

***Cilicæa angustispinata* n.sp. (Fig. 32)**

**DIAGNOSIS**

*Cilicæa* with pleonite 1 process in adult males narrow and with parallel sides posteriorly, terminating in two small lobes separated by a shallow, terminal, median emargination. Uropod outer ramus in adult males completely covered with short setae. Pleotelson apex in adult males without perforations.

**TYPE MATERIAL**

Holotype: NZOI Type No. 145 [Cop. 7, ♂, 7 mm].

Paratypes: NZOI Type No. P202 [Cop. 10, 4 ♂♂ 5-7 mm; 1 ♀, 6 mm; 1 juv., 3 mm].

**TYPE LOCALITY:** Hauraki Gulf (North Channel), Kawaii Island.

**MATERIAL EXAMINED**

Little Barrier I: [Cop. 7] spp; 1 ♂ (7 mm, damaged).

Hauraki Gulf: [Cop. 9] 3 ♂♂, 1 ♀, 1 juv. [Cop. 10] 4 ♂♂ (5-7 mm, 2 damaged), 1 ♀ (6 mm), 1 juv. (3 mm).

**HABITAT:** Sublittoral, shallow shelf benthos.

**DEPTH RANGE:** 18-55 m.

***Cilicæa caniculata* (Thomson, 1879) (Fig. 33)**

*Nesæa caniculata* Thomson, 1879: 234-5, pl. 10 fig. A7. Filhol, 1885: 458.

*Naesæa canaliculata*. Thomson & Chilton, 1886: 1953.

*Cilicæa caniculata*. Chilton, 1911a: 568. Chilton, 1911b: 311. Holdich, 1968b: 407. Morton & Miller 1968: 538.

*Cilicæa caniculata*. Hansen, 1905: 123. Nierstrasz, 1931: 206. Hurley, 1961: 270.

*Cymodocea bituberculata*. Filhol, 1885: 457, pl. 55 fig. 2.

*Cymodocea bituberculata*. Hutton, 1904: 263. Tattersall, 1921: 221-2, pl. 6. figs 9-15. Hurley, 1961: 270. Nierstrasz, 1931: 201. Morton & Miller, 1968: 538, fig. 71.9.

**DIAGNOSIS**

*Cilicæa* with pleonite 1 process in mature males broad, truncated, with a shallow, terminal, median cleft. Uropod outer ramus in adult males covered with setae except for the inner part of the ventral surface. Pleotelson apex in adult males perforated each side of midline, notch in apex fully occupied by median lobe. Females without pleonite process, pleotelson has instead two well marked, rounded bosses separated by a median groove.

