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XI. *On new or imperfectly-known Species of* Ostracoda, *chiefly from New Zealand.*

By G. Stewardson Brady, *M.D., LL.D., D.Sc., F.R.S.*

Received February 8, 1898, read March 15, 1898.

[Plates XLIII.–XLVII.]

For the opportunity of describing the following species of Ostracoda I am indebted to Mr. G. M. Thomson of Dunedin, New Zealand, and to Dr. Meinert and Dr. H. J. Hansen of the Museum of Zoology, Copenhagen. Mr. Thomson's specimens are the result of his own labours in the pursuit of natural history at Dunedin, Brighton, and other places in New Zealand; those sent to me from Copenhagen belong to the museum of that city, and were dredged in Lyttelton Harbour and Akaroa Harbour by Mr. H. Suter. One very interesting species (*Eupathistoma natans*) is from an altogether different geographical area, having been taken in the Bay of Bengal; for specimens of this species I have to thank my friend Mr. I. C. Thompson, F.L.S., of Liverpool.

Though, except in the case of *Eupathistoma*, there is nothing very strikingly new in the morphology of the species here noticed, there are many points of interest as showing deviations from the usual types of structure; for example, the setose armature of the first pair of antennæ in *Trachyleberis scabrocuneata*, the peculiar hairy cushions covering the valves of *Sarsiella*, the adventitious concretionary nodules found on the limbs of *Philomedes sculpta*, and the shell-glands and ducts of *Philomedes flexilis*.

The species described or noticed in the present paper are as follows:—

Asterope australis, G. S. Brady, Otago, Akaroa, Lyttelton: p. 431.
„ *quadrata*, sp. nov., Lyttelton Harbour: p. 432.
„ *grisea*, sp. nov., Akaroa Harbour: p. 432.
Cyclasterope zealandica (Baird), Lyttelton Harbour: p. 433.
„ *ovulum*, sp. nov., Stewart Island: p. 432.
„ *tenera*, sp. nov., Lyttelton Harbour: p. 433.
Philomedes agilis, Thomson, Otago Harbour: p. 434.
„ *sculpta*, sp. nov., Otago Harbour: p. 434.
„ *flexilis*, sp. nov., Lyttelton Harbour, Akaroa Harbour: p. 435.
Eupathistoma natans, gen. & sp. nov., Bay of Bengal: p. 437.
Sarsiella hanseni, sp. nov., Lyttelton Harbour: p. 438.
„ *hispida*, sp. nov., Akaroa Harbour: p. 439.
Cypris viridis, Thomson, Dunedin: p. 440.
Cyprinotus flavescens, sp. nov., Dunedin: p. 440.

Loxoconcha punctata, Thomson, Otago, Brighton: p. 441.
Xestoleberis laxata, sp. nov., Lyttelton Harbour: p. 441.
„ *olivacea*, sp. nov., Brighton: p. 442.
„ *compressa*, sp. nov., Brighton: p. 442.
Cythere brunnea, sp. nov., Lyttelton Harbour; p. 442.
„ *innominata*, nom. nov., Brighton: p. 443.
„ *truncula*, sp. nov., Lyttelton Harbour: p. 444.
Trachyleberis scabrocuneata, G. S. Brady, Lyttelton Harbour: p. 444.
Cytherideis novæ-zealandiæ, sp. nov., Lyttelton Harbour: p. 446.
Cytherella eburnea, sp. nov., Lyttelton Harbour: p. 447.

In addition to these, there have been described the following New-Zealand species, which are unknown to me:—

Cypris novæ-zealandiæ, Baird.
„ *ciliata*, Thomson.
„ *littoralis*, Thomson.
Cythere atra, Thomson.

The memoirs quoted in this paper are the following. They are indicated in the synonymy by the numbers attached to them in the list:—

Baird, W. (1).—Descriptions of several New Species of Entomostraca. (Proceedings of the Zoological Society of London, part xviii. Annulosa, plates xvii., xviii.) 1850.

Brady, G. S. (1).—A Monograph of the recent British Ostracoda. (Transactions of the Linnean Society, vol. xxvi.) 1868.

„ (2).—The Voyage of H.M.S. 'Challenger.' Report on the Ostracoda. 1880.

„ (3).—Notes on Entomostraca collected by Mr. A. Haly in Ceylon. (Journal of the Linnean Society, Zoology, vol. xix.) 1885.

„ (4).—On Ostracoda collected by H. B. Brady, Esq., LL.D., F.R.S., in the South-Sea Islands. (Transactions of the Royal Society of Edinburgh, vol. xxxv. part ii.) 1888.

„ (5).—A Supplementary Report on the Crustaceans of the group Myodocopa obtained during the 'Challenger' Expedition, with Notes on other new or imperfectly-known species. (Transactions of the Zoological Society of London, vol. xiv. part iii.) 1897.

Brady, G. S., & Norman, A. M. (1).—A Monograph of the Marine and Fresh-water Ostracoda of the North Atlantic and of North-west Europe.—Part ii. Myodocopa, Cladocopa, and Platycopa. (Transactions of the Royal Dublin Society, vol. v., ser. ii.) 1896.

Dana, J. D. (1).—Crustacea of the United States Exploring Expedition. 1852.

Jones, T. R. (1).—A Monograph of the Tertiary Entomostraca of England. (Palæontographical Society.) 1856.

Müller, G. W. (1).—Die Ostracoden des Golfes von Neapel und der angrenzenden Meeresabschnitte. 1894.

Norman, A. M. (1).—Last Report on Dredging among the Shetland Isles. (British Association Reports.) 1868.

Philippi, A. (1).—Zoologische Bemerkungen in Arch. Naturg. 6 Jahrg. 1840.

Sars, G. O. (1).—Nye Bidrag til Kundskaben om Middelhavets Invertebratfauna. (Archiv for Mathematik og Naturvidenskab.) 1887.

„ (2).—On some Freshwater Ostracoda and Copepoda raised from dried Australian Mud. (Christiania Videnskabs-Selskabs Forhandlinger, no. 8.) 1889.

Thomson, G. M. (1).—On the New Zealand Entomostraca. (Transactions of the New Zealand Institute, vol. xi.) 1878.

Genus Asterope Philippi.

Asterope Philippi (1), 1840; G. O. Sars (1), p. 11; Brady & Norman (1), p. 629.
Cylindroleberis Brady (1), p. 465; G. W. Müller (1), p. 216.
Cypridina Auctorum.

Asterope australis Brady. (Plate XLIII. figs. 1–8.)

Asterope australis Brady (4), p. 515, pl. iv. figs. 1, 2.

Shell of the *male*, seen from the side (fig. 1), ovate, height equal to more than half the length, anterior extremity evenly rounded, with a short, wide beak and a rather wide but shallow antennal notch; posterior extremity evenly rounded; dorsal margin very slightly but evenly arcuate, ventral almost straight. Seen from above (fig. 2), the outline is elongate-ovate, widest in the middle, much more than twice as long as broad; extremities broadly rounded, lateral margins gently and evenly curved. Surface of the shell smooth, destitute of hairs or sculpture, excepting at the posterior extremity, which bears two tufts of very fine hairs. Secondary branch of the antenna (fig. 5) with a large and very crooked terminal unguis, which bears near its base a very long and stout seta, the last joint (dactylon) having two much shorter setæ. Post-abdomen (fig. 8) armed, on each lamina, with a series of seven ungues, which progressively increase in size and amount of curvature from the first to the last, the larger of the series very finely ciliated on the concave margin. Length of the shell 1·6 mm. Colour (of spirit-specimens) yellowish white; the black eye-spot very conspicuous.

The shell of the *female* (figs. 3, 4) is somewhat smaller than that of the male, and seen laterally is higher behind than in front; seen from above it is subacuminate in front and narrowly rounded behind; the posterior extremity has no setose tufts. The secondary branch of the antenna consists of a simple cylindrical one-jointed stem, which ends in a single long seta (fig. 6). Length 1·4 mm.

Hab. Males, taken abundantly in the surface-net, Otago Harbour; a single female specimen in a dredging from Akaroa Harbour, depth 6 fathoms, and Lyttelton Harbour, 1–5 fathoms. The Otago gathering consisted almost entirely of males, the lesser swimming-power of the females doubtless keeping most of them at or near the bottom. The shell in most specimens is flexible and submembranaceous, but occasionally hard

and calcareous, the soft ones probably imperfectly matured after moulting. The types of the species were described by me from specimens taken amongst the South-Sea Islands, and do not differ from the New Zealand examples except in being rather larger.

Asterope quadrata, sp. n. (Plate XLV. figs. 17–21.)

In general appearance this is very like *A. australis*, but it is somewhat smaller, and seen dorsally has much more obtuse extremities, having almost parallel lateral margins; the inner antennal branch of the male (fig. 19) is very broadly clawed, and the larger ungues of the post-abdominal laminæ in the female (fig. 21) are not only finely pectinated, but bear a few longer interspersed setæ—about five on the last and three on the penultimate unguis; in the male, however, of which only one mutilated specimen was seen, there is only a simple pectination. Shell extremely thin and membranous. Length 1·3 mm.

