farewell, King Is. (39°27'48"S, 143°17'18"E) 10.x.1980, 104 m, medium-fine sand, 1(MV F78647*) 4 mm long; Central Bass Strait, 57 km S of Rodondo Is. (39°43'30"S, 146°18'48"E) 13.xi.1981, 80 m, bryozoan sand, 1(MV F78673*) 7 mm long; (39°46'S, 146°18'E) 13.xi.1981, 80 m, bryozoan sand, 2(MV F78685*) 5 & 6 mm long; (40°13'48"S, 148°39'36"E) 14.xi.1981, 60 m, 1(MV F78707*) 5 mm long, muddy sand; 47 km E of Cape Rochon, Three Hummock Is. (40°23'48"S, 145°32'E) 03.xi.1980, 66 m, mud-shell-sand, 3(MV F78660*) 4–5 mm long; 65 km ENW of Cape Rochon, Three Hummock Is. (40°10'54"S, 145°44'18"E) 13.xi.1981, 75 m, 1(MV F78704*) 10 mm long, bryozoan mud, 1(MV F78684*) 11 mm long; Eastern Bass Strait, 85 km NE of North Pt., Flinders Is. (39°02'24"S, 148°30'36"E) 15.xi.1981, 120 m, sandy mud, 2(MV F78675*), 8 mm long; Westernport, Cribb Pt. (38°21'36"S,

145°13'40.2"E) 12.iii.1965, 13 m, muddy sand, 4(MV F78550*) 4–7 mm long. **New South Wales:** Jervis Bay: Montagu Roadstead (35°02'12"S, 150°46'E) 17.viii.1989, 12 m, 1(AM W24158*) 11 mm long; Honeymoon Bay (35°03'48"S, 150°45'24"E) 09.xi.1989, 1(AM W24159*) 8 mm long; 27.ii.1990, 1(AM W24160*) 10 mm long; 21.ii.1991, 1(AM W24161*) 5 mm long; Wattamolla (34°44'S, 150°39'E) 26.vii.1990, 45–50 m, 7(AM W24129*) 5–8 mm long; 2(AM W24130*) 8 mm long; 1(AM W23083*) 8 mm long; 1(AM W24131*) 5 mm long; 1(AM W24132*) 6 mm long; 1(AM W24133*) 7 mm long; 14.xi.1990, 1(AM W24134*) 7 mm long; 1(AM W23083) 5 mm long; 1(AM W24136*) 8 mm long; Bass Pt. (34°36'S, 150°54'E) 14.xi.1990, 65–70 m, 1(AM W24137*) 13 mm long; Cape Banks (34°00'S, 150°16'E) 18.i.1990, 65–70 m, 1(AM W24138*) 8 mm long; (33°58'16.8"S, 151°11'58.8"E) 28.vii.1992, 7 m, 1(AM W21651) 5 mm long; 01.iv.1992, 1(AM W24139) 5 mm long. **Queensland:** Halifax Bay, N of Townsville (19°10'S, 146°38'E) 5 m, 1(AM W24119) incomplete, 4 mm long; near mouth of Althaus Ck., Halifax Bay (19°10'S, 146°37'E) i.1977, 2 m, 2(AM W24120*) 5 & 8 mm long; (19°10'S, 146°38'E), 1(AM W24117*) 12 mm; (19°10'S, 146°44'E) 1(AM W24116*) 12 mm long; 5(AM W24114*) 5–22 mm long. **Northern Territory:** Adelaide R. mouth (12°12'S, 131°13'E) 21.v.1985, 5–8 m, shellgrit pebbles, fine silt, 1(NTM W2922*) 9 mm long; 1(NTM W2924*) 13 mm long, 1(NTM W2923*), 9 mm long; 1(NTM W2921*) 14 mm long; Melville Bay (12°15'S, 136°43'E) 22.iii.1992, 11.5 m, 1(NTM W16479*) 7 mm long; 1(NTM W16481*) 6 mm long, 12.9 m, 1(NTM W16482*) 12 mm long. Material examined was 3–19 mm long and 0.5–2.5 mm wide.

Artacamella tribranchiata, sp. nov.

Material examined

Holotype. New South Wales: Jervis Bay, S of Long Beach (35°03'48"S, 150°45'24"E) 09.xi.1988, 3 m, in *Posidonia* seagrass beds, 1(AM W24146*) complete, 15 mm long, 1.5 mm wide, 60 segments.

Paratypes. **New South Wales:** Jervis Bay, Hole in the Wall (35°07'36"S, 150°44'48"E) 26.ix.1990, 12 m, sandy sediments, unvegetated, 1(USNM*) complete, 18 mm long, 3.8 mm wide, about 85 segments; 21.ii.1991, 12 m, 2(LACM-AHF) complete, 5 mm long, 0.76 mm wide, about 45 segments, incomplete, 6 mm long, 1.5 mm wide, about 25 segments; 18.vi.1991, 1(BMNH*) complete, 10 mm long, 3.8 mm wide, about 85 segments; Green Pt. (35°05'S, 150°45'E) 23.i.1973, 3–5 m, in *Zostera* & *Halophila* seagrass beds, 1(AM W24150) complete, 6 mm long, 1.5 mm wide, about 50 segments.

