

THE ANNALS
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[FIFTH SERIES.]

"..... per litora spargite muscum,
Naiades, et circum vitreos considite fontes:
Pollice virgineo teneros hinc carpite flores:
Floribus et pictum, divæ, replete canistrum.
At vos, o Nymphæ Craterides, ite sub undas;
Ite, recurvato variata corallia trunco
Vellite muscosis e rupibus, et mihi conchas
Ferte, Deæ pelagi, et pingui conchylia succo."
N. Partheni Giannettasi Ecl. 1.

No. 31. JULY 1880.

I.—*New Species of Crustacea from New Zealand.*
By GEORGE M. THOMSON.

[Plate I.]

THE following notes record the result of observations made on the crustacean fauna of Dunedin Harbour during last summer. Limited as the field is, it has already yielded so many new forms, and this too after most cursory examination, that I anticipate numerous additions will be made to our knowledge by more systematic dredging. The maximum depth of the Bay is probably about 6 fathoms; so that no deep-sea forms are included in the following list.

Group SCHIZOPODA.

Fam. Mysidæ.

Genus MYISIS.

Mysis denticulata, n. sp.

Carapace rather short and slender, with a short triangular acute rostrum. Peduncle of the internal (upper) antennæ extending to the extremity of the scale of the external antennæ, second joint very short, third the widest. Scale of external antennæ broad, with a tooth at the outer angle, and long cilia on its inner side and at the extremity. Middle lamella of the

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tail entire, toothed on each side, and with two strong teeth at the apex. Lateral laminæ exceeding the central one; the inner narrow-lanceolate, acute, and furnished with long hairs on each side; the outer obtuse, with the apical half narrowing, ciliated only at the extremity and on the inside, and with a few stout teeth about the middle of its outer margin. Length 0.5 inch.

Dunedin Harbour, in 4 fathoms.

ISOPODA VAGANTIA.

Fam. Tanaidæ.

Genus PARATANAIS, Dana.

Paratanais tenuis, n. sp. (Pl. I. fig. 1.)

Body slender. Head, when seen from above, narrowing anteriorly, front margin nearly straight. Eyes triangular; peduncles so short as to be hardly visible. Superior antennæ stout; inferior pair about two thirds as long as superior, slender. First gnathopoda stout; mobile finger smooth on the inner margin; immobile finger with a slightly convex inner margin furnished with a few strong hairs, and terminated by two or three stout denticles. Second gnathopoda long and very slender. Two anterior pairs of pereopoda comparatively slender, succeeding pairs stouter. Last segment of abdomen somewhat triangular, with a truncate apex, terminated by two minute setæ. Terminal uropoda with the inner branch four-jointed, and more than half as long as abdomen; outer branch one-jointed, as long as first joint of inner. Length 0.1 inch.

Dunedin Harbour, in 4-5 fathoms, and rock-pools on the coast.

AMPHIPODA NORMALIA.

Fam. Gammaridæ.

Subfam. STEGOCEPHALIDES.

Genus PANOPLŒA, n. gen.

Coxæ of the four anterior segments well developed, those of the second pair of pereopoda excavated on the upper part of the posterior margin. Antennæ subequal, without a secondary appendage. Mandibles with an appendage. Maxillipeds with a squamiform process on the ischium. Gnathopoda feeble, almost chelate. Three posterior pairs of pleopoda double-branched. Telson simple, squamiform.

I have formed this genus to include two species which appear to me to be the southern representatives of the Arctic genus *Pleustes*. It differs from *Pleustes* only in the well-developed squamiform plate on the ischium of the maxillipeds, and in the gnathopoda being slender and more or less chelate. In the general appearance of the species, however, there is a very perceptible difference.

1. *Panoplœa spinosa*, n. sp. (Pl. I. fig. 2.)

Cephalon produced into an acute rostrum. Pereion broad, smooth, the dorsal margins of the last segment and of the first two of the pleon produced posteriorly into two spines. Coxæ of the gnathopoda narrow, but deep. Eyes reniform, pale reddish in colour. Superior antennæ longer than the inferior. Both pairs of gnathopoda very slender: first chelate, ischium and carpus long, propodos with a mobile finger articulating at some distance from its setose extremity; second pair nearly chelate, basos very long, propodos fringed with simple hairs on its inferior margin, dactylos articulating almost as in first pair. Pereiopoda increasing somewhat in size posteriorly, squamiform plates of the basa of the last three pairs toothed on their posterior margins. Three posterior pairs of pleopoda subequal; rami of the penultimate pair unequal. Telson subquadrate; extremity slightly excavate.

Colour varying from light to dark brown, thickly covered with black stellate markings. Length 0.45 inch.