Hab. Lyttelton Harbour, dredged in a depth of 1–5 fathoms.

Asterope grisea, sp. n. (Plate XLIII. figs. 9–14.)

Shell of the *female*, seen from the side, elongated, elliptical (fig. 9), height scarcely as much as half the length, and nearly equal throughout; extremities evenly rounded, the posterior rather the narrower of the two; dorsal and ventral margins evenly and very slightly curvate. Seen from above (fig. 10) the outline is narrowly ovate, the width equal to two-fifths of the length, slightly tapered towards the front, broader and rounded off behind. Shell chitinous, flexible, perfectly smooth, colour greyish. Length 2·8 mm. Frontal tentacle cylindrical, its terminal joint slightly dilated at the base; secondary branch of the antenna (fig. 12) small, simple, with a small apical seta; spines of the post-abdominal laminæ (fig. 14) long, slender, very delicately ciliated. Claw of the secondary antennal branch in the male (fig. 11) much thickened and dilated at its base.

Hab. Akaroa Harbour; many specimens dredged in a depth of 6 fathoms. Only one male could be found, and this was a good deal damaged; its only marked peculiarity, so far as could be made out, was the extreme length of the antennular setæ.

Genus Cyclasterope G. S. Brady.

Cyclasterope Brady (5), p. 85.

Cyclasterope ovulum, sp. n. (Plate XLIII. figs. 24–30.)

Shell of the *female* (figs. 24, 25), seen from the side, nearly circular, slightly narrowed and produced in front, antennal notch small and shallow; seen from above, ovate, widest in the middle, twice as long as broad, subacuminate in front, narrowly rounded behind. Shell dense and calcareous, smooth, finely punctate. Length 8 mm., height 6·6 mm.

Frontal tentacle (fig. 27) three-jointed, the median joint very short and constricted at the base, distal joint conical, with a much-attenuated apex; secondary branch of the antenna (fig. 26) three-jointed, cylindrical, ending in a long seta, the two basal joints bearing a few marginal hairs; teeth of the bifid extremity of the vermiform limb (fig. 28) corrugated, their apices formed by a small spine, which is overhung by a knobbed columnar process: abdomen fringed distally with closely-set hairs; post-abdominal laminæ (fig. 29) bearing three very stout, blunt, and strongly curved distal ungues, which bear two marginal rows of closely-set lancet-shaped spinules (fig. 30); in front of the ungues is a series of about nine long ringed and pinnated setæ. *Male* unknown.

Hab. Rock-pools, Stewart Island.

This fine species closely resembles in external aspect *C. orbicularis*, of which a single specimen from Valparaiso was described by me (*loc. cit.*), but *C. ovulum* is much larger, and differs in many points as regards the soft parts.

Cyclasterope tenera, sp. n. (Plate XLIV. figs. 27–29.)

Female. Shell, seen from the side (fig. 27), almost circular, slightly narrower towards the front, length about one-seventh greater than the height, very thin, membranous, and slightly wrinkled; anterior and inferior margins beset with distant, rigid hairs. Secondary antennal branch (fig. 28) simple, three-jointed, with a long apical seta; falcate process of the mandible bearing numerous marginal spines and teeth; the post-abdominal claws are three in number (fig. 29), very unequal in length, and armed with closely-set short marginal spinules. Length 1·5 mm.

Hab. Lyttelton Harbour, 1–5 fathoms. One specimen only.

Cyclasterope zealandica (Baird). (Plate XLIII. figs. 15–23.)

Cypridina zealandica Baird (1), p. 257, pl. xvii. figs. 11–13.

Shell of the *female* (figs. 15, 16), seen from the side, very broadly ovate, length about one-fourth greater than the height, the outline forming a perfect oval except at the antennal notch, which is small and shallow; seen from above, ovate, compressed, greatest width in the middle, and equal to half the length; extremities rather wide and evenly rounded, slightly emarginate at the contact of the valves. Shell calcareous, finely punctate and, towards the anterior extremity, faintly wrinkled in a transverse direction (fig. 23). Length 5 mm., height 4 mm. Secondary branch of the antenna (fig. 19) cylindrical, three-jointed, geniculated, the first joint bearing a tuft of marginal setæ near its extremity, second joint with three small marginal setæ externally and a long seta on its internal distal angle, last joint obliquely truncate and mucronate at its apex; ungues of the post-abdominal laminæ (fig. 21) stout, subequal, and strongly

curved, bordered with rows of lanceolate spinules (fig. 22), which, towards the bases of the ungues, have also intermediate smaller spinules; in front of the ungues a row of about ten flexuous ringed setæ, which gradually decrease in length until they give place to a fringe of densely-set fine hairs. Length 5 mm., height 4 mm.

Shell of the *male* (fig. 17), seen from the side, subovate, somewhat narrowed towards the front, greatest height situated in the middle and equal to nearly three-fourths of the length; anterior extremity rounded, beak sharp and curved, antennal notch wide; posterior extremity subtruncate, rounded off below, abruptly angulated at its junction with the dorsal margin, which is almost straight for the greater part of its length, but is well rounded in front, and slopes steeply behind to join the posterior border; surface minutely and closely punctate, fringed at the two extremities with long, fine hairs. Length 6·25 mm., height 4·5 mm. Terminal joint of the secondary antennal branch (fig. 18) forming a strong claw, very stout and constricted near the middle; penultimate joint armed on the opposing margin with a fascicle of very thick, rigid setæ.

Hab. Dredged in Lyttelton Harbour, 2–5 fathoms. Only few specimens, the males badly mauled, and their limbs clogged with mud so as to be viewed with difficulty.

Dr. Baird's figures and description agree well with these specimens, and his notice of the wrinkled shell-surface confirms the impression that this is the form to which he refers.

Genus Philomedes Lilljeborg.

Philomedes agilis Thomson.

Philomedes agilis Thomson (1), p. 257, pl. xi. figs. C. 8 *a–e*, D. 1 *a–g*; G. S. Brady (5), p. 90, pl. xvi. figs. 13–16.

Taken in the surface-net, Otago Harbour. Males only.

Philomedes sculpta, sp. n. (Plate XLIV. figs. 15–20.)

Shell of the *male* (fig. 15), seen from the side, elongated, subrhomboidal, highest in the middle and narrowing gradually to the extremities, height equal to half the length; anterior extremity produced to a subacute point, notch obsolete; posterior extremity produced below the middle into a wide, wedge-shaped, obtusely-pointed beak, above which it is rather deeply sinuated; dorsal margin moderately and evenly curved throughout its whole length, ventral almost straight in the middle and bent sharply upward towards each extremity. Seen from above (fig. 16), the outline is compressed, subovate, greatest width in front of the middle, and equal to less than half the length; anterior extremity wide, subtruncate, mucronate in the middle, and emarginate towards the sides; posterior narrower, bluntly pointed, lateral margins convex and irregularly sinuous. Surface of the shell undulated, covered with irregular, small, polygonal pittings, and raised into two principal longitudinal ribs which join near the front, forming a single short median ridge, but remain separate behind, running into a

marginal ridge: the spaces between, and less conspicuously outside of, these ribs are marked with smaller, curved, anastomosing ridges; the anterior margin round about the antennal notch (fig. 17) has a thin laminated flange marked by delicate transverse lines. Secondary branch of the antenna (fig. 18) geniculated between the second and third joints; first joint very short, bearing two short marginal setæ, second and third very long and nearly equal, second with three long setæ on its outer margin, third rugose with a number of wart-like protuberances on its opposing surface, and bearing a single seta near the distal and proximal ends respectively; extremity blunt and slightly furrowed longitudinally; post-abdominal laminæ (fig. 19) armed with three principal ungues and seven smaller ones, the first of the smaller series situated between the second and third larger ones. Length 2·6 mm.

Hab. Taken abundantly in the surface-net, Otago Harbour. Males only.

An interesting peculiarity of this species consists in its tendency to develop calcareous concretions on the setæ of the antennæ and antennules, and sometimes in other situations. These concretions are extremely dense and dark-coloured, and when broken present a radiated crystalline appearance. Treated with a weak acid, they are seen under the microscope to effervesce freely, and in time to disappear almost entirely, so that they are probably composed chiefly or altogether of calcium carbonate. Two or more setæ are sometimes immovably soldered together by a concretion of this kind, which must, one would think, materially interfere with the locomotion of the animal. Though *P. sculpta* is especially liable to these concretions, they are sometimes met with in other species; in *P. sculpta*, however, full-grown specimens seem rarely to be free from them. Though in this gathering the majority of examples had shells of a flexible or membranous kind, some few were distinctly dense and calcareous. These differences may perhaps depend upon the lapse of time in relation to exuviation; but I am disposed to think that in the case of flexible shells there is often a larger development of the concretions above referred to, in which case it may be allowable to look upon them as pathological products which have withdrawn the lime otherwise available for shell-formation. A broken fragment of one of the nodules is shown in fig. 20. It is just possible that a species described by me from one dried shell under the name *Streptoleberis crenulata* may be identical with *P. sculpta*, but this I cannot decide with any certainty (see 5, p. 515, pl. iv. figs. 3, 4).