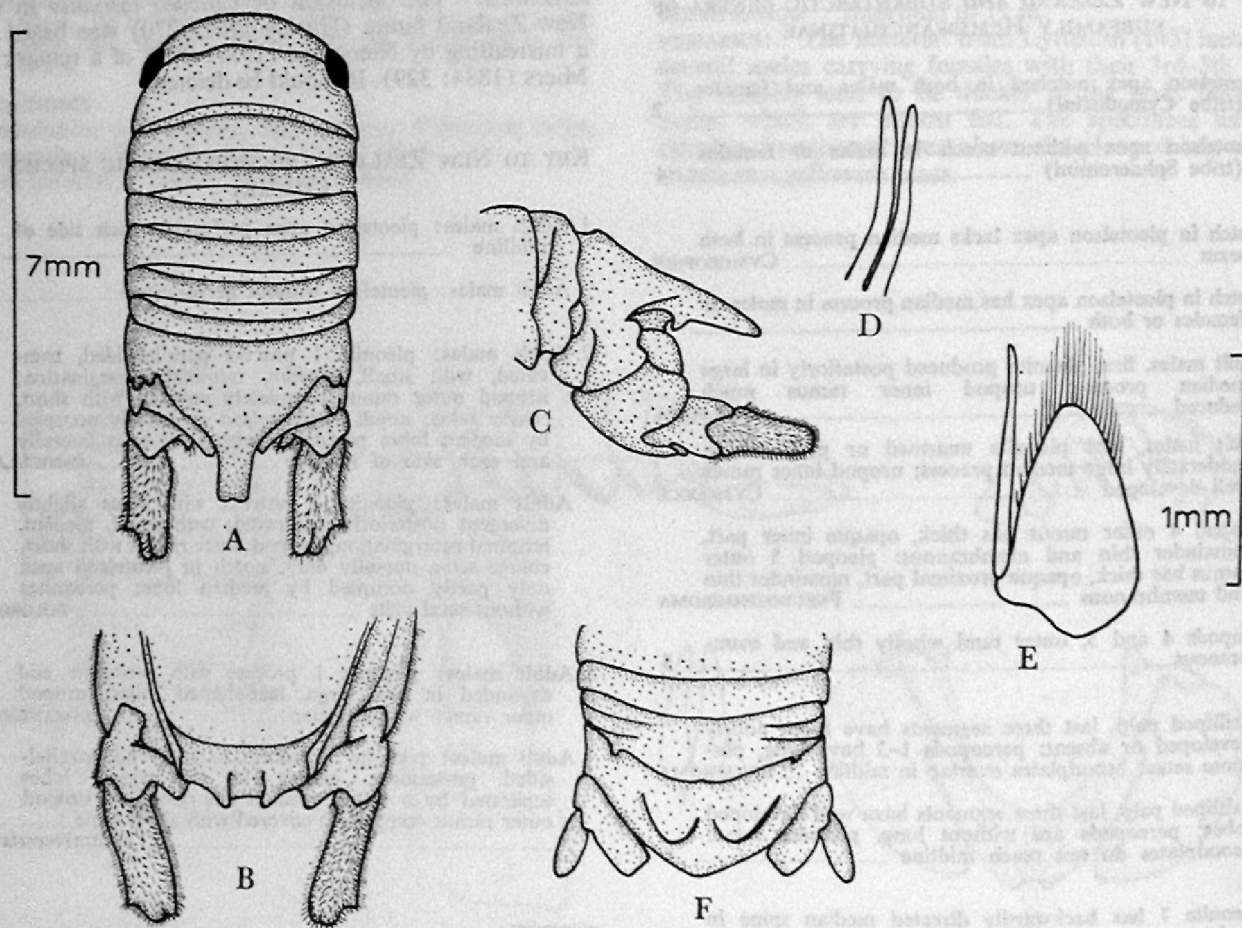


FIG. 32. *Cilicæa angustispinata* n.sp., mature ♂ except F (♀): A, whole animal; B, pleotelson, ventral view; C, pleon, side view; D, penes; E, pleopod 2, inner ramus; F, pleotelson, dorsal view.

TYPE LOCALITY: Dunedin.

MATERIAL EXAMINED

Off Cape Maria van Diemen: [Cop. 2].

Bay of Islands: [Cop. 6] spp.

Wellington: [Cop. 17] spp.

Kaikoura: [104] 6 ♂♂ (6-9 mm).

Lyttelton: [Cop. 19] spp.

Off Oamaru: [130] 3 spp; [133] 3 spp.

Otago Harbour: [Z2290] 2 juvs (6 mm), 2 ♂♂ (10-11 mm); [Z2292] 1 ♀, 1 ♂ (7 mm); [Z2294] 19 juvs (2-6 mm), 1 ♂ (11 mm); [Z2295] 4 ♀♀ (10-12 mm), 1 ♂ (14 mm); [Z2293]: [VUC1] 1 ♂ (10 mm); [VUC4] 6 ♀♀ (10-11 mm), 9 ♂♂ (10-12 mm); [Z2286] 65 juvs (2-7 mm), 1 ♀ (9 mm), 7 ♂♂ (7-8 mm). Also: [Z2291] 2 spp; [Z2296] 1 sp; [34] 1 sp; [38] 1 sp; [Z2296a] many specimens.

Off Otago: [Z2285] 2 spp.

Foveaux Strait: [B578] 1 ♀ (6 mm), 1 ♂ (7 mm); [D127] 1 juv. (6 mm). Also: [B247] 3 spp.

Stewart I: [Cop. 21] spp.

Off Snare Is: [D132] 1 ♂ (6 mm). Also: [D144] 1 sp; [61] 1 sp.

Dusky Inlet: [25] 1 juv. (6 mm), 1 ♂ (11 mm).

Chatham Is. Exped: [CIE 19] 1 juv. (5 mm), 1 ♂ (9 mm); [CIE 49] 2 ♂♂ (11-12 mm); [CIE 52] 1 ♂, 1 ♀ (10 mm); [CIE 59] 2 ♂♂ (9-11 mm).

OTHER RECORDS: None

HABITAT: Among algal holdfasts and in crevices.

DEPTH RANGE: Intertidal to 531 m, but the two Chatham Rise stations, CIE 52 and 59, may be wrongly

identified as to species or station number, making the range then 0-143 m.

REMARKS: Unfortunate misspellings crept into both generic and specific names in Thomson & Chilton's checklist of 1886. The change of generic name removed the misspelling "Naesa", but "canaliculata" has persisted to the present day, although Chilton's subsequent reference used the correct original, "caniculata".

The most notable point about this species is the discovery that the females have long been considered a separate species in the genus *Cymodoce*. However, they are identical with the males in all details except the body processes, and are typically taken with the males.

Except where accompanied by adequate figures, the distribution records in earlier literature must be considered with suspicion, since it now appears that at least two species, *C. caniculata* and *C. dolorosa*, were confused.

Morton & Miller (1968: 538) refer to this species as one of the common isopods of river mouths, "burrowing in silty sand or mud". In the same habitat, they found "*Cymodoce bituberculata*", an association which adds weight to our belief that *C. bituberculata* is the female of *Cilicæa caniculata*.