Other material. **South Australia:** Spencer Gulf, Port Pirie, 8 kms W of First Ck. (33°12'S, 137°55'E) 4.6 m, in *Posidonia* seagrass beds 3(AM W202294*) 5–10 mm long; 2.8 m, 1(AM W24157) incomplete, 7 mm long; Upper Spencer Gulf, Monument Hill – W (32°50'S, 137°49'E) viii.1986, 17 m, 1(SAM E3028*) 7 mm long, medium sand; Lowly Pt. – Ward Spit Channel (33°01'S, 137°47'38"E) i.viii.1986, 22 m, medium sand, 2(SAM E3023*) 5 & 9 mm long; False Bay (33°01'S, 137°40'E) viii. 1986, 10 m, 1(SAM E3030*) 14 mm long; Backy Pt. –W (32°55'S, 137°48'E) viii.1986, 18 m, 1(SAM E3027*) 7 mm long; 11 m, 1(SAM E3026*) 13 mm long; Lowly Pt. – E (33°00'S, 137°49'52"E) viii.1986, 18 m, 6(SAM E3031*) 5–14 mm long; Port Bonython (33°01'S, 137°45'E) viii.1986, 15 m, 2(SAM E3025*) 9 & 14 mm long; Whyalla – S (33°05'S, 137°37'38"E) viii.1986, 12 m, medium sand, 1(SAM E3024*) 11 mm long; Fairway Banks – W (33°05'S, 137°40'E) viii.1986, 13 m, coarse sand, 1(SAM E3022*) 8 mm long; Whyalla (33°02'24'S, 137°40'E) viii.1986, 12 m, 1(SAM

E3029*) 9 mm long; (33° 02'24'S, 137°37'38'E) viii.1986, 10 m, 1(SAM E3020*) 8 mm long; Backy Pt. (32°55'S, 137°50'E) viii. 1986, 17 m, 2(SAM E3021*) 10 & 11 mm long; Streaky Bay (32°42'S, 134°08'E) 13.iii.1979, midtide fauna from mussel clumps, 1(AM W24153*) 15 mm long; Speeds Pt. (32°42'S, 134°08'E) 14.iii.1979, algal washings, 1(AM W241548) 12 mm long. **Victoria:** Westernport (38°16'13.8'S, 145°15'27'E) 22.xi.1973, 9 m, sand, 1(MV F78718) 3 mm long; Cribb Pt. (38°20'49.8'S, 145°13'29.4'E) 23.iii.1965, 13 m, sandy gravel, 3(MV F78603*) 3–7 mm long; 2(MV F78601) 4 & 5 mm long; 4(MV F78602*) 4–6 mm long; (38°21'36'S, 145°13'40.2'E) 12.iii.1965, 13 m, muddy sand, 1(MV F78605*) 7 mm long; 5(MV F78550*) 4–6 mm long; (38°20'56.4'S, 145°13'37.2'E), 29.iii.1965, 15 m, fine sand/mud, 3(MV F78600*) 4–7 mm long. Bass Strait; 20 km SSW of Babel Is. (40°06'48'S, 148°24'24'E) 14.xi.1981, 22 m, coarse shell, 1(MV F78665) 4 mm long; 53 km W of Stokes Pt., King Is. (40°05'36'S, 143°18'06'E) 11.x.1980, 123 m, medium sand, 1(MV F78650*) 7 mm long; 38 km SW of Cape Paterson (38°55'30'S, 145°17'E) 12.xi.1981, 70 m, 2(MV F78702*) 3 & 5 mm long, fine mud; 9 km SSW of Cape Adansan, Three Hummock Is. (40°30'54'S, 144°56'E) 02.xi.1980, 27 m, very coarse sand, 3(MV F78659*) 4–7 mm long; 25 km S of Cape Otway (39°06'S, 143°35'48'E) 31.i.1981, 95 m, fine sand, 3(MV F78672*) 3–6 mm long; (40°13'48'S, 48°39'36'E) 14.xi.1981, 60 m, muddy sand, 2(MV F78707*) 4 & 5 mm long; 47 km east of Cape Rochon, Three Hummock Is. (40°23'48'S, 145°32'E) 03.xi.1980, 66 m, mud-shell-sand, 2(MV F78660*) 4 & 5 mm long. **New South Wales:** Jervis Bay, Plantation Pt. (35°04'S, 150°42'E) 27.ii.1990, sandy mud, unvegetated, 1(AM W24162*) incomplete, 2 mm long; S of Long Beach (35°03'48'S, 150°45'24'E) 09.xi.1988, 3 m, in *Posidonia* seagrass beds, 1(AM W24163*) incomplete, 5 mm long; Wattamolla (34°44'S, 150°39'E) 14.xi.1990, 45–50 m, 1(AM W24164*) 10 mm long; 65–70 m, 1(AM W24165*) incomplete, 8 mm long; 26.vii.1990, 45–50 m, 1(AM W24166*) 10 mm long; 6(AM W24167*) 7–9 mm long; 2(AM W24168*) 7–8 mm long; 11.i.1990, 45–50 m, 1(AM W24169*) 9 mm long; Bass Pt. (34°36'S, 150°54'E) 18.i.1991, 65–70 m, 1(AM W24170) 6 mm long; 1.ii.1990, 45–50 m, 2(AM W24171*) incomplete, 4 & 12 mm long; 14.xi.1990, 65–70 m, 1(AM W24172) 11 mm long; 18.i.1991, 35–40 m, 1(AM W24173*) 8 mm long; Cobblers, Bate Bay (34°07'S, 151°10'E) 24.i.1990, 35–40 m, 2(AM W24174*) incomplete, 5 & 7 mm long; Cape Banks (34°00'S, 151°16'E) 14.xi.1990, 65–70 m, 1(AM W24175) 5 mm long; (34°00'S, 150°16'E) 18.i.1990, 65–70 m, 1(AM W24176*); Sydney, SE off Chinamans Beach & 200 m of rock shelf off Wyangaring Pt. (35°45'S, 151°19'E) 08.v.1971, 10 m, in dead shells & sand 3(AM W24156*) incomplete, 8–20 mm long; Port Stephens (32°42'S, 152°06'E) in *Posidonia* seagrass beds, 1(AM W12851) incomplete, 4 mm long. Material examined was 2–20 mm long and 0.5–2 mm wide.