Philomedes flexilis, sp. n. (Pl. XLIV. figs. 1–14; Plate XLV. figs. 15, 16.)

Shell of the *female* (Pl. XLIV. figs. 1, 2; Pl. XLV. figs. 15, 16), seen from the side, irregularly lozenge-shaped, widest in the middle, greatest width equal to about two-thirds of the length; anterior extremity somewhat produced and narrowed, beak inconspicuous, antennal notch shallow; posterior extremity narrowed, running out below the middle into a wide, blunt, and massive tuberosity; dorsal margins boldly arched (in old specimens rugged and ending in a tuberous projection); ventral margin moderately convex. Seen from above, the outline is irregularly polygonal,

with wide extremities and subparallel sides, the laterally-produced rostrum and the posterior beak forming large terminal protuberances. Except in old specimens (Pl. XLIV. figs. 1, 2) the shell is flexible and membranaceous, and covered with rounded or subangular pittings (fig. 12); each valve bears three flexuous longitudinal ribs which, viewed dorsally, stand out very conspicuously as irregular translucent flanges on each lateral margin; rostrum and adjoining shell-margin bordered with a thin, semitransparent, radially-striated lamina; posterior extremity fringed with a few very small recurved hairs. Just within the anterior margin, and below the antennal sinus, a small patch of the shell is marked with a series of about ten parallel striæ (fig. 13). Frontal tentacle (fig. 4) slender, filiform, sharply pointed, its median portion divided into about sixteen very small joints, base bulbously dilated. Secondary branch of the antenna (fig. 6) composed of a single (?) curved, sickle-shaped joint, which bears on its outer edge, near the base, three short setæ, near the middle one extremely long plumose seta, and at the blunt apex a short flexuous seta. The setæ of the swimming-branch, in small specimens (fig. 7), are short and non-plumose, but in fully-grown ones longer and plumose. The principal chewing segment of the second maxilla (fig. 8) is in the form of a blunt, broad-ended lobe, with one broad tooth-like process at its inner end, and two similar but larger processes at the outer end; these are sometimes, though not always, of a deep purple colour; spines of the vermiform foot (fig. 9) with very thick peduncles; post-abdominal ungues about ten in number, progressively increasing in length from the first, which is extremely small (fig. 10); the seventh, ninth, and tenth ungues are stout, and bear rather stout and short marginal teeth; the eighth and all the other ungues are more slender and only feebly ciliated. Eyes usually wanting, but sometimes well developed, deeply pigmented and distinctly visible through the shell (fig. 11). On the inner surface of the rostrum lies a convoluted "shell-gland" which seems to communicate with a nipple-like tubular prominence opening near the margin of the shell (fig. 14). Length 2–2·3 mm. The shell of the *male* is much narrower and more elongate (fig. 3), but in other respects agrees with that of the female; the eyes are well developed (fig. 4), and the secondary antennal branch (fig. 5) is very similar to that of *P. sculpta*.

Hab. The specimens from which the description is drawn up were taken numerously by the dredge in depths of 1–5 fathoms in Lyttelton Harbour. Others which I refer to the same species occurred in a dredging from 6 fathoms in Akaroa Harbour. These, however, differ slightly from the types in having generally an almost smooth shell with little or no trace of ribs, though in not a few specimens the ribs are quite apparent, and are in character like those of the types.

The great majority of specimens possess a quite flexible and membranous shell, but two or three (probably very old individuals) occurred in which it had become dense and calcareous, the various processes and ridges being at the same time strongly developed (figs. 1, 2). In some examples, which I suppose to be immature, the

antennal setæ are very short and non-plumose, like those of G. W. Müller's genus *Pseudophilomedes*, but in most cases they are long and strongly plumed. A peculiarity which I do not understand is the presence in a very few female specimens of well-developed eyes, organs of which in most cases I have been able to find no trace; another unintelligible point is the red coloration, in some specimens, of the teeth of the second maxilla. Of course it is possible that two distinct species may be mixed up in my description, though I scarcely think that is the case. I am not aware that the shell-gland has been previously noticed, and it is only in two or three specimens that I have found it; the duct which I have figured is probably connected with the gland, though I have not certainly made out the connection; the structure is probably an excretory one and homologous with the green gland of higher crustacea.

Genus Eupathistoma [1], gen. nov.

Shell membranous, in shape not unlike *Philomedes*. Antennules and antennæ nearly alike in both sexes, and similar to those of *Cypridina*, except that the antennules of the male have no suckers; margins of the mouth provided with three pairs of finger-like sensory processes; mandibles and maxillæ as in *Cypridina*; terminal armature of the vermiform foot one-sided, consisting of several unequal, slender lashes, the longest of which are longer than the diameter of the limb; post-abdomen as usual in Cypridinidæ.

In general character this genus is intermediate between *Cypridina* and *Philomedes*, but the sensory mouth-organs are very remarkable, and seem to have no parallel among other Myodocopa. One pair, at least, of these appendages has an arrangement of olfactory (?) filaments exactly like that found in the antennules of the Daphniadæ.

Eupathistoma natans, sp. n. (Plate XLIV. figs. 21–26.)

Shell seen from the side (fig. 21) elongated, subrhomboidal, greatest height equal to more than half the length; anterior extremity obliquely truncated and slightly concave, distinctly angulated at its dorsal end, very acutely and prominently angular below, where it merges in a wide, well-rounded antennal sinus; posterior extremity produced below the middle into a wide, bluntly-rounded beak; dorsal margin almost flat in the middle, sloping rather steeply to the anterior extremity, and with a steeper curve behind to its junction with the posterior beak, ventral margin rather boldly convex, more fully rounded in front than behind; seen from above (fig. 22), evenly ovate, twice as long as broad, mucronate behind, narrowly rounded in front. Length 2 mm. Male and female nearly alike. The sensory mouth-appendages consist of three pairs of finger-like or conical processes (fig. 24), one pair of which (*a*) are simple

[1] εὐπαθής, sensitive; στόμα, a mouth.

cones with terminal rosettes of short olfactory (?) setæ, a second pair (*b*) consisting each of two coalescent cones, a third (*c*) longer and finger-like with crenated margins. The mandible (fig. 23) has four long terminal ungues and a short seta; its chewing-lobe (fig. 23 *a*) is setose and ends in two slender mucrones; and the antepenultimate joint bears, like *Cypridina*, a short apical process with a lancet-shaped point and two lateral setæ (fig. 23 *b*). Lateral setæ of the vermiform limb few, generally not more than eight; terminal setæ long, filiform, not at all tooth-like, unilateral (fig. 25). Post-abdominal laminæ (fig. 26) bearing nine pectinated marginal ungues, which are progressively longer from first to last.

Hab. Taken abundantly in the surface-net in the Bay of Bengal, lat. 14° N. For these specimens I am indebted to my friend Mr. I. C. Thompson, F.L.S., of Liverpool.

Genus Sarsiella Norman, 1869.

Sarsiella Norman (1), p. 293; Brady & Norman (1) (♀), p. 677.
Nematohamma Brady & Norman (1) (♂), p. 680; G. W. Müller (1), p. 213.

Sarsiella hanseni, sp. n. (Plate XLV. figs. 1–12.)

Shell of the *female*, seen from the side (fig. 1), subquadrate, height equal to four-fifths of the length; anterior extremity very wide, truncate, slightly irregular, but almost straight, posterior narrower, deeply excavated, and bounded above and below by two prominences, the lower of which is much the largest and forms a stout sub-triangular beak; dorsal margin slightly arcuate, somewhat sinuous, highest in the middle, whence it slopes very gently towards the front, but steeply and with a distinct curve backward, ventral margin more strongly convex and sinuated in front of the posterior beak. Seen from above (fig. 2), the outline is elongated and subquadrangular, of nearly equal width throughout, width equal to more than half the length; anterior extremity wide, flattened, but deeply emarginate in the middle, posterior almost as wide as the greatest width of the shell, abruptly truncated and slightly prominent in the middle; lateral margins subparallel, very slightly divergent from behind forward, almost rectangular at their junction with the posterior extremity, but rounded off in front. The substance of the shell is flexible and submembranaceous, closely pitted with small impressed puncta and irregularly waved and ribbed; the anterior and inferior margins form a continuous elevated ridge; two longitudinal ribs run parallel to, but at a considerable distance within, the dorsal and ventral margins; there is a flexuous central rib between these two, rising near the front of the valve, and becoming lost behind the middle; between this and the dorsal rib is another rib which begins with a sharp bend in front of the middle, and, gradually becoming stronger, passes backward and ends in a curve a little within the posterior margin. Between these principal ribs the valves are irregularly corrugated; all the ribs are beset with long and rather

coarse hairs (fig. 3), and the dorsal surface bears patches of very short, rigid, and closely-set hairs (figs. 2, 11), which have dilated subglobular or crutch-shaped apices. Length 1·05, height ·85 mm. Shell of the *male* (fig. 4) elongated, not unlike that of *Philomedes*, nearly twice as long as high; surface-markings scarcely so pronounced as those of the female. Length 1·1 mm. The limbs of the *female* differ scarcely at all from those of *S. capsula*, which has been fully described by G. O. Sars and G. W. Müller. Post-abdominal laminæ narrow, its four marginal ungues very slender, and increasing progressively in length from the first to the last, which is at least four times as long as the first (fig. 10), their inner margins sparingly spinulose. The mandible of the *male* (fig. 8) differs from that of the female in being more profusely setiferous, and in having only one, instead of three, terminal ungues; the antennule (fig. 5) has on the penultimate joint a cushion-like prominence which bears a dense brush of innumerable long fine hairs; extremity of the vermiform limb truncated, and without the pairs of hooks which are found in the female. Copulative organ (fig. 12) ending in two stout and blunt chitinous hooks. Secondary branch of the antenna (fig. 6) three-jointed, geniculated; inner margin of the second joint bearing at the base two very long and stout spine-like setæ; terminal joint slightly thickened at its base, blunt and angularly bent. Post-abdomen like that of the female.