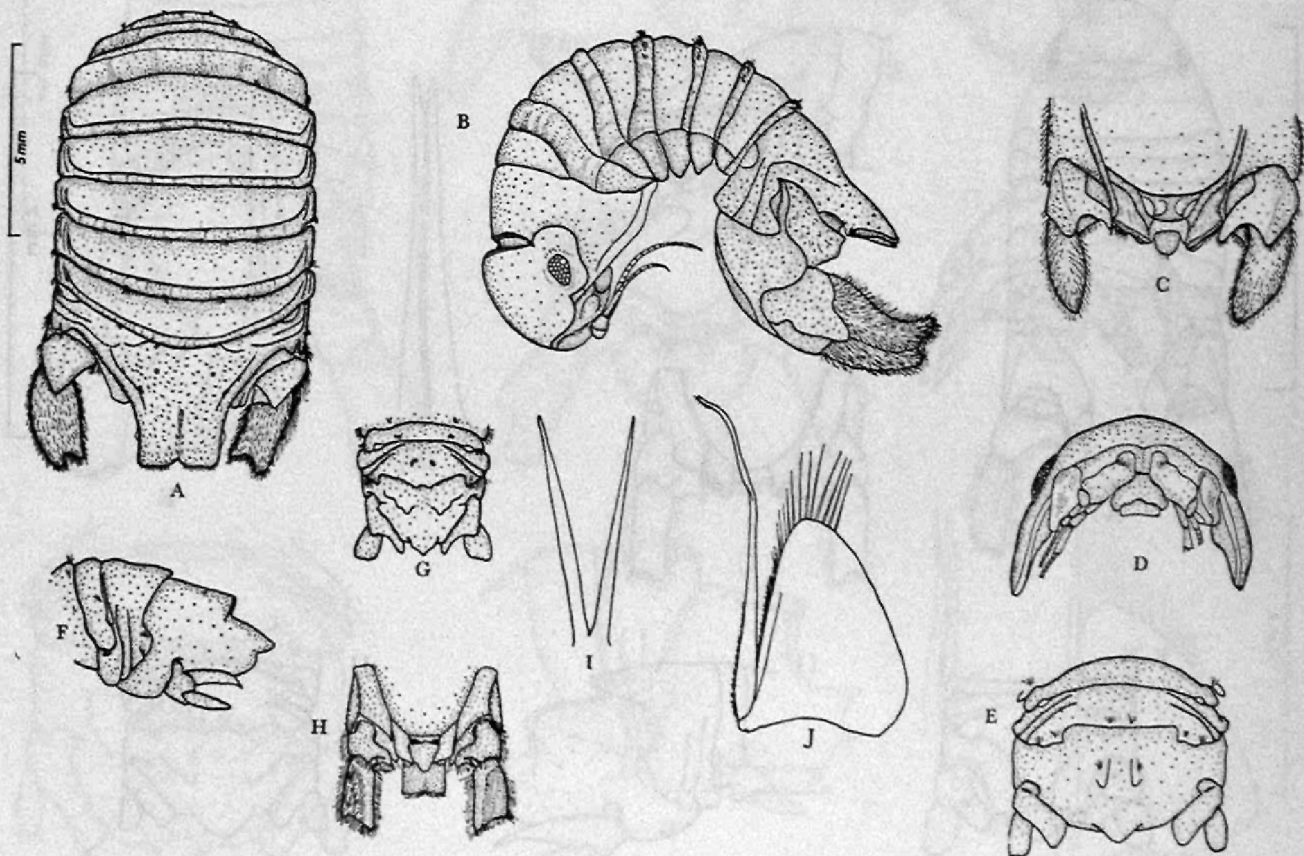


Fig. 33. *Cilicæa caniculata* (Thomson), mature ♂ except E, F (immature ♂) and G (♀): A, whole animal; B, side view; C, pleotelson, ventral view; D, head, frontal view showing epistome and peduncles of antenna I; E, pleon, dorsal view; F, pleon, side view; G, pleon, dorsal view; H, pleotelson, ventral view, different aspect from C.

***Cilicæa dolorosa* n.sp. (Fig. 34)**

[? part] *Cymodocea bituberculata* Filhol, 1885: 457, pl. 55, fig. 2.

**DIAGNOSIS**

*Cilicæa* with pleonite 1 dorsal process in mature males truncate, slightly expanded at end, with a shallow median cleft. Uropod outer ramus in adult males covered with setae on dorsal surface only. Pleotelson apex in mature males perforated both sides of midline.

**TYPE MATERIAL**

Holotype: Canterbury Museum Type No. AQ3406 [104, ♂, 16 mm].

Paratypes: Canterbury Museum Type No. AQ3431 [104, 33 juvs, 2.5–9 mm; 22 ♀♀, 7–14 mm; 32 ♂♂, 9–14 mm].

**TYPE LOCALITY:** Kaikoura.

**MATERIAL EXAMINED**

Off Three Kings Is: [E312] 1 juv. (5 mm); [Cop. 1] spp.  
Auckland (Leigh): [E956] 4 juvs (6–9 mm), 4 ♂♂ (8–14 mm); [E957] 3 juvs (3–7 mm); [Z2281] 1 juv (6 mm), 1 ♀ (8 mm), 1 ♂ (10 mm); [E975, 977, 979] 28 juvs (2–7 mm), 1 ♂ (10 mm).  
Mt Maunganui: [E959] 5 juvs (5–7 mm), 2 ♂♂ (8–10 mm).  
Gisborne: [E982] 4 juvs (3 mm); [Z2312] 2 spp.