***Octobranthus myunus*, sp. nov.**

Material examined

Holotype. New South Wales: Jervis Bay, Hole in the Wall (35°07'36'S, 150°44'48'E) vi.1991, 12 m, sandy mud, unvegetated sediments, (AM W24181*) 16.7 mm long, 2.3 mm wide, with about 40 segments.

Paratypes. **New South Wales:** Jervis Bay, Hole in the Wall (35°07'36'S, 150°44'48'E) 12 m, sandy mud, unvegetated sediments, 1(USNM 186056) 13 mm long, 1.9 mm wide, 47 segments; 4(AM W24182) 7–13 mm long, 1.9–2.6 mm wide, 26–50 segments; 1(BMNH 1999.1091*) 13 mm long, 2.3 mm wide, about 50 segments;

1(LACM-AHF POLY 1925) 13 mm long, 2.3 mm wide, about 50 segments; 1(AM W24183) 26.6 mm long, 2.3 mm wide, about 60 segments. All type material collected in either vi.1989 or vi.1991.

Other material. **Western Australia:** Rottneest Is., North Pt. (31°59'15'S, 115°30'33'E) 10 m, in algal holdfasts, 1(AM W24187) 6 mm long, 1(AM W24188*) 5 mm long, 1(AM W24189) 4 mm long; Reef, 2 km off North Pt. (31°58'30'S, 115°29'42'E) 30 m from coral bommie surrounded by algal beds 1(AM W24190*) 6 mm long, 1(AM W24191*) 5 mm long; Roe Reef (31°58'27'S, 115°31'54'E) 20–30 m, 1(AM W24192) 4 mm long; Mabel Cove (32°01'S, 115°27'24'E) 10 m, coralline algae, sponges on overhangs of limestone reef, 1(AM W24193*) 9 mm long; Duck Pt. (31°59'18'S, 115°32'06'E) 7–10 m, algal washings, 1(AM W24194*) 9 mm long, all material from Rottneest Is. collected i.1991; Two Peoples Bay, 2 km SE of South Pt. (34°57'S, 118°11'E) 12 m, 1(AM W201033*) 12 mm long. **Victoria:** W Bass Strait, 80 km SSE of Cape Otway (39°25'30'S, 142°57'24'E) 09.x.1980, 115 m, mud, fine sand, 1(MV F78646*) 7 mm long; 5 km S of Pt. Reginald, (38°49'45'S, 143°16'E) xi. 1981, 47 m, 2(MV F78712*) incomplete, 5 & 8 mm long; 30 km SSW of Warnambool (38°38'12'S, 142°35'E) 20.xi.1981, 59 m, 1(MV F78713*) incomplete, 7 mm long; Central Bass Strait, 66 km S of Rodondo Is. (39°49'30'S, 146°18'30'E) 13.xi.1981, 82 m, bryozoan mud, 5(MV F78662*) incomplete, 2–7 mm long; 57 km S of Rodondo Is. (39°43'30'S, 146°18'48'E) 13.xi.1981, 80 m, bryozoan sand, 1(MV F78651) incomplete, 6 mm long; (39°46'S, 146°18'E) 13.xi.1981, 80 m, bryozoan mud, 2(MV F78685) incomplete, 3 & 4 mm long; 20 km N NE of North Pt. (40°32'S, 145°23'E) 4.xi.1980, 44 m, muddy sand, 1(MV F78681) incomplete, 5 mm long; 36 m, muddy shell, 1(MV F78710*) 10 mm long; 28 km SSW of Marlo (38°01'45'S, 148°24'30'E) 30.vii.1983, 51 m, 12(MV F78654) incomplete, 3–8 mm long; E Bass Strait, 85 km NE of North Pt., Flinders Is. (39°02'24'S, 148°30'36'E) 15.xi.1981, 120 m, sandy mud, 1(MV F78695) incomplete, 3 mm long; 6 km WSW of Cape Conran (37°49'30'S, 148°41'E) 30.xii.1983, 21 m, 2(MV F78655) 4 & 6 mm long; Westernport, Cribb Pt. (38°21'19.8'S, 145°13'38.4'E) 8.iv.1965, 15 m, fine sand/mud, 1(MV F78621) incomplete, 3 mm long. **New South Wales:** Murrumbulga Ck., Twofold Bay (37°05'S, 149°54'E) 25.vi.1985, subtidal rock platform, kelp holdfasts, 4(AM W201598*) 6–9 mm long; off Tathra Head (36°46'30'S, 150°02'30'E) 10.vi.1980, 64 m, 3(AM W24184*) 5–9 mm long; Jervis Bay, Hole in the Wall (35°07'36'S, 150°44'48'E) vi.1991, 4(AM W24185*) 5–10 mm long. Material examined varied from 6 to 13 mm long and 0.5–1 mm wide.