Hab. Plentiful in a dredging, from 1–5 fathoms, in Lyttelton Harbour.

The extremely hirsute character of the shell and the peculiar cushion-like patches of knobbed hairs, forming a sort of interrupted nimbus round the edges when seen dorsally, are very characteristic. But the surface-sculpture is not easily seen while the shell is immersed, and when removed from liquid it very speedily shrivels and loses its proper markings. The genus *Nematohamma* Brady & Norman was founded on male specimens of a *Sarsiella*, the relation of which to the female form was then unknown.

Sarsiella hispida, sp. n. (Plate XLV. figs. 13, 14.)

Shell membranous, thin and flexible, seen from the side subrhomboidal (fig. 13), height equal to two-thirds of the length; anterior extremity narrowed, rounded; posterior much wider, subtruncate, sloping very steeply, and terminating in a long conical beak; dorsal margin almost flat in the middle, whence it slopes gently toward the front; near its hinder end it is distinctly sinuated and terminates in an abrupt angle; ventral margin boldly arcuate, with a slight sinuation (antennal notch) near the anterior extremity; seen from above (fig. 14), subquadrate, oblong, sides nearly parallel, but indented near the middle, obtusely rounded in front, rectangularly truncated behind, with a large median mucronate process. Shell densely hispid, and on the dorsal aspect bearing patches of short, rigid, clubbed hairs; surface of the valves flexuously ribbed in a longitudinal direction. Length 1·5 mm.

Hab. Akaroa Harbour; dredged in a depth of 6 fathoms.

The test of this species is so very thin that it is impossible to examine it in the dry condition owing to its rapid shrivelling, and the markings are very difficult to make out accurately in fluid; the disposition of the ridges seems, however, to be very much like that of *S. hanseni*.

Genus Cypris O. F. Müller.

Cypris viridis Thomson. (Plate XLV. figs. 22–24.)

Cypris viridis Thomson (1), p. 253, pl. xi. fig. A. 2 *a–g*.

Shell of the *female* short and very tumid; seen from the side (fig. 22) reniform, very slightly depressed in front, height equal to nearly two-thirds of the length; extremities well rounded, dorsal margin boldly and evenly arched, ventral slightly sinuated in the middle; seen from above (fig. 23), very broadly ovate, greatest width behind the middle and equal to about three-fourths of the length, anterior extremity abruptly tapered and subacute, posterior broadly rounded; lateral margins strongly arcuate, converging steeply towards the front. Shell-surface finely punctated and covered with short, rather rigid hairs; the anterior and posterior extremities bordered by a narrow, pellucid flange, which is fringed with a single series of very fine hairs; behind this flange is a thicker band marked by irregular transverse glandular (?) streaks; left valve overlapping the right on the dorsal and posterior aspects. Colour an opaque dark green. Length ·9 mm. Post-abdominal rami (fig. 24) very small and slender; terminal seta as long as the ramus itself, lateral seta about half as long and attached very near the apex; the minor apical seta is extremely minute.

Hab. "In pools about Dunedin and Taieri Plan" (*G. M. Thomson*).

Genus Cyprinotus G. S. Brady.

Cyprinotus Brady (3), p. 301; G. O. Sars (2), p. 5 (separate copy).

Cyprinotus flavescens, sp. n. (Plate XLVI. figs. 28, 29.)

Shell, seen from the side (fig. 28), reniform, highest in the middle, height equal to rather more than half the length; extremities rounded, anterior wide and almost subtruncate, posterior narrower and slightly depressed; dorsal margin forming an evenly flattened arch, ventral gently sinuated towards the front; seen from above (fig. 29) the outline is compressed, ovate, widest in the middle, more than twice as long as broad, gradually tapered towards the acuminate anterior extremity, narrowly rounded behind; surface of the valves quite smooth. Colour yellowish. Length 2·2 mm.

Hab. Dunedin district (exact locality lost).

The soft parts of the animal agree accurately with those of the typical *Cyprinotus*, but there is not so much inequality of the valves as in the better-known species.

Genus Loxoconcha G. O. Sars.

Loxoconcha punctata Thomson. (Plate XLVI. figs. 3–5.)

Loxoconcha punctata Thomson (1), p. 255, pl. xi. fig. B. 3 *a–k*.

Shell of the *female*, seen from the side (fig. 3), subrhomboidal, height equal to more than two-thirds of the length; extremities obliquely rounded, the anterior sloping steeply above the middle and rounded off ventrally, posterior forming a bold curve from below to the dorsum, where it ends in an abrupt angle; dorsal margin forming a flattened arch with an excavation where it joins the posterior extremity, ventral very slightly sinuated in the middle; seen from above (fig. 14), lozenge-shaped, twice as long as broad, widest in the middle, whence it tapers rather suddenly to the extremities, which are subacuminate and nearly equal. Surface of the shell smooth, bearing numerous small papillæ; valves flattened out at the extremities, forming a bordering flange which is continued, though feebly, along the ventral margin. Colour generally greyish, but variable, as is also the texture of the shell. Length ·57 mm. The shell of the *male* is rather larger (·7 mm.), and has the characteristic shape of that sex in *Loxoconcha*.

Hab. Otago Harbour, among seaweed and in rock-pools, Brighton, New Zealand.

This species has been described and figured by Mr. G. M. Thomson (*loc. cit.*); but, as the 'Transactions' of the New Zealand Institute are not generally accessible, I here re-figure the female.

Genus Xestoleberis G. O. Sars.

Xestoleberis luxata, sp. n. (Plate XLVI. figs. 20–27.)

Shell of the *female* compressed, subreniform, left valve much larger than the right, and overlapping everywhere except on the ventral margin (figs. 20, 21); seen from the side, nearly twice as long as high, highest behind the middle, depressed in front; anterior extremity narrow, rounded but somewhat flattened, posterior wide and boldly rounded; dorsal margin forming a continuous curve, flattened toward the front, but boldly rounded behind, ventral sinuated in front of the middle; seen from above, compressed, ovate, twice as long as broad, widest behind the middle, tapering gently towards the front, well rounded behind; shell-surface smooth, marked with numerous very small circular papillæ. Colour yellowish white. Length ·6 mm. Antennules (fig. 24) six-jointed, bearing two setæ on the second joint, one on the third, three on the fourth, one on the fifth, and three on the sixth, all of them short; the mandibular branchia (fig. 26) consists of only two setæ, and the animal is, in other respects, similar to the typical *Xestoleberis*.

Hab. On algæ in Lyttelton Harbour, New Zealand.

In most species of *Xestoleberis* there is some inequality of the valves, but in this species it is more pronounced than in any other known to me.

Xestoleberis olivacea, sp. n. (Plate XLVI. figs. 6, 7.)

Shell, seen from the side (fig. 6), subreniform, greatest height situated in the middle and equal to two-thirds of the length; extremities well rounded; dorsal margin boldly and evenly arched, sloping steeply behind, more gradually in front, ventral rather deeply sinuated in front, boldly arcuate behind, where it forms a curve continuous with that of the posterior extremity; seen from above (fig. 7), ovate, nearly twice as long as broad, widest in the middle, lateral margins evenly and boldly arcuate; anterior extremity subacuminate, posterior narrowly rounded. Shell-surface perfectly smooth and without markings, excepting a dark eye-spot. Colour dark olive. Length ·55 mm.

Hab. Rock-pools, Brighton, New Zealand.

Xestoleberis compressa, sp. n. (Plate XLVI. figs. 10–19.)

Shell, seen from the side (fig. 10), reniform, highest in the middle, height equal to more than half the length; anterior extremity obliquely rounded, posterior boldly and evenly rounded; dorsal margin boldly arched, ventral rather deeply sinuated in the middle; seen from above (fig. 11), compressed, ovate, fully twice as long as broad, acuminate in front, rounded behind. Shell-surface smooth, marked with distant, very minute papillæ. Colour yellowish. Length ·46 mm. Antennules (fig. 13) six-jointed, third, fourth, and fifth joints each with a single strong apical spine and a slender seta, sixth joint with two setæ; second joint fringed externally with fine, short hairs; in other respects like typical *Xestoleberis*.