Castlepoint: [Z2299] 1 juv. (2 mm); [Z2287] 1 ♀ (8 mm); [E983] 2 ♂♂ (8–9 mm). Also: [E983] 11 spp.  
Wellington: [E966, 967] 51 juvs (2–4 mm), 1 ♀ (11 mm); [27] 1 juv. (7 mm); [30] 2 juvs (7–10 mm).  
Kaikoura: [84] 1 juv. (7 mm); [92] 5 juvs (6–9 mm), 1 ♂ (11 mm); [E971] 4 juvs (3–4 mm); [104] 33 juvs (2.5–9 mm), 22 ♀♀ (7–14 mm), 33 ♂♂ (9–16 mm).

Dusky Inlet: [26] 1 sp.

**OTHER RECORDS:** None firm. It has possibly been confused with *C. caniculata*.

**HABITAT:** Under stones and among algae, in algal holdfasts on exposed shores.

**DEPTH RANGE:** Intertidal to 118 m.

**REMARKS:** The synonymy between *Cilicæa dolorosa* and part of Filhol's *Cymodocea bituberculata* has been introduced because of Filhol's record of *C. bituberculata* from Cook Strait. There are no other confirmed records of *Cilicæa caniculata*, of which *Cymodocea bituberculata* is considered the female, north of Kaikoura, making it likely that Filhol's records included females of both *Cilicæa caniculata* and *Cilicæa dolorosa*. Confusion with *Cilicæa tasmanensis* is unlikely since *C. tasmanensis* is a deeper, sublittoral species.

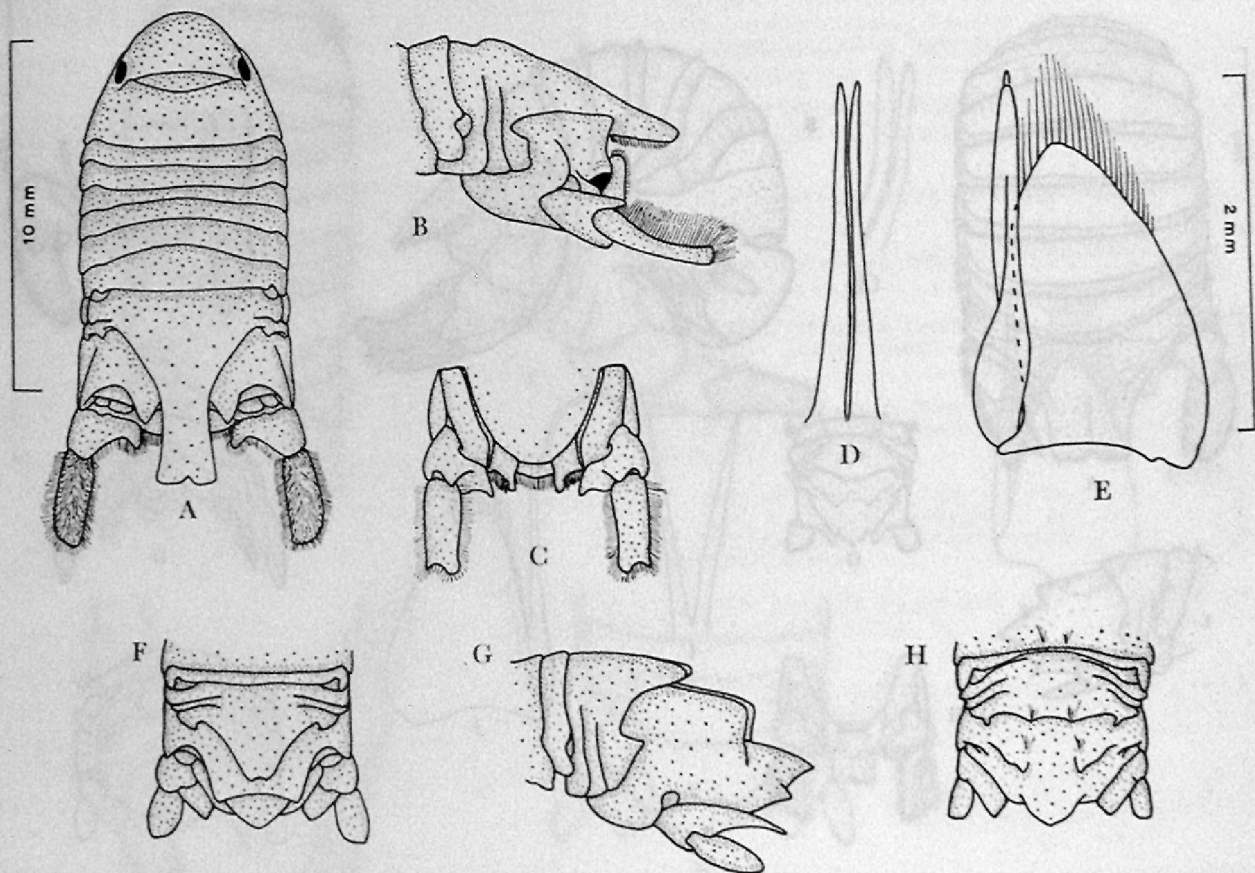


FIG. 34. *Cilicæa dolorosa* n.sp., mature ♂ except F, G (immature ♂) and H (♀): A, whole animal; B, pleon, side view; C, pleotelson, ventral view; D, penes; E, pleopod 2, inner ramus; F, pleon, dorsal view; G, pleon, side view; H, pleon, dorsal view.