***Terebellides kowinka*, sp. nov.**

Material examined

Holotype. Queensland: Middle Banks, Moreton Bay (27°25'S, 153°20'E) xii.1983, in 9–18.5 m, (AM W23826*) 23 mm long, 1.52 mm wide, about 55 segments.

Paratypes. **Queensland:** Middle Banks, Moreton Bay (27°25'S, 153°20'E) xii.1983, in 9–18.5 m, 7(AM W23827*) 16–21 mm long, 1.52–2.66 mm wide, 48–57 segments; 2(QM G217307) 18–19 mm long, 2.28–2.4 mm wide, 53–55 segments; 3(USNM 186059*) 14–19 mm long, 1.9 mm wide, 45–52 segments; 3(LACM-AHF POLY 1924*) 14–24 mm long, 1.52–2.28 mm wide, 50–53 segments; 3(BMNM 1999.1097-1099*) 19–20 mm long, 1.9–2.28 mm wide, 45–60 segments.

Other material. **South Australia:** Spencer Gulf, 8 km SW of First Ck., Port Pirie, (33°12'S, 137°55'E) 1979, 2.8 m, *Posidonia* seagrass beds 1(AM W23837*) 20 mm long; 1980, 1(AM W23838*) 5 mm long. **Tasmania:** Huon R. (43°02'S, 146°17'E) 3. iii. 1976, 1(AM W11070*) 13 mm long; 11.ii.1976, 1(AM W11067*) 16 mm long; 3(AM W11068*) 14–19 mm long; 5.ii.1976, 3(AM W11098*) 11–19 mm long; 5.ii.1976, 1(AM W11683*) 33 mm long; Kelly Inlet, Port Davey (43°16'44'S, 145°52' 30'E) 1 (AM W24040*) 40 mm long. **Victoria:** Port Phillip Bay, E of Pt. Wilson (38°05'S, 144°33'30'E) 14.v.1963, 1(MV F41833*) 24 mm long; 6(MV F41647*) 17–33 mm long. **New South Wales:** Hawkesbury R., Juno Head, Hungry Beach (33°35'S, 151°17'E) 12.i.1977, 4 m, sandy mud, 3(AM W196122*) 21–27 mm long; 5.xi.1977, 5(AM W196123*) 16–32 mm long; 12.i.1977, 8(AM W196127) 14–30 mm long. **Queensland:** Gladstone, Auckland Ck. (23°51'S, 151°14'E) 9.x.1975, 1(AM W10342) 7 mm long; Calliope R. (24°01'S, 150°59'E) 9.x.1975, 1(AM W10343) 9 mm long; v.1976, 2(AM W13532*) 19–25 mm long; viii.1976, 2(AM W13533*) 9–16 mm long; Halifax Bay, N of Townsville (19°09'S, 146°37'E) 1973, 1(AM W5555*) 15 mm long. **Northern Territory:** Darwin Harbour (12°27'S, 130°50'E) 17.iii.1994, 10 m, 3(NTM W14863*) 23–28 mm long; 6 m, 13.vii.1993, 6 m, 1(NTM W9731*) 20 mm long. Material examined was 7–33 mm long and 1–3 mm wide.

***Terebellides mundora*, sp. nov.**

Material examined

Holotype. Victoria: Bass Strait (39°02'24'S, 148°30'36'E) 15.xi.1981, 120 m, bryozoan mud, (MV F82682*) 15 mm long, 1.52 mm wide, 65 segments,

Paratypes. **Victoria:** Bass Strait (39°02'24'S, 148°30'36'E) 15.xi.1981, 120 m, sandy mud, 2(MV F78642*), 26 & 16 mm long, 3.8 & 2.28 mm wide, 55 & 65 segments; (39°48'36'S, 146°18'48'E) 13.xi.1981, 82 m, bryozoan mud, 2(MV F78485*) 16 & 17 mm long, 1.14 & 1.52 mm wide, 50 & 55 segments; (39°49'5'S, 146°18'5'E) 13.xi.81, 82 m, 2(MV F78486) 3.04 & 3.42 mm long, 0.38 mm wide, 40 & 50 segments; (40°10'54'S, 145°44'18'E) 13.xi.1981, 75 m, bryozoan mud, 5(MV F78483) 4.94 mm long, 0.76 mm wide, 55 segments; 1(AM W24205*) 15.2 mm long, 1.52 mm wide, 55 segments; 1(USNM 186060*) 16.72 mm long, 1.52 mm wide, 50 segments; 1(LACM-AHF POLY1923*) 11.40 mm long, 1.14 mm wide, 50 segments; 1(BMNH 1999.1087*) 11.40 mm long, 1.90 mm wide, 60 segments.

Other material. **Victoria:** Bass Strait (39°13'36'S, 143°55'36'E) 23.xi.1981, 85 m, fine sandy shell, 1(MV F78473*) 11 mm long; SW Bass Strait (40°22'12'S, 145°17'E) 3.xi.1980 40 m, sand, 4(MV F78474*) 2–11 mm long; (40°38'S, 145°23'E) 4.xi.1980, 36 m, muddy shell, 2(MV F78639) 7 & 11 mm long; (40°23'48'S, 145°32'E) 3.xi.1980, 66 m, mud-shell-sand, 1(MV F78476) 4 mm long; (40°10'54'S, 145°44'18'E) 13.xi.1981, 75 m, bryozoan mud, 5(MV F78484) 6–14 mm long; (39°43'30'S, 146°18'48'E) 13.xi.1981, 80 m, bryozoan sand, 2(MV F78487*) 8 & 16 mm long; (38°12'30'S, 147°48'20'E) 31.vii.1983, 55 m, 1(MV F50094) 7 mm long. Material examined was 2–23 mm long and 0.5–2.5 mm wide.