Hab. Rock-pools, Brighton, New Zealand.

G. W. Müller notes that in many, if not in all, species of *Xestoleberis* the shell bears a crescentic pellucid patch behind the eyes, and of this he gives several figures. I have not been able to find this patch in any of the species here described, though in *X. compressa* there is, at any rate in some specimens (fig. 10), a similar mark in front of the eyes. But the shell in this species and in others of the same genus is liable to the presence of similar irregular spots on various parts.

Genus Cythere O. F. Müller.

Cythere brunnea, sp. n. (Plate XLVII. figs. 8–15.)

Male. Shell, seen from the side (fig. 8), subreniform, greatest height in front of the middle, and equal to more than half the length; anterior extremity wide, rather obliquely rounded, forming a very wide band or fillet, which ceases above at the highest point of the valve, but is continued in a narrower form along the ventral margin, and as far as the postero-dorsal angle; posterior extremity much narrower than the anterior, subtruncate, rounded off below, almost angular above; dorsal margin slightly arcuate, sloping continuously and evenly from the front backward;

ventral deeply sinuated in front of the middle, behind which it is slightly convex; seen from above, the outline is narrowly ovate, nearly thrice as long as broad (fig. 9), rounded behind and tapered gradually to the obtusely-pointed anterior extremity. Shell-surface covered with closely-set angular pittings, except on the marginal flange (fig. 10), the flange itself marked with closely-set, fine, radiating lines (lacunæ?) on its broad inner zone, and on the narrower outer zone with distant short hairs. Length ·66 mm. Antennules (fig. 11) six-jointed, each of the last four joints bearing a stout apical spine, the last three having also one or two setæ which are not very much longer than the spines; urticating seta of the antenna slightly longer than the limb; poison-gland large and lobose. Mandible (fig. 12) stout, broad, and many-toothed; palp three-jointed, the long middle joint being again imperfectly divided into three, terminal joint much narrower than the rest, finger-like, and bearing three broad apical setæ and two short hairs; the long median joint has an apical brush of seven long hairs arising from a short external process; its inner margin has three very stout, curved, plumose setæ, that of the distal segment being much longer than the other two; the middle of the outer margin has a fascicle of very short, fine hairs; the short basal joint bears two very small, plumose branchial (?) setæ. Three pairs of feet, sparingly setiferous (figs. 13, 14), with strong curved ungues. Copulative organs complex (fig. 15), enclosing a coiled spermatic duct, with two stout plumose setæ on the free margin. Female unknown.

Hab. A few specimens taken in Lyttelton Harbour among algæ.

The antennæ of this species with their long and stout urticating setæ, and the mandible-palps with their slender terminal joint and stout, falcate setæ, correspond closely with the same organs as seen in *Cythere albomaculata* Baird, and in no other species with which I am acquainted.

CYTHERE INNOMINATA, nom. nov. (Plate XLVI. figs. 1, 2.)

Cythere truncata[1] Thomson (1), p. 254, pl. xi. fig. C. 2 *a–c*.

Shell, seen laterally (fig. 1), subquadrate, highest in front, greatest height much more than half the length; anterior extremity broadly rounded, irregularly crenulated or almost dentated; posterior narrow, rounded off above and below, subtruncate below the middle, but deeply excavated above; dorsal margin sloping gently and in a slightly sinuous line from the front; ventral nearly straight behind its junction with the anterior encircling fillet, gently upcurved toward the posterior extremity; seen from above (fig. 2), elongated, compressed, widest behind, nearly thrice as long as broad, lateral margins converging gradually, but with irregular sinuations from near the hinder end to the front, which is obtusely pointed; from the widest point the sides converge

[1] This specific name has been already used by Reuss for a Tertiary species. I therefore propose the new name *innominata*.

abruptly to the posterior extremity, which is narrow and truncated; surface of the shell irregularly rugose, the ridges taking a transverse direction at the posterior end; a conspicuous polished tubercle on the anterior hinge. Length 1·3 mm.

Hab. In rock-pools, Brighton, New Zealand. Two or three specimens only.

The shell is somewhat like in general appearance to G. W. Müller's genus *Paracytheridea*, but, so far as I have been able to observe, it does not agree with that genus in minor details. The types described by Mr. Thomson were got among algæ in Otago Harbour.

Cythere truncula, sp. n. (Plate XLVII. figs. 16, 17.)

Shell, seen from the side (fig. 16), subquadrangular, greatest height near the front, and equal to about two-thirds of the length; anterior extremity obliquely and not very strongly rounded; posterior very wide, almost rectangularly truncated, produced below the middle, where it bears three short, stout, and blunt teeth; dorsal margin sloping rather steeply and irregularly from the front backward; ventral almost straight for about three-fourths of its length, where it forms a prominent abrupt angle, and thence curves upward to the posterior extremity; seen from above, the outline is lozenge-shaped or subhexagonal (fig. 17), widest in the middle, the width being nearly equal to the height; extremities wide, truncated, and irregularly emarginate; lateral margins strongly arcuate, prominent in the middle, and converging rather steeply to each extremity. Surface of the shell covered with large irregularly-angulated fossæ; a large polished tubercle over the anterior hinge; anterior margin fringed with coarse hairs. Length ·75 mm.

Hab. Among weeds in Lyttelton Harbour. One specimen only.

Genus Trachyleberis [1], gen. nov.

Shell beset with prominent nodules or spines. Antennules six-jointed, devoid of spines, but bearing numerous slender setæ; antennæ four-jointed, that of the female with a very short, falcate, urticating seta, which is absent from that of the male; mandible-palp with a small branchial plate bearing three upwardly-directed filaments, a very short one directed downward, and one very minute, horizontal ray. The remaining limbs as in *Cythere*; in front of the first pair of legs in the male a pair of one-jointed setiferous appendages.

Trachyleberis scabrocuneata (G. S. Brady). (Plate XLVII. figs. 1–7, 18–25.)

Cythere scabrocuneata Brady (2), p. 103, pl. xvii. figs. 5 *a–f*; pl. xxiii. figs. 2 *a–c*.

Shell of the *male* (figs. 1, 2), seen from the side, elongated, subquadrate, greatest height near the front, and equal to rather less than half the length; anterior extremity

[1] τραχύς, rough; λεβηρίς, a shell.

forming a steep curve above the middle, below the middle well rounded and broken up into a series of short blunt teeth; posterior extremity irregularly emarginate, narrowed and wedge-shaped, most prominent below the middle; dorsal margin slightly sloping from before backward, and broken into an irregular jagged line; ventral almost straight, with an upward bend behind. Seen from above, the outline is compressed, subovate, more than twice as long as broad, the whole circumference excessively jagged and uneven, tapered at the extremities, which are obtuse, deeply emarginate in front; surface covered with large irregularly-rounded nodules, and beset with coarse, rigid hairs. A large polished tubercle over the anterior hinge; hingement of two terminal teeth on the right corresponding with depressions on the left valve. Length 1·1 mm. Shell of the female shorter and more tumid. Antennules (figs. 18, 19) six-jointed, the last three joints bearing each three or four setæ, each of which is about as long as the last four joints of the antennule; the second and third joints have one seta each, the first none; the last joint of the antenna (fig. 20) is small, and bears a long, slender unguis with two setæ; the penultimate joint has three fascicles of long setæ, and, near its base, a brush of small, short hairs; second joint small, bearing a single long seta and a few small hairs; first joint (in the female) with a short, strongly-curved, urticating seta—none in the male. Mandible wide and many-toothed; palp (fig. 3) four-jointed, its last joint rather shorter and much more slender than the preceding; branchial plate (fig. 21) five-rayed; præcrural appendages (fig. 25) elongated, quadrilateral, apices rectangularly truncate, and bearing numerous very fine long hairs; legs similar to those of the Cytheridæ generally (figs. 22–24), their terminal claws very long, slender, and moderately curved; the second joint of the last leg in the male (fig. 24) bears four small, but dense, fascicles of hairs; that of the female (fig. 4) has only one. Post-abdomen in the female (fig. 5) forming two trisetose lobes.

Hab. Dredged abundantly in Lyttelton Harbour, depth 1–5 fathoms.

This species was first described from specimens (shells only) taken during the cruise of the 'Challenger' in various depths, down as far as 40 fathoms: the localities were East Moncœur Island, Bass's Straits; Inland Sea, Japan; and Wellington Harbour, New Zealand. The very long and slender setæ of the antennules—as long as those of many Cypridæ (*Bairdia*, *Macrocypris*, *Paracypris*, &c.)—seem to entitle this species to a separate generic position, and further distinctive characters are found in the peculiarities of the mandibular branchial plate, the urticating antennal setæ, and the setose armature of the third pair of legs in the male.

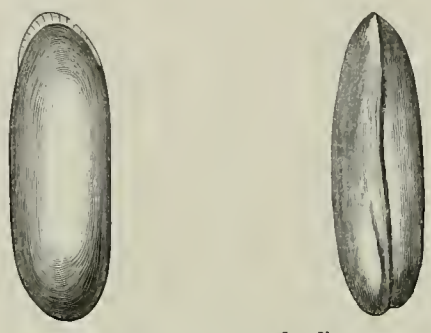
Genus Cytherideis Jones.