Several specimens taken in Dunedin Harbour, in 4-5 fathoms.

2. *Panoplœa debilis*, n. sp. (Pl. I. fig. 3.)

Coxæ less developed than in *P. spinosa*. Pereion tumid; pleon slender, its first two segments and last of pereion produced on their postero-dorsal margins into spines. Cephalon produced into a very short rostrum. Eyes circular, black. Superior antennæ nearly as long as the body, rather longer than the inferior; peduncle very short. Gnathopoda feeble, subchelate: first pair small, basos long, fringed with a row of short spines on the anterior margin, propodos long, dactylos small, transverse; second pair similar in form, but very long and slender. Pereiopoda as in *P. spinosa*, but with the margins of the squamiform plates smooth. Telson rounded at the extremity. Colour uniformly light brown; when examined under a low power of the microscope the whole body is seen to be dotted with reddish-brown star-like marks. Length 0.35 inch.

Not uncommon in Dunedin Harbour, in 4-5 fathoms.

Subfam. *PHOXIDES*.Genus *AMPHILOCHUS*, C. Spence Bate.*Amphilochus squamosus*, n. sp. (Pl. I. fig. 4.)

Body broad and thick anteriorly, slender posteriorly. Cephalon depressed anteriorly between the bases of the superior antennæ. Eyes large, deep red in colour; not easily made out owing to the numerous and dense reddish-black spots with which the whole body is covered. Superior antennæ shorter than inferior; peduncle shorter than flagellum, which is seven-jointed and carries two long setæ at the extremity of each joint. (The last joint of the peduncle bears a minute one-jointed appendage.) Inferior antennæ not one fourth as long as body; flagellum slender, longer than the peduncle, smooth. Gnathopoda subequal and similar in form; meros and carpus produced into obtuse lobes, spinous at the extremity; propodos somewhat elongated, with a rounded palm, and a few spines at the point of impingement of the slender falcate dactylos. Pereiopoda slender, subequal. Antepenultimate pleopoda reaching almost to the extremity of the ultimate, smooth; penultimate much shorter, and, together with the posterior (ultimate) pair, having somewhat unequal rami. Length 0.1 inch.

Under a low power of the microscope (a $\frac{2}{3}$) the integument, which is very thin, is seen to be covered with minute scale-like marks and hooks.

Subfam. *GAMMARIDES*.Genus *EUSIRUS*, Kröyer.*Eusirus cuspidatus*, Kröyer, var. *antarcticus*, n. var.

Several specimens of this crustacean were obtained by the dredge in the harbour; but as they differ in a few points from both the generic and specific description as given in the British-Museum Catalogue, p. 154, I think it advisable to separate them as a distinct variety under the name *antarcticus*. In regard, first, to the generic character, the maxillipeds are certainly not unguiculate, the propodos being obtusely pointed and densely clothed at the extremity with hairs, and the dactylos being obsolete; the cephalon also has a small rostrum. In specific characters it differs in the following respects:—The two posterior segments of the pereion are smooth, not produced back into teeth; the cilia on the flagellum of the superior are usually on every third (not second) articulus, which is also produced downwards into a tubercle: the palm

of both pairs of gnathopoda is defined by a double row of hairs, which are alternately very short, and the point of impingement of the dactylos by a fascicle of short stout spines. The length of the largest specimen obtained by me was only 0.35 inch, whereas the Greenland species is said to be $1\frac{1}{4}$ inch long.

Still, after taking all these differences into due consideration, there does not seem to be sufficient reason for separating this southern form specifically from the northern species.

Melita tenuicornis, Dana (*Mæra tenuicornis*, Sp. Bate, *Paramæra tenuicornis*, Miers).

This species is not uncommon in the rock-pools along the coast. The animals are dark slaty grey in colour, very slender and compressed in form, swimming very rapidly. The females are remarkable for possessing a hook-like process on the coxal lamellæ of the fourth pair of pereiopoda, almost exactly similar to that figured and described by Fr. Müller ('Facts for Darwin,' p. 27) as occurring in *M. insatiabilis*.

Genus *MEGAMCERA*, Spence Bate.*Megamæra fasciculata*, n. sp. (Pl. I. fig. 5.)