Terebellides narribri, sp. nov.*Material examined*

Holotype. Queensland: Moreton Bay, 4 km S of SW Rocks, Peel Is. (27°30'S, 153°21'E), ix.1971, 5 m, sand, mud & shell, 1(AM W5048*) 11 mm long, 2.66 mm wide, 45 segments.

Paratypes. **Queensland:** Peel Is., 1.6 km SE of SW Rocks (27°30'S, 153°21'E) ix.1971, 6.4 m, mud, 1(QM G10366*) 11 mm long, 2 mm wide, 48 segments; 1.2 km N NE of Serpentine Ck. (27°24'S, 153°07'E) 15.v.1967, mud & shell, 1(QM G5052*), 46 mm long, 3 mm wide, 60 segments; E Channel, off Tangalooma Pt. (27°12'S, 153°21'E) xii.1972, 1(USNM 186052*), 11 mm long, 1.9 mm wide, 55 segments; 1(USNM 186051*), 14 mm long, 1.52 mm wide, 55 segments; ix.1972, 2(BMNH 1999.1096*), 21 mm long, 2.28 mm wide, 65 & 55 segments; 1(BMNH 1994.1094), 11 mm long, 1.9 mm wide, 50 segments; 1(AM W7059*) 29 mm long, 2.28 mm wide, 55 segments; xii 1972; 1(LACM-AHF POLY 1927), 1 incomplete, 18.20 mm long, 1.52 mm wide, 55 segments; ix.1972, 1(AM W23828*), 12.5 mm long, 1.52 mm wide, 50 segments.

Other material. **Western Australia:** Rottneest Is., Duffield Ridge (32°02'30'S, 115°28'39'E) 10.i.1991, 35 m, coralline algae and reef limestone, 1(AM W23839*) 11 mm long. **South Australia:** Kangaroo Is., Maston, American R. inlet (35°49'S, 137°44'E) 2.iii.1979, *Posidonia* seagrass beds, 1(AM W198501) 16 mm long. **Victoria:** Port Phillip Bay, S of Pt. Wilson (38°08'S, 144°30'30'E) 9.iii.1958, 1(MV F41848*) 27 mm long; Westernport, Cribb Pt. (38°19'59'S, 145°15'08'E) 16.iii.1965, 2 m, mud and *Zostera* seagrass beds, 2(MV F78728*) 29 & 30 mm long; Bass Strait, SW (40°22'12'S, 145°17'E) 3.xi.1980, 40 m, sand, 1(MV F78474*) 9 mm long; (38°01'45'S, 148°24'30'E) 30.vii.1983, 51 m, 1(MV F50093*) 25 mm long. **New South Wales:** Botany Bay (33°58'08'S, 151°11'10'E) 7.iv.1992, 5 m, 1(AM W21652*) 26 mm long; Pittwater, (33°35'51'S, 151°18'43'E) 20.x.1994, 16 m, 2(AM W23840) 9–13 mm long. **Queensland:** Moreton Bay, Middle Banks (27°12'S, 153°20'E) viii.1982, 1(QM GH4818*) 20 mm long. **Northern Territory:** W of Barrow Bay, Port Essington (15°20'S, 132°13'E) LWS, 18.ix.1985, mud flat, front mangrove, 1(NTM W3464*) 23 mm long; Bing Bong, McArthur R., Gulf of Carpentaria (15°38'S, 136°21'E) 13.7 m, 19.ix.1992, 1(NTM W7989*) 20 mm long. Material examined was 5–34 mm long and 0.5–4 mm wide.

Terebellides stroemii Sars*Material examined*

Norway: Porsangerfjord, Leirbugt (70°30'N, 25°30'E) 11.vii.1939, 10 m, 13(BMNH 1950.2.15.35–38, in part*), 16–26 mm long, 2–2.5 mm wide, with 46–50 segments.

Terebellides woolawa, sp. nov.*Material examined*

Holotype. Queensland: Moreton Bay, 1.6 km SE of SW Rocks, Peel Is. (27°30'S, 153°21'E) vi.1970, 4 m, (AM W5038*) 42 mm long, 3.04 mm wide, with about 65 segments.

Paratypes. Queensland: 1.6 km SE of SW Rocks, Peel Is. (27°30'S, 153°21'E) vi.1970, 6 m, 1(AM W5043*) 44 mm long, 6.08 mm wide, about 56 segments; 800 m S of SW Rocks, 7 m, ix.1971, shell grit & sand, 1(AM W5050*) 27 mm long, 3.04 mm wide, about 60 segments; ix.1970, 6 m, shell, grit & sand, 1(QM G217306*) 30 mm long, 3.04 mm wide, about 55 segments; 2.4 km S of SW Rocks, vi.1971, 4 m, sand, mud & shell, 2(USNM 186051*, 186052*) 17 & 24 mm long, 1.14 & 1.9 mm wide, nos of segments difficult to count as slightly dehydrated; Victoria Pt. (27°35'S, 153°20'18" E) 12.iii.1963, 1(LACM-AHF POLY 1920*) 24 mm long, 2.28 mm wide, 55 segments; E Channel, off Tangalooma Pt. (27°12'S, 153°21'E) ix.1972, 1(BMNH 1999.1084) 22 mm long, 0.9 mm wide, 65 segments; xii.1972, 1(AM W23825) 8.79 mm long, 0.76 mm wide, 50 segments.