Cytherideis T. R. Jones (1), p. 46; G. S. Brady (1), p. 454; Brady & Norman (1), p. 226.

Cytherideis novæ-zealandiæ, sp. n. (Figs. 1–4).

Shell, seen from the side (fig. 1), suboval, elongated, three times as long as broad; extremities obliquely rounded, the anterior bordered with a narrow flange; dorsal margin quite straight, ventral straight, but indented at its junction with the anterior border; seen from above (fig. 2), ovate, more than thrice as long as broad, sides only slightly arcuate, anterior extremity subacuminate, posterior rounded, right valve overlapped by the left; surface smooth. Antennule (fig. 3) six-jointed, bearing several

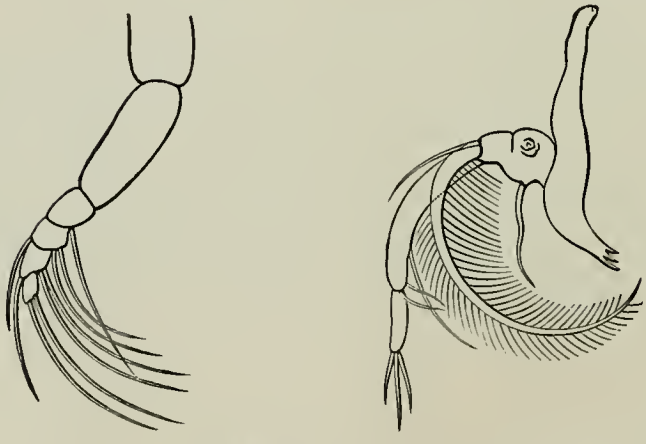
Fig. 1. Fig. 2.



Cytherideis novæ-zealandiæ.

Fig. 1. Shell, seen from left side, × 55.
Fig. 2. „ „ above, × 55.

Fig. 3. Fig. 4.



Cytherideis novæ-zealandiæ.

Fig. 3. Antennule, × 210.
Fig. 4. Mandible and palp, × 210.

long setæ, which are crowded together on the last four joints; mandible slender and feebly toothed (fig. 4); palp very long and slender, destitute of branchial rays, basal joint bearing one extremely long and stout, falcate, plumose seta, and two much shorter, simple setæ; penultimate joint with two, last joint with three, small apical setæ. Length ·88 mm.

Hab. One specimen only in a dredging from Lyttelton Harbour, 1–5 fathoms.

Family CYTHERELLIDÆ Sars.

Genus Cytherella Jones.

Cytherella eburnea, sp. n. (Plate XLVI. figs. 8, 9.)

Shell, seen from the side (fig. 8), subelliptical, about twice as long as high; extremities well rounded, dorsal and ventral margins nearly straight. Seen from above (fig. 9), the outline is club-shaped, widest near the posterior extremity, width equal to more than one-third of the length; anterior extremity very obtusely rounded, posterior much wider, subtruncate, with rounded angles; lateral margins converging slightly from behind to the anterior extremity. Surface of the valves quite smooth and polished. Colour grey. Length ·9 mm.

Hab. Lyttelton Harbour, among weeds. One specimen only found.

EXPLANATION OF THE PLATES.

PLATE XLIII.

Asterope australis, p. 431.

Fig. 1. Shell of male, seen from left side,
Fig. 2. „ „ above,
Fig. 3. Shell of female, seen from right side,
Fig. 4. „ „ above,
} × 40.

Fig. 5. Inner branch of antenna, ♂,
Fig. 6. „ „ ♀,
} × 210.

Fig. 7. Process of mandibular foot, × 180.

Fig. 8. Post-abdominal lamina, × 180.

Asterope grisea, p. 432.

Fig. 9. Shell of female, seen from right side,
Fig. 10. „ „ above,
} × 25.

Fig. 11. Inner branch of antenna, ♂, × 100.
Fig. 12. „ „ ♀, × 84.
Fig. 13. Terminal teeth of vermiform limb, × 210.
Fig. 14. Post-abdominal lamina, × 84.

Cyclasterope zealandica, p. 433.

Fig. 15. Shell of female, seen from right side, } × 8.
Fig. 16. „ „ above, }
Fig. 17. Shell of male, seen from right side, × 8.
Fig. 18. Inner branch of antenna, ♂, } × 50.
Fig. 19. „ „ ♀, }
Fig. 20. A terminal tooth of vermiform limb, × 540.
Fig. 21. Post-abdominal lamina, × 25.
Fig. 22. Teeth at base of unguis of same, × 250.
Fig. 23. Sculpture of anterior margin of shell, × 25.

Cyclasterope ovulum, p. 432.

Fig. 24. Shell of female, seen from left side, } × 6.
Fig. 25. „ „ below, }
Fig. 26. Inner branch of antenna, ♀, × 40.
Fig. 27. Frontal tentacle, × 40.
Fig. 28. Terminal teeth of vermiform foot, × 250.
Fig. 29. Post-abdominal lamina, × 25.
Fig. 30. Marginal teeth of caudal ungues, × 250.

PLATE XLIV.

Philomedes flexilis, p. 435.

Fig. 1. Old shell of female, seen from right side, }
Fig. 2. „ „ below, } × 25
Fig. 3. Shell of male from right side, }
Fig. 4. Eyes and frontal tentacle, ♂, × 84.
Fig. 5. Inner branch, antenna, ♂, × 40.
Fig. 6. „ „ ♀, × 40.
Fig. 7. Outer branch, antenna, ♀, × 84.
Fig. 8. Principal tooth of second maxilla, × 210.
Fig. 9. End of vermiform limb, × 210.
Fig. 10. Post-abdominal lamina, × 84.
Fig. 11. Eye of female, × 210.

Fig. 12. Portion of lining membrane of shell, × 84.
Fig. 13. Rostrum and laminar border, × 60.
Fig. 14. Shell-gland, × 200.

Philomedes sculpta, p. 434.

Fig. 15. Shell of male, seen from left side,
Fig. 16. „ „ above, } × 25.
Fig. 17. Rostrum and marginal lamina, × 40.
Fig. 18. Inner branch of antenna, ♂, × 110.
Fig. 19. Post-abdominal lamina, × 84.
Fig. 20. Fragment of concretion, × 84.

Eupathistoma natans, p. 437.

Fig. 21. Shell of male, seen from right side,
Fig. 22. „ „ below, } × 25.
Fig. 23. Mandible, × 84.
a, *b*. Processes of same, × 210.
Fig. 24. Oral sense-organs, × 210.
Fig. 25. End of vermiform foot, × 210.
Fig. 26. Post-abdominal lamina, × 84.

Cyclasterope tenera, p. 433.

Fig. 27. Right valve of lamina, seen from inside, × 30.
Fig. 28. Inner branch of antenna, × 84.
Fig. 29. Post-abdominal lamina, × 84.

PLATE XLV.

Sarsiella hanseni, p. 438.

Fig. 1. Shell of female, seen from right side,
Fig. 2. „ „ above,
Fig. 3. Left valve, seen as transparent object, } × 50.
Fig. 4. Shell of male, seen from left side,
Fig. 5. Antennule of male, × 84.
Fig. 6. Inner branch of antenna, ♂, × 210.
Fig. 7. Mandible of female.
Fig. 8. „ male.
Fig. 9. End of vermiform limb, × 210.
Fig. 10. Post-abdominal lamina, × 120.
Fig. 11. Hairs from dorsal cushion, × 300.
Fig. 12. Copulative organ, ♂, × 210.

Sarsiella hispida, p. 439.

Fig. 13. Shell of female, from left side, × 50.
Fig. 14. „ „ above, × 40.

Philomedes flexilis, p. 435.

Fig. 15. Shell of female, from right side, × 35.
Fig. 16. „ dorsal view (rather oblique), × 35.

Asterope quadrata, p. 432.

Fig. 17. Outline of shell (♀), seen from left side,
Fig. 18. „ „ above, } × 40.
Fig. 19. Inner branch of antenna, ♂, × 210.
Fig. 20. „ „ ♀, × 210.
Fig. 21. Post-abdominal lamina, ♀, × 210.

Cypris viridis, p. 440.

Fig. 22. Shell of female, seen from left side,
Fig. 23. „ „ above, } × 50.
Fig. 24. Post-abdominal ramus, × 210.

PLATE XLVI.

Cythere innominata, p. 443.

Fig. 1. Shell, seen from right side,
Fig. 2. „ „ above, } × 84.

Loxoconcha punctata, p. 441.

Fig. 3. Shell of female, seen from right side,
Fig. 4. „ „ above, } × 84.
Fig. 5. Portion of shell-margin, × 210.

Xestoleberis olivacea, p. 442.

Fig. 6. Shell of female, seen from left side,
Fig. 7. „ „ above, } × 84.

Cytherella eburnea, p. 447.

Fig. 8. Shell, seen from left side,
Fig. 9. „ „ above, } × 50.