*Cilicæa tasmanensis* n.sp. (Fig. 35)

DIAGNOSIS

*Cilicæa* with pleonite 1 process in adult males expanded posteriorly in two large, leaf-shaped lobes. Uropod outer ramus in mature males without setae. Pleotelson apex in mature males without perforations.

TYPE MATERIAL

Holotype: NZOI Type No. 144 [B686, TAM, ♂, 20 mm].  
Paratypes: NZOI Type No. P201 [B686, 1♂, 9 mm; 6♀ ♀].

TYPE LOCALITY: Cook Strait.

MATERIAL EXAMINED

Off Hokianga: [C752] 1♂ (13 mm).  
Off East Cape: [C814] 3♀ ♀ (10-11 mm), 1♂ (14 mm).  
Cook Strait: [135] 1♂, 1♀ (12 mm); [39] 1♂ (8 mm).  
Off Cape Farewell: [B686] 2♂ ♂ (9-20 mm), 6♀ ♀.

OTHER RECORDS: None.

HABITAT: Shelf benthos.

DEPTH RANGE: 73-194 m.

REMARKS: The female of the species is very like the female of *Cilicæa caniculata* (= "*Cymodoce bituberculata*").

*Cymodoce* Leach, 1814

*Cymodoce* Leach, 1814: 533. Hansen, 1905: 104, 119-22.

TYPE-SPECIES: *Cymodoce truncata* Leach, 1814.

DIAGNOSIS

Hemibranchiate Sphaeromatidae with pleotelson notched in both sexes, the notch divided by a median lobe. Uropod rami both well developed. Epistome without free process in front. Sexes alike or dissimilar. Males with or without mesial process on pleonite 1. Mature males with well developed appendix masculina on pleopod 2 inner ramus.

REMARKS: The occasional use of the spelling *Cymodocea* has prompted us to check the correct usage. According to Sherborne's "Index Animalium", *Cymodoce* was used originally by Leach in 1814. *Cymodocea* was subsequently used by Leach in 1818, but in the meantime *Cymodocea* had been proposed by Lamouroux in 1816 for a genus of Coelenterata.

Present usage of *Cymodoce* would appear to be correct practice.