Other material. Western Australia: Broome, Mangrove Pt. (15°23'S, 128°06'E) 28.ix.1984, LWM, mud, 1(NTM W2136*) 45 mm long; Dampier Archipelago, Kendrew Is. (20°29'S, 116°32'E) 28.iii.1987, 10 m, 1(AM W23832) 14.5 mm long; W side of Goodwyn Is. (20°33'S, 116°33'E) 29.iii.1987, 6 m, crevice fauna, 1(AM W23833*) 13.5 mm long; W side of Enderby Is. (20°36'S, 116°27'E) 28.iii.1987, intertidal, 1(AM W23830*) 37.5 mm long. **South Australia:** Spencer Gulf, Port Pirie, 8 km SW of First Ck. (33°12'S, 137°55'E) 1979, 2.8 m, *Posidonia* seagrass beds, 1(AM W23834*) 20 mm long; N of Fairway Bank (33°02'24"S, 137°45'E) ii.1986, 18 m, 1(SAM E3032*) 23 mm long. **Victoria:** Port Phillip Bay, Corio Bay, (38°08'18"S, 144°24'32"E) 11.vii.1987, 9 m, sand, 1(AM W23831*), 53 mm long; Westernport, Cribb Pt. (38°21'44"S, 145°13'14"E) iv.1965, 3 m, 1(MV F78733*) 31 mm long. **New South Wales:** Jervis Bay, Callala Boat Ramp (35°00'S, 150°44'E) 25.v.1990, 2 m, *Posidonia* seagrass beds, 1(AM W23836*) 55 mm long; 5.vi.1990, 2 m, 1(AM W23835*) 52 mm long. **Queensland:** Moreton Bay, Peel Is., 1.6 km SE of SW Rocks (27°30'S, 153°21'E) vi.1970, 5.64 m, 1(QM G10398*) 32 mm long; ix.1971, 6.4 m, mud, 1(QM G10366*) 38 mm long; vi.1970, 5.5 m, mud, 1(QM G6702*) 32 mm long; Victoria Pt. (27°35'S, 153°29'E) *Zostera*, 13.vi.1962, 1(QM G3636) 26.5 mm long. **Northern Territory:** Darwin Harbour, underneath the bridge, Channel Is. (12°32'51"S, 130° 51'48"E) 20.vii.1993, SLWM, on *Caulerpa*, 1(AM W23829*) 13 mm long; Gulf of Carpentaria, McArthur R. Bing Bong (15°38'S, 136°21'E) 19.ix.1992, 13.7 m, 1(NTM W7988*) 18 mm long; 19.iii.1993, 1(NTM W7982*) 26 mm long. Material examined was 3–55 mm and 0.5–5.5 mm wide.

Trichobranchus bunnabus, sp. nov.

Material examined

Holotype. New South Wales: Cape Banks (34°00'S, 151°16'E) xi.1990, 65–70 m, (AM W24221*) 7.6 mm long, 1.14 mm wide, about 37 segments.

Paratypes. New South Wales: Wattamolla (34°44'S, 150°39'E) 26.vii.1990, 65–70 m, 1(AM W 24224*) 8 mm long, 0.5 mm wide, 52 segments; 1(AM W24226*) 5 mm long, 0.5 mm wide, 45 segments; 1(LACM-AHF POLY 1921*) 8 mm long, 1.52 mm wide, about 55 segments; Bass Pt. (34°36'S, 150°54'E) 18.i.1991, 45–50 m, 3(USNM 186055) 5–11 mm long, 1.52 mm wide, 2 posteriorly incomplete, 1 with about 65 segments, ii.1990, 45–50 m, 2(AM W24225) 7 & 5 mm long, 0.5 wide, 43–45 segments; Cape Banks (34°00'S, 151°16'E) 14.xi.1990, 65–70 m, 1(AM W24222*) 12 mm long, 2.28 mm wide, 30 segments, posteriorly incomplete, 18.i.1991, 2(BMNH 1999.1088–1089) 8 & 11 mm long, 1.14 mm wide, 1 incomplete posteriorly,

other with about 60 segments; 1(AM W24223*) 5 mm long, 1.52 mm wide, with about 40 segments; Bate Bay (34°07'S, 151°10'E) 18.i.1991, 65–70 m, 1(MV F87071*) 8 mm long, 2.28 mm wide, with about 60 segments.