Xestoleberis compressa, p. 442.

Fig. 10. Shell, seen from right side,
Fig. 11. „ „ above, } × 84.
Fig. 12. Portion of shell-margin, × 210.
Fig. 13. Antennule of female,
Fig. 14. Antenna of female, } × 210.
Fig. 15. Mandible and palp of female, × 210.
Fig. 16. Foot of second pair, × 210.
Fig. 17. „ third pair, × 210.
Fig. 18. Post-abdomen, × 250.
Fig. 19. Copulative organ, ♂, × 250.

Xestoleberis luxata, p. 441

Fig. 20. Shell, seen from right side,
Fig. 21. „ „ above,
Fig. 22. „ „ behind, } × 84.
Fig. 23. Muscle-spots, × 210.
Fig. 24. Antennule, × 210.
Fig. 25. Antenna, × 210.
Fig. 26. Mandible and palp, × 210.
Fig. 27. Post-abdomen and third foot, × 210.

Cyprinotus flavescens, p. 440.

Fig. 28. Shell, seen from right side,
Fig. 29. „ „ above, } × 25.

PLATE XLVII.

Trachyleberis scabrocuneata, p. 444.

Fig. 1. Shell of male, seen from left side,
Fig. 2. „ „ above, } × 53.
Fig. 3. Mandible and palp, × 210.
Fig. 4. Foot of third pair, ♀, × 120.
Fig. 5. Post-abdomen, ♀, × 210.
Fig. 6. Copulative organ, ♂, × 100.
Fig. 7. Portion of shell-margin, anterior, × 84.

Cythere brunnea, p. 442.

Fig. 8. Shell of female, seen from left side,
Fig. 9. „ „ above, } × 84.

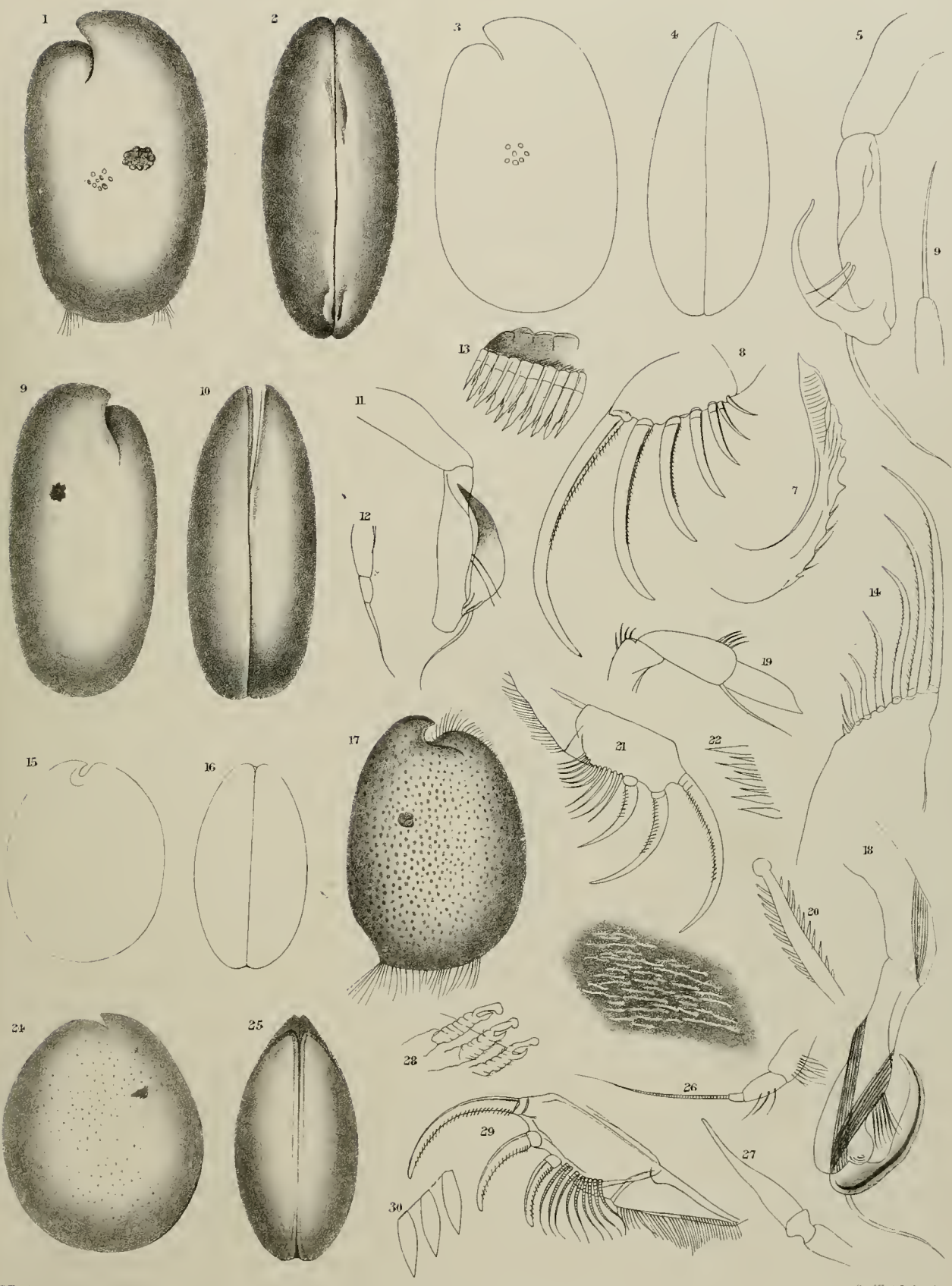
Fig. 10. Portion of shell-margin, × 250.
Fig. 11. Antennule, × 210.
Fig. 12. Mandible and palp, × 210.
Fig. 13. Foot of first pair, × 210.
Fig. 14. „ third pair, × 210.
Fig. 15. Copulative organ, ♂, × 210.

Cythere truncula, p. 444.

Fig. 16. Shell, seen from left side,
Fig. 17. „ „ above, } × 84.

Trachyleberis scabrocuneata, p. 444.

Fig. 18. Antennule, × 110.
Fig. 19. Last four joints of antennule, × 250.
Fig. 20. Antenna of female, × 180.
Fig. 21. Branchial plate of mandible, × 210.
Fig. 22. Leg of first pair, ♂, × 210.
Fig. 23. „ first pair, ♀, × 210.
Fig. 24. „ third pair, ♂, × 110.
Fig. 25. Præcrural appendage, ♀, × 210.



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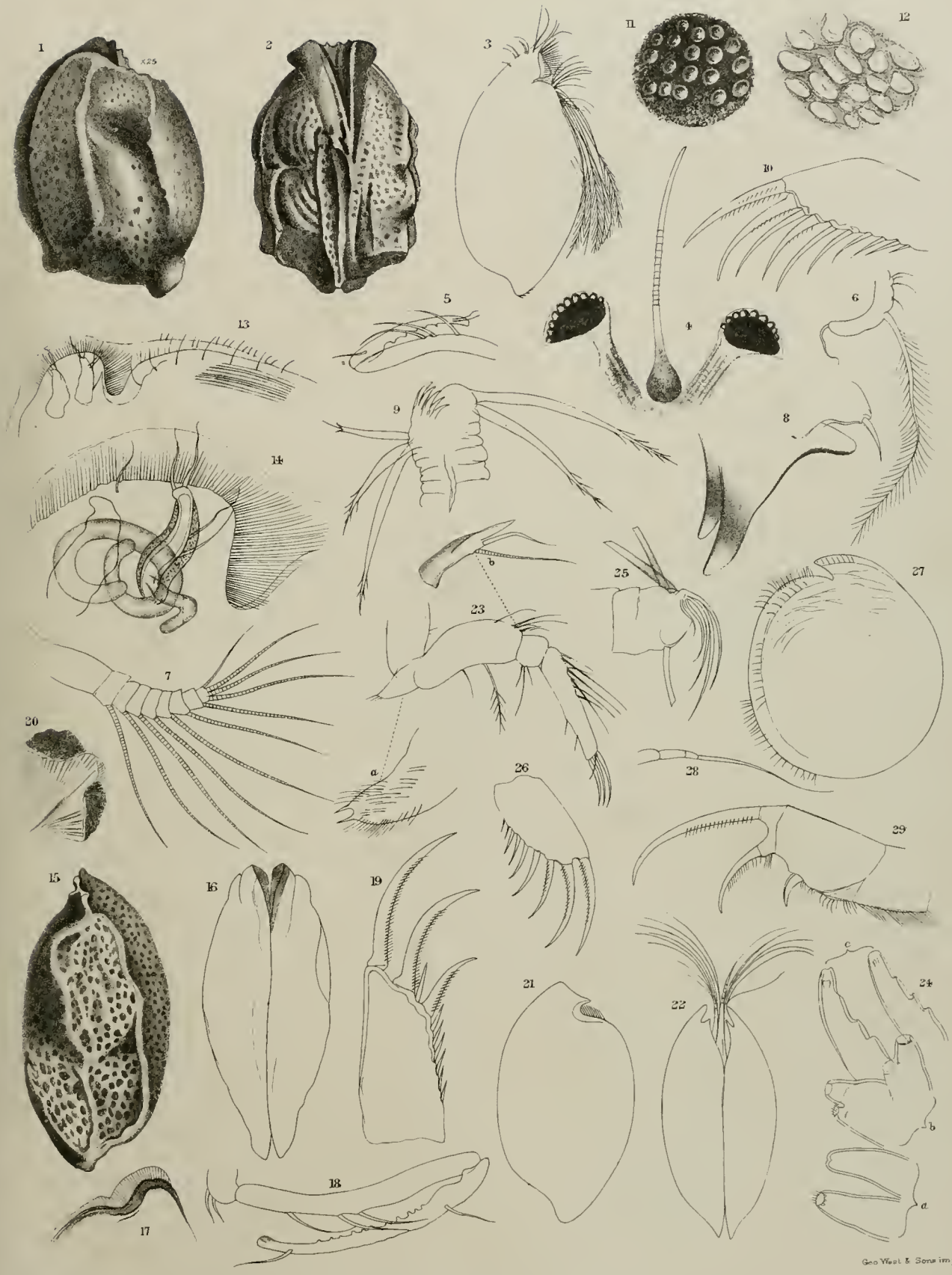