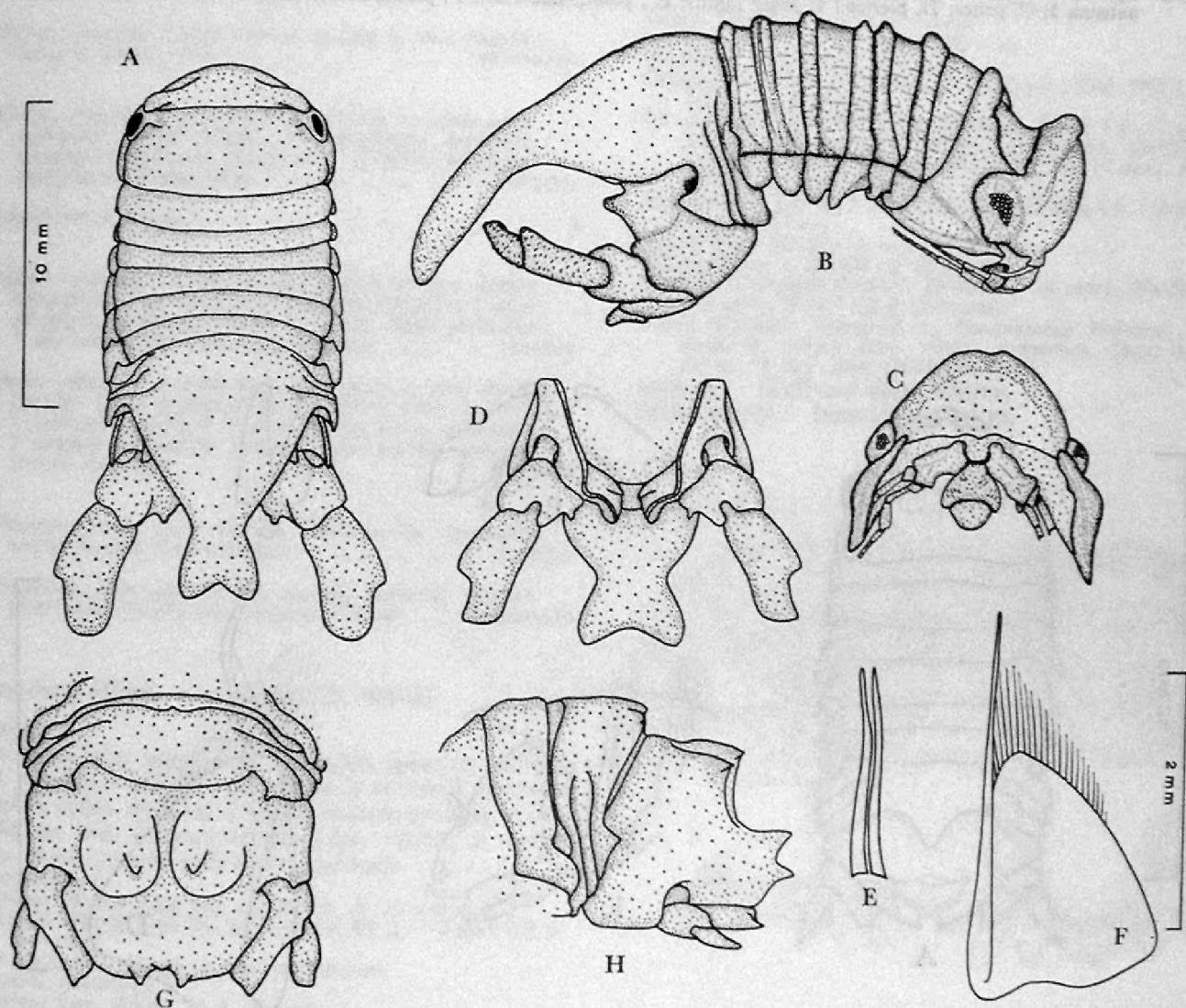


FIG. 35. *Cilicæa tasmanensis* n.sp., mature ♂ except G, H (♀): A, whole animal; B, side view; C, head, frontal view showing epistome and peduncles of antenna I; D, pleotelson, ventral view; E, penes; F, pleopod 2 inner ramus; G, pleon, ventral view; H, pleon, side view.

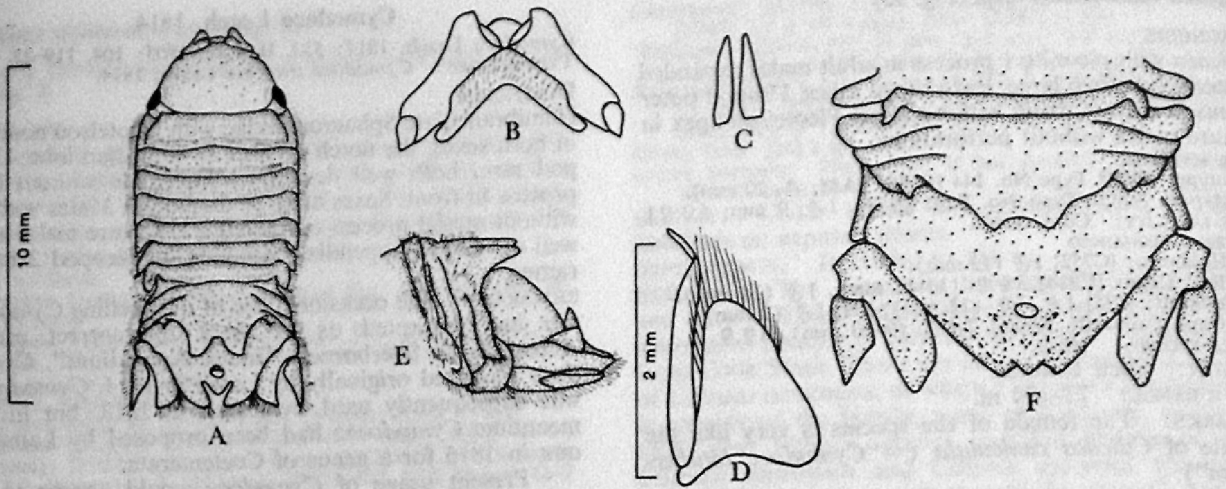


FIG. 36. *Cymodoce allegra* n.sp., mature ♂ except F (immature ♂): A, whole animal; B, epistome and peduncles of antenna I; C, penes; D, pleopod 2, inner ramus; E, pleon, side view; F, pleon, dorsal view.