Other material. **Western Australia:** Houtman Abrohlos, Beacon Is. just behind WA Fisheries hut, foot of reef slope (28°25'30'S, 113°47'E) 18.v.1992, 32 m, tubes on small pieces of coral rubble, 2(AM W24230*) incomplete, 12 & 30 mm long. **South Australia:** Spencer Gulf, Port Pirie, near mouth of First Ck. (33°12'S, 137°55'E) 1979, 5.5 m, 1(AM W24231) 5 mm long. **Victoria:** Bass Strait (39°29'24'S, 143°14'24'E) 11.x.1980, 123 m, very fine sand, 1(MV F78648) incomplete, 5 mm long; (40°13'48'S, 148°39'36'E) 14.xi.1981, 60 m, muddy sand, 1(MV F78653) incomplete, 3 mm long; 63 km E of North Pt., Flinders Is. (39°44'48'S, 148°40'36'E) 14.xi.1981, 124 m, fine sand-mud, 1(MV F78687*) incomplete, 10 mm long; 85 km SSW of Cape Conran (38°30'S, 148°17'30'E) 15.xi.1981, 1120 m, mud, 1(MV F78709*) incomplete, 9 mm long; 24 km N NE Eddystone Pt. (40°43'54'S, 148°32'30'E) 14.xi.1981, 56 m, muddy sand, 1(MV F78694*) incomplete, 6 mm long; Port Phillip Bay, off Portarlington (38°04'42'S, 144°42'54'E) 10.ii.1970, 15 m, silt – sand, 1(MV F78629*) incomplete, 19 mm long; off Indented Head (38°08'30'S, 144°45'E) 03.v.1963, 1(MV F41840*) 28 mm long; Geelong arm (38°07'S, 144°34'30'E) 12.ii.1970, 12 m, silt-clay, 1(MV F78630*) incomplete, 12 mm long; 1(MV F78623*) incomplete, 10 mm long; (38°07'42'S 144°48'06'E), 21.ix.1970, 21 m, sand-silt-clay, 2(MV F78624*) 12 & 24 mm long; (38°14'S, 144°49'48'E) 12.ii.1970, 25 m, clay-silt, 2(AM W16133*) incomplete, 10 & 13 mm long; (38°14'S, 144°49'48'E) 12.ii.1970, 25 m, clay-silt, 4(MV F78631*) incomplete, 10–13 mm; 12.x.1971, 19 m, sand-silt-clay, 1(MV F78632*) incomplete, 7 mm long; (38°18'42'S, 144°56'42'E) 11.x.1971, 19 m, sand, 1(MV F78636*) incomplete, 13 mm long; 1(MV F78633*) incomplete, 7 mm long; (38°18'42'S, 144°53'18'E) 22.ix.1970, 18 m, sand, 1(MV F78635*) 23 mm long; 1(MV F78634*) incomplete, 13 mm long. **New South Wales:** Wattamolla (34°44'S, 150°39'E) 18.i.1991, 65–70 m, 1(AM W 24235*) incomplete, 7 mm long; 1(AM W 24228*) incomplete, 6 mm long; Bass Pt. (34°36'S, 150°54'E), 26.vii.1990, 65–70 m, 1(AM W 24236*) incomplete, 8 mm long; 18.i.1991, 45–50 m, 1(AM W 24232*) incomplete, 6 mm long; ii.1990, 25–50 m, 1(AM W 23054*) incomplete, 4 mm long; Cobblers, Bate Bay (34°07'S, 151°10'E) 18.i.1991, 65–70 m, 1(AM W24234*) incomplete, 4 mm long. **Queensland:** SE of Swains Reef (22°31'66'S, 152°42'37.8'E) 05.vii.1984, 78 m, fine grey sand, 1(AM W 24227) 8 mm long; Gladstone, Auckland Ck.(23°51'S, 151°16'E) iii.1980, 1.9 m, silty sand, 1(AM W198239*) incomplete, 7 mm long. **Northern Territory:** Darwin Harbour, Bangalow (12°30'S, 130°48'E) 7.vii.1993, intertidal spring tide, silt & clay, 1(AM W 24229) incomplete, 6 mm long; Channel Is. (12°32'51'S, 130°51'48'E) 28.iii.1984, 1(NTM W4016*) 10 mm long, mud flats; Melville Bay (12°15'S, 136°43'E) 19.iii.1992, 12.3 m, 2(NTM W16477*) incomplete, 4 & 11 mm long; 26.iii.1992, 2 m, 1(NTM W16471*) incomplete, 8 mm long; 22.iii.1992, 6.6 m, 1(NTM W16474*) incomplete, 13 mm long; 09.vii.1991, 1.9 m, coarse sand, 1(NTM W16476*) incomplete, 5 mm long; 19.iii.1992, 3.1 m, 2(NTM W16483*) 4 & 8 mm long; 20.iii.1992, 4.2 m, 1(NTM W16466*) 10 mm long; 22.iii.1992, 12.9 m, 1(NTM W16472*) 9 mm long. Material examined was 5–30 mm long and 0.5–2.5 mm wide.

Trichobranthus gooreekis, sp. nov.*Material examined*

Holotype. Victoria: Central Bass Strait, 20 km N NE of North Pt. (40°32'S, 145°23'E) 04.xi.1980, 44 m, muddy sand, 1(MV F82700*) posteriorly incomplete, 15.2 mm long, 1.5 mm wide, 45 segments.

Paratypes. **Victoria**: Central Bass Strait, 9 km SSW of Cape Adansan, Three Hummock Is. (40°30'54'S, 144°56'E) 02.xi.1980, 27 m, very coarse sand, 3(MV F78679*) 8–10 mm long, 1.5–3 mm wide, 1 posteriorly incomplete, others with about 50–55 segments; 20 km NNE of North Pt. (40°32'S, 145°23'E) 04.xi.1980, 44 m, muddy sand, 11(MV F78681*) 3–8 mm long, 1.14–1.9 mm wide, 40–55 segments; 3(MV F78661) 4–8 mm long, 1.52–2.28 mm wide, with about 55–60 segments; 100 km SE of Cape Liptrap (39°45'54'S, 145°33'18'E) 13.xi.1981, 74 m, bryozoan mud, 1(AM W24220*) 9 mm long, 2.28 mm wide, about 60 segments; E Bass Strait, 25 km NE of Deal Is. (39°16'48'S, 147°33'12'E) 18.xi.1981, 57 m, muddy shell, 1(BMNH 1999.1090*) 15.2 mm long, 1.14 mm wide, about 55 segments, 1(USNM 186058*) 14.8 mm long, 2.28 mm wide, with about 50 segments, 1(LACM-AHF POLY 1922*) 19.0 mm long, 1.14 mm wide, with about 60 segments, 2(MV F78666), 5–9.15 mm long, 1.52–1.7 mm wide, 1 posteriorly incomplete, other with about 50 segments.