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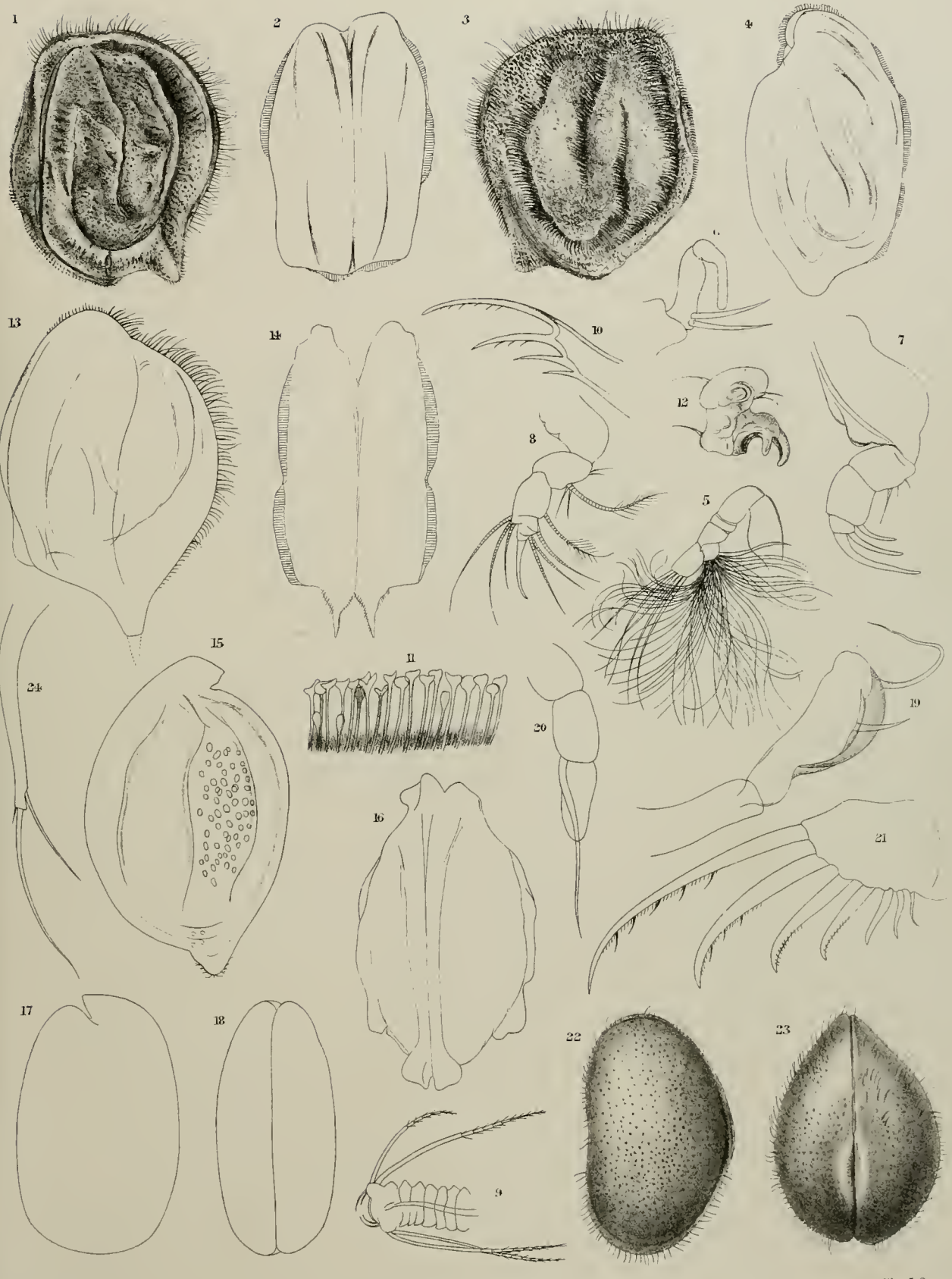

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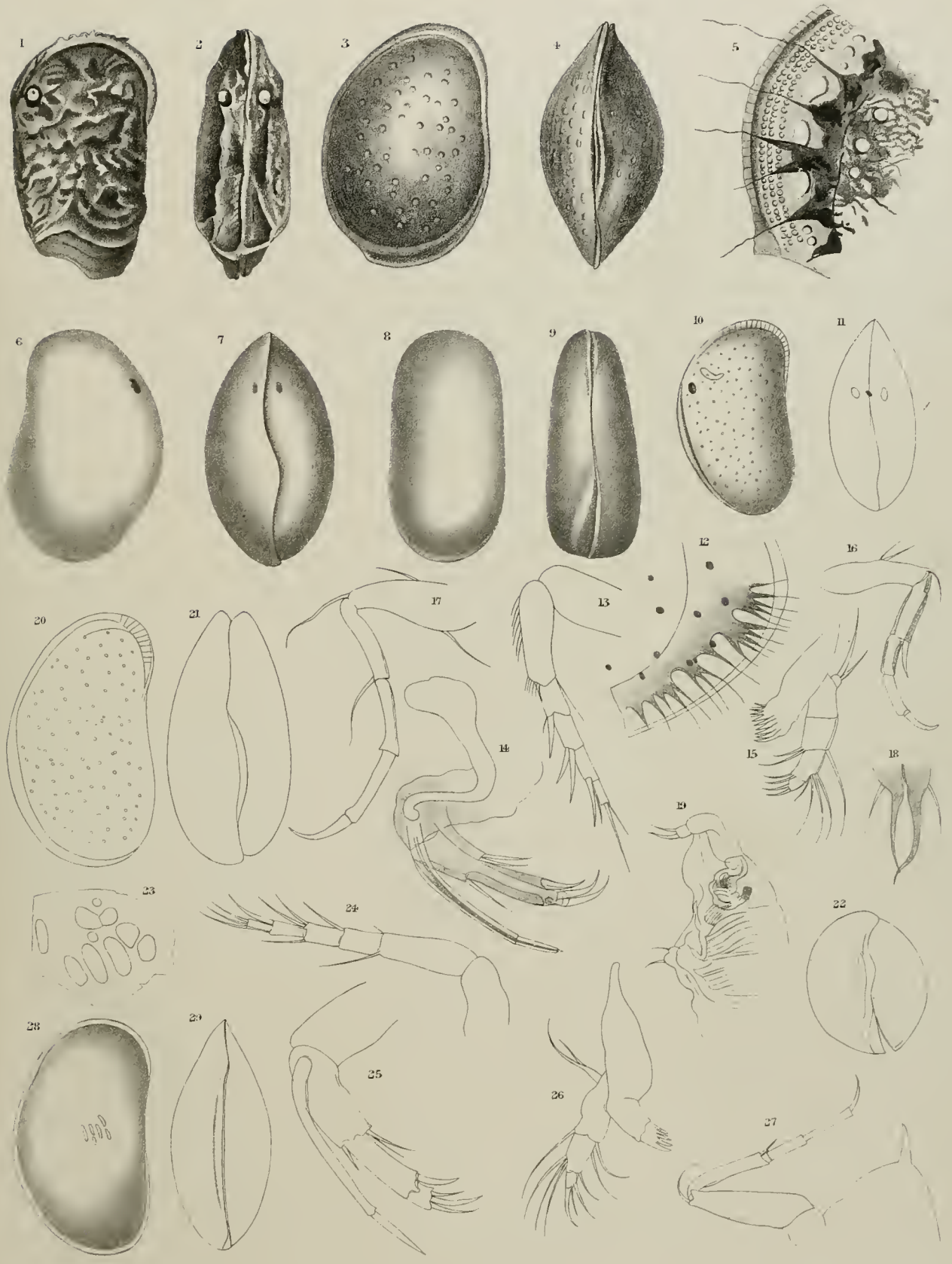

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