Dorsal surface of the animal quite smooth. Eyes reniform. Superior antennæ nearly one third as long as the animal; first and second joints of peduncle rather short, subequal, third joint very short; flagellum long, very many-jointed, joints transverse and setose; secondary appendage very minute, one-jointed, and terminated by two or three setæ. Inferior antennæ shorter than superior, very similar in the form of the joints of the flagellum. First pair of gnathopoda with carpus and propodos subequal, and fringed on their lower margin with fascicles of serrated or barbed hairs; propodos broader at distal extremity than at the base, with a rounded projection at the extremity of the lower margin; palm quite transverse; dactylos not quite as long as palm. Second gnathopoda larger; carpus increasing in width, with numerous fascicles of barbed hairs; propodos longer, lower margin with barbed hairs, upper with several transverse rows of simple hairs; palm rounded; dactylos curved. Pereiopoda somewhat increasing in length posteriorly, and with short spines. Posterior pleopoda considerably exceeding the preceding pair. Telson double. Length 0.5 inch.

Numerous specimens taken with the dredge in 4-5 fathoms in Dunedin Harbour; also in rock-pools on the coast both near Dunedin and Christchurch (*Sumner*).

Fam. Corophiidaë.

Genus COROPHIUM, Latr.

Corophium contractum, Stimpson.

I obtained two specimens of this species by the dredge in Dunedin Harbour; and its occurrence in this habitat is interesting, as it was originally described from Japan. The description given in the Brit. Mus. Cat. p. 282, which is evidently copied from that given by Stimpson himself, is so meagre, that I have drawn up the following from my specimens, both of which were adult females.

Body much broader than deep. Eyes small. Superior antennæ rather shorter than inferior; first joint stout, produced on its inferior inner margin into two stout teeth; second equal to it in length, slender; third much shorter; flagellum five-jointed, terminated by a bunch of setæ. Inferior antennæ very strong, about one fourth as long as the animal, with a few strong teeth on their inferior margins on the inside. First gnathopoda small; basos with two long setæ; ischium, meros, and carpus fringed with long setæ; propodos rounded towards the extremity, with a convex palm fringed with short hairs; dactylos curved, as long as the palm. Second gnathopoda larger than first; carpus widely convex on its inferior margin, and, together with the more slender propodos, bearing fringes of long setæ; dactylos four-toothed at the extremity of its lower margin. First four pairs of pereopoda diminishing in length posteriorly, but with the basa progressively widening. Fifth pair very long; basos dilated, fringed with long setæ, which are simple on the anterior, and plumose on the posterior margin. Three anterior pairs of pleopoda short and double-branched; three posterior pairs very short, the last pair reaching slightly beyond the telson, flattened, rounded, thickly covered with short hairs, and bearing a few long setæ. Telson broadly triangular, notched at the apex. Length 0.14 inch.

Otago Institute, Dunedin,
Feb. 10, 1880.

EXPLANATION OF PLATE I.

- Fig. 1. *Paratanais tenuis*, $\times 26$. *a*, first pereopod, $\times 90$; *b*, second pereopod, $\times 90$.
 Fig. 2. *Panoplaea spinosa*, $\times 10$. *a*, first gnathopod, $\times 28$; *b*, second gnathopod, $\times 28$; *c*, telson, $\times 28$.
 Fig. 3. *Panoplaea debilis*, $\times 10$. *a*, telson and pleopoda, $\times 15$.
 Fig. 4. *Amphilocheus squamosus*, $\times 14$. *a*, first gnathopod, $\times 60$.
 Fig. 5. *Megamæra fasciculata*. *a*, first gnathopod, $\times 26$; *b*, second gnathopod, $\times 26$; *c*, posterior pleopoda and telson, $\times 13$; *d*, telson (from above), $\times 20$.

II.—*A Contribution to the Knowledge of the Fish-fauna of the Rio de la Plata.* By Dr. A. GÜNTHER, F.R.S., Keeper of the Zoological Department, British Museum.

[Plate II.]

THE Fish-fauna of the Rio de la Plata and of the large affluents which discharge their waters into that estuary is but little known. On preparing a list of the species described by ichthyologists as occurring in the various parts of this great river-system, I found their number to amount to 153. But so little is known as regards the distribution of the species within the main river and its tributaries that that list utterly failed to fulfil the purposes for which it was drawn up, viz. to elucidate the degree of affinity between the Uruguay, Parana, Paraguay, and the rivers draining the country east of the Cordilleras, and to demonstrate a transition of the fauna of the lower parts into that of the upper—which latter may be supposed to be very similar to that of the San Francisco, so fully described by Dr. Lütken. Therefore it would have been premature to publish such a list, and I propose to limit the present communication to some notes and descriptions drawn up during an examination of a considerable collection of fishes received by the British Museum from Mr. E. White of Buenos Ayres. As a part of these species are identical with those received from the 'Challenger' expedition, I have thought it useful to supplement these notes by adding the names of the fishes obtained from the latter source, full descriptions being given in my "Report on the Shore-fishes" procured during that voyage; they are marked in the following notes by the letters *Ch*. The majority of the fishes enumerated in this paper belong to the fauna of the Rio de la Plata proper and of the lowermost portion of the Parana.