Other material. **Western Australia**: Rottneest Is., North Pt. (31°59'15'S, 115°30'33'E) 10.i.1991, algal washings, 1(AM W 24237*) 7 mm long. **Victoria**: W Bass Strait, 36 km SSW of Stokes Pt. (40°26'42'S, 143°41'24'E) 21.xi.1981, 85 m, sandy shell, 1(MV F78699*) incomplete, 9 mm long. Central Bass Strait, 47 km E of Cape Rochon, Three Hummock Is. (40°23'48'S, 145°32'E) 03.xi.1980, 66 m, mud-shell-sand, 1(MV F78691) incomplete, 4 mm long; 9 km SSW of Cape Adansan, Three Hummock Is. (40°30'54'S, 144°56'E) 02.xi.1980, 27 m, very coarse sand, 14(MV F87083*) 2–8 mm long; 20 km N NE of North Point. (40°32'S, 145°23'E), 4.xi.1980, 44 m, muddy sand, 11(MV F78681) 2–8 mm long; 1(MV F78661) 7 mm long; 66 km S of Rodondo Is. (39°48'36'S, 146°18'48'E) 13.xi.1981, 82 m, 2(MV F78693*) incomplete, 5 & 10 mm long; 20 km NNE of North Pt. (40°38'S, 145°23'E) 4.xi.1980, 36 m, 8(MV F78671) 4–7 mm long, muddy shell; 57 km S of Rodondo Is. (39°46'S, 146°18'E) 13.xi.1981, 80 m, bryozoan mud, 7(MV F78685*) 3–6 mm long; 65 km S of Cape Schanck, (39°08'18'S, 144°43'54'E) 23.xi.1981, 66 m, sandy shell, 1(MV F78700) 4 mm long; 44 km NE of Cape Wickham, King Is. (39°22'S, 144°18'18'E) 23.xi.1981, 60 m, sandy shell, 1(MV F78678) 6 mm long; 25 km S of Deal Is. (39°43'42'S, 147°19'36'E) 13.xi.1981, 59 m, muddy shell, 3(MV F78674*) 3–6 mm long; 1(MV F78686) 8 mm long; 33 km S of Deal Is. (39°47'18'S, 147°19'18'E) 14.xi.1981, 60 m, 4(MV F78705) 3–5 mm long; (MV F78706*) 5 & 7 mm long; E Bass Strait, 43 km SE of Port Albert (38°53'42'S, 147°06'30'E) 18.xi.1981, 58 m, coarse shell, 4(MV F78688*) 3–7 mm long; 8 km S of SE Pt., Wilsons Promontory (39°12'54'S, 146°27'18'E) 18.xi.1981, 65 m, muddy sand, 11(MV F78689*) 2–9 mm long; 25 km NE of Deal Is. (39°16'48'S, 147°33'12'E) 18.xi.1981, 57 m, muddy shell, 1(MV F78666) 4 mm long; muddy shell, 11(MV F78676*) 1–7 mm long; 6 km WSW of Cape Conran (37°49'30'S, 148°41'E) 30.xii.1983, 21 m, 1(MV F78655) incomplete, 6 mm long; 50 km SE of Port Albert (38°54'18'S, 147°13'24'E) 18.xi.1981, 58 m, coarse shell, 4(MV F78696) incomplete, 3–5 mm long; 1(MV F78667) 6 mm long; 42 km SSW of Lakes Entrance (38°14'05'S, 147°49'20'E) 31.xii.1983, 46 m, 1(MV F78658) 7 mm long; 39 km NNE of Eddystone Pt. (40°55'09'S, 148°40'E) 1981, 70 m, 3(MV F78683*) 8–9 mm long; 24 km NNE Eddystone Pt. (40°43'54'S, 148°32'30'E) 14.xi.1981, 56 m, muddy sand, 2(MV F78663) 3 & 5 mm long; 40 km SSW Lakes Entrance (38°12'30'S, 147°48'20'E) 31.vii.1983, 55 m, 1(MV F78657) 5 mm long; 15 km S of Cape Wellington, Wilsons

Promontory (39°03'12'S, 146°39'30'E) 18.xi.1981, 55 m, muddy sand, 4(MV F78698) incomplete, 2–8 mm long; 40 km SSW Lakes Entrance (38°12'30'S, 147°48'20'E) 31.vii.1983, 55 m, 5(MV F78656) incomplete, 3–6 mm long; 28 km SSW of Marlo (38°01'45'S, 148°24'30'E) 30.vii.1983, 51 m, 5(MV F78654) 3–6 mm long; (40°40'42'S, 148°36'54'E) 14.xi.1981, 67 m, mud, bryozoan, 5(MV F78652) 4–7 mm long. Material examined was 1–10 mm long and 0.5–1 mm wide.