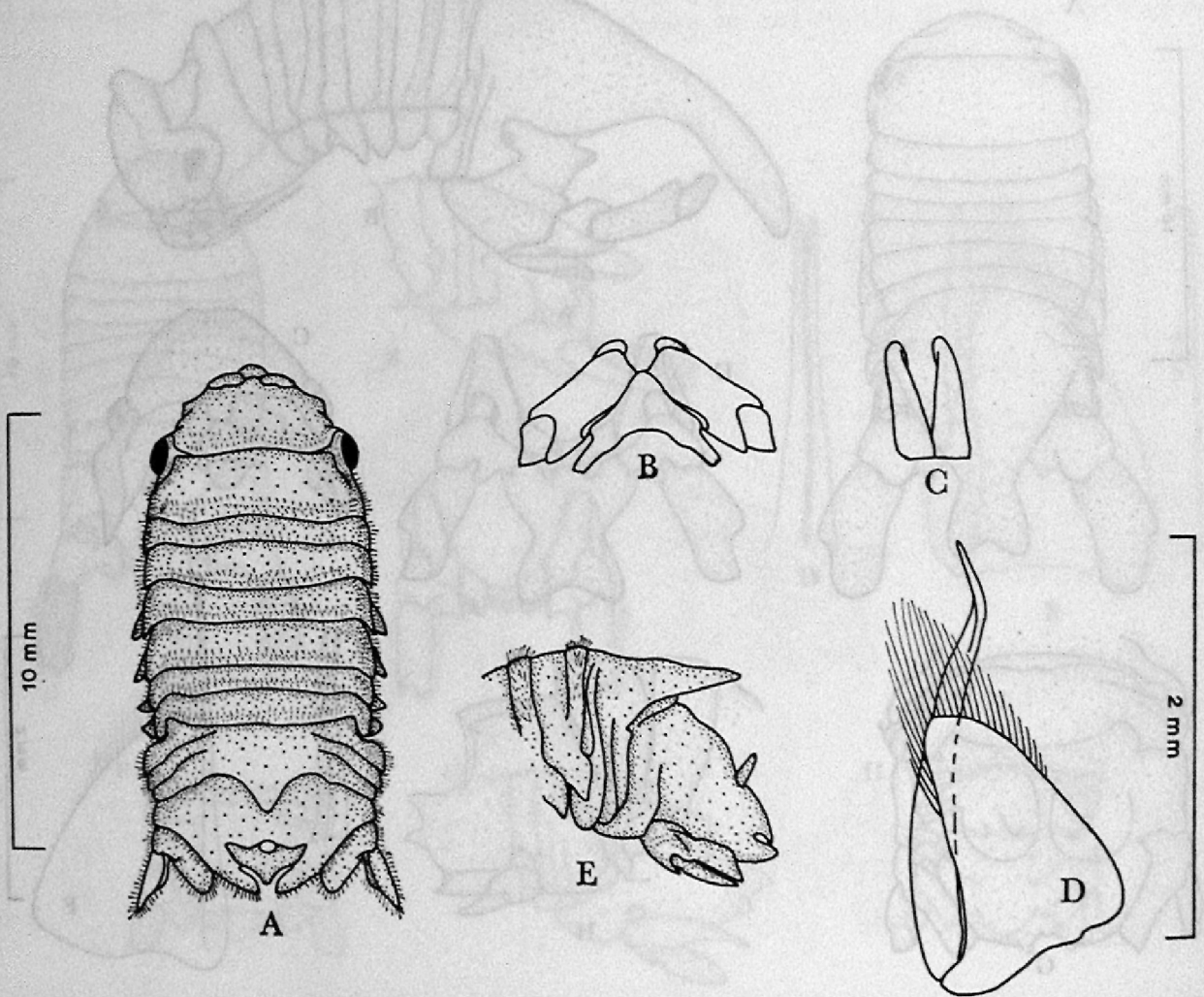


FIG. 37. *Cymodoce australis* Hodgson, mature ♂: A, whole animal; B, epistome and peduncles of antenna I; C, penes; D, pleopod 2, inner ramus; E, pleon, side view.

KEY TO NEW ZEALAND AND SUBANTARCTIC SPECIES OF  
CYMODOCE

1. Males: pleonite 1 with single or bilobed median process; pleotelson with single median or transverse pair of small erect processes ..... 2  
Males: pleonite 1 and pleotelson without processes ..... 7
2. Males: pleotelson with transverse pair of small, erect processes obscured by bifurcated process of pleonite 1; posterior margins of body segments strongly tuberculate ..... IOCOSA  
Males: pleotelson with single, median, small, erect process ..... 3
3. Males: pleotelson with small, erect process trilobed in dorsal view ..... 4  
Males: pleotelson with small, erect process rounded in dorsal view ..... 5
4. Males: pleonite 1 with process broadly truncated in dorsal view, bilobed in posterior view ..... HODGSONI  
Males: pleonite 1 with process ending in two rounded lobes in dorsal view ..... PENSEROSA
5. Males: pleonite 1 with process tapering to acute apex; pereonite 7 not longer than preceding segments; antenna 1 peduncle, segment 1 without prominent swellings or strong setae ..... AUSTRALIS  
Males not as above ..... 6
6. Males: pleonite 1 with process ending in two deeply separated lobes; antenna 1 peduncle, segment 1 with prominent swellings visible in dorsal view; pereonite 7 not longer than preceding segments ..... ALLEGRA  
Males: pleonite 1 with process ending in two small, rounded lobes separated by a shallow cleft; antenna 1 peduncle, segment 1 with strong setae; pereonite 7 extends posteriorly, rounded rear margin partially covers pleonite 1 ..... PERVERSA
7. Pleotelson with four obscure tubercles in transverse series; uropod rami subequal ..... CONVEXA  
Pleotelson with one obscure median tubercle; uropod outer ramus nearly twice length of inner ..... GRANULATA

*Cymodoce allegra* n.sp. (Figs. 36, 40I-J)

DIAGNOSIS

*Cymodoce* with small, erect, rounded spine on pleotelson; pleonite 1 with process ending in two well separated lobes in males. Antenna I has prominent swelling proximally on first segment of peduncle, visible in dorsal view. Body covered with short, fine hairs.