CHONDROPTERYGIANS.

1. *Mustelus vulgaris*, M. & H.
2. *Raja platana*, Gthr. [*Ch*.]
3. *Raja microps*, Gthr. [*Ch*.]
4. *Trygon hystrix*, M. & H.

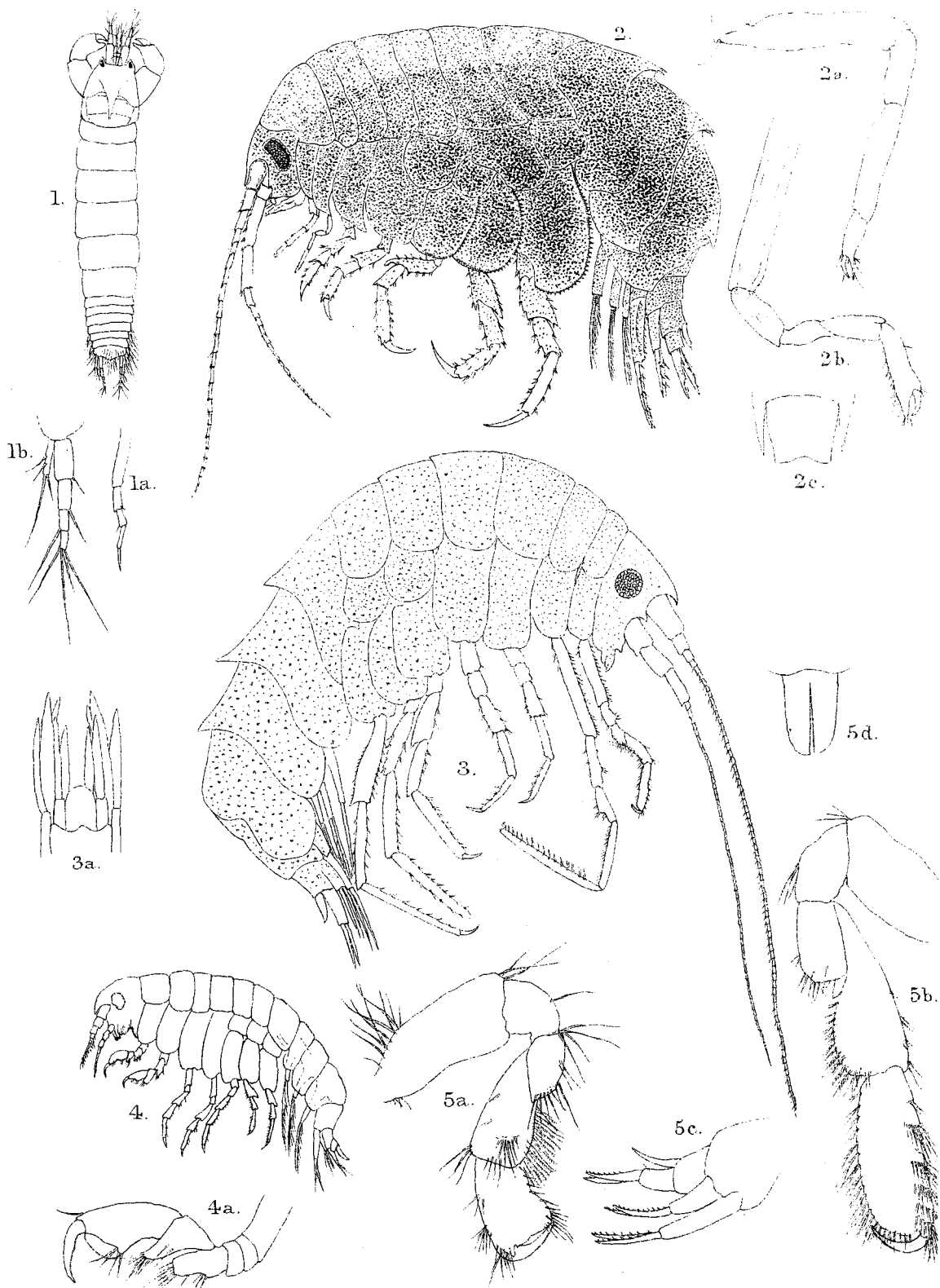
I believe that authors have confounded several species under this name. The true *Trygon hystrix* of the Rio de la Plata has a large eye, the longitudinal diameter of which is two thirds of the width of the cartilaginous space between the eyes; the spiracles are very large, three times the size of the eye; and the tail is considerably longer than the body,

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