TYPE MATERIAL

Holotype: NZOI Type No. 137 [B176, ♂, 10 mm].  
Paratypes: NZOI Type No. P194 [B176, 4 ♀♀, 7-9 mm; 2 ♂♂, 9-10 mm].

TYPE LOCALITY: North of Auckland Islands.

MATERIAL EXAMINED

Chatham Rise: [E422] 2 ♀♀ (9 mm).  
Foveaux Strait: [B260] 1 ♂, 2 ♀♀ (10 mm); [E820] 1 ♂ (8 mm).  
E of Snares Is: [B582] 1 ♂ (6 mm); [F97] 1 ♂ (9 mm). Also: [F97] 2 spp; [D132] 1 ♂ (8 mm).

Snares Is: [63] 1 ♂ (10 mm).  
Off Auckland Is: [B176] 4 ♀♀ (7-9 mm), 3 ♂♂ (9-10 mm); [D71] 3 ♀♀ (7 mm); [D65] 1 juv. (7 mm); [D60] 2 ♀♀ (8 mm); [D52] 1 ♂ (9 mm); [D53] 1 sp.  
HABITAT: Shelf and slope benthos.  
DEPTH RANGE: Intertidal to 615 m.  
DISTRIBUTION: Southern New Zealand, Chatham Rise, Subantarctic Islands.

*Cymodoce australis* Hodgson, 1902 (Figs 37, 40C-D)

*Cymodocea australis* Hodgson, 1902: 245-6, pl. 33 fig. 3, pl. 34 figs 3a-e.  
*Cymodoce australis*. Hurley, 1961: 270.  
*Cymodoce multidens* var. *australis* Nierstrasz, 1931: 200.

DIAGNOSIS

*Cymodoce* with single, tapering process on pleonite 1; pleotelson with single, rounded, erect process in males. Body covered with short, fine setae.

TYPE LOCALITY: Cape Adare, Antarctica.

MATERIAL EXAMINED

Cook Strait: [A444] 1 ♀ (10 mm).  
Off Banks Peninsula: [E433] 1 ♂ (10 mm).  
Otago: [Z2285] 25 juvs (3-10 mm).  
Snares Is: [63] ♀ (10 mm); [64] 1 sp.  
Off Snares Is: [F94] 1 ♂ (12 mm).  
Campbell I.: [Gal. 594] 3 ♂♂, 4 ♀♀, 1 juv.; [Gal. 595] 1 juv., 3 ♀♀, 2 ♂♂ [8] 4 spp.  
Off Auckland Is: [B177] 1 ♂ (7 mm); [D45] 1 ♂ (7 mm); [D65] 2 juvs (-6 mm); [D176] 1 ♀ (9 mm); [D179] 1 ♂ (12 mm); [D194] 1 ♀ (10 mm); [18] 1 juv. (7 mm). Also: [D57] 1 sp; [D65] 6 spp.  
Auckland Is: [D182] 3 juvs (5-6 mm); [D185] 1 ♀ (10 mm). Also: [62] 1 sp.  
Pukaki Rise: [D211] 1 ♂ (13 mm).  
Off Antipodes I.: [D148] 1 ♀ (6 mm).  
Southern Campbell Plateau: [F136] 1 ♂ (8 mm); [F145] 1 ♂ (11 mm); [F147] 4 ♂♂ (7-9 mm).  
OTHER RECORDS: Campbell I., Perseverance Harbour, 28 m (coll. R. Oliver Nov. 1944); Antarctica, Cape Adare, 14 m, 17 Jan. 1900 (Hodgson 1902).  
HABITAT: Shelf and slope benthos.  
DEPTH RANGE: Intertidal to 611 m.

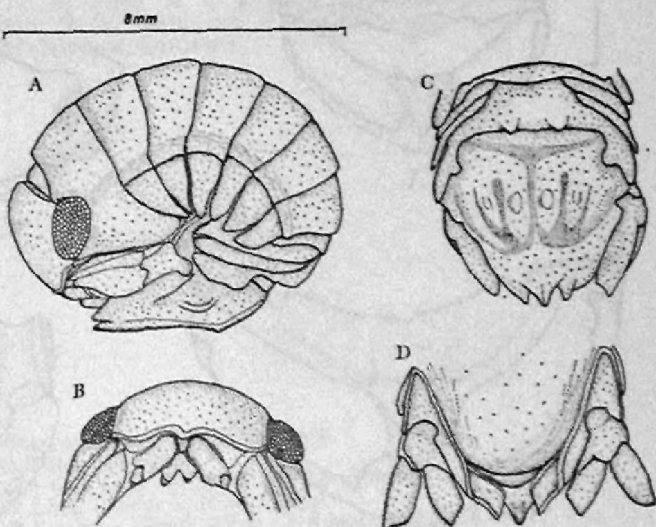


FIG. 38. *Cymodoce convexa* Miers: A, whole animal, side view; B, head, showing epistome and peduncles of antenna I; C, pleon, dorsal view; D, pleotelson, ventral view.