XI.—THE FAUNA OF BRACKISH PONDS AT PORT CANNING, LOWER BENGAL.

Part V.—Definition of a New Genus of Amphipoda, and Description of the typical Species.

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AMPHIPODA GAMMARIDEA.

Family Gammaridæ.

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Quadrivisio, n. g.

Eyes four, separate, well developed. First antennæ the shorter, with elongate accessory flagellum. Upper lip with rounded distal border. Mandibles with slender palp, the second joint longer than the first, but not longer than the third. First maxillæ having the inner plate fringed with numerous setæ, the second joint of the palp large. The second maxillæ fringed along the inner margin of the inner plate. Gnathopods subchelate, first pair small, second very large in the male, small and differently constructed in the female. Third uropods much produced, the rami subequal, foliaceous. Telson small, cleft to the base.

By the character, though not by the number, of its eyes, the species for which this genus is instituted, appears at present to be unique. In the Ampeliscidæ four eyes are common, but they are externally simple. In the Synopiidæ and Tironidæ there are species with four eyes, but in both cases the lateral pair are minute, and in *Synopia* the dorsal pair coalesce at the top of the head. In *Hirondellea trioculata*, Chevreux, the number is definitely only three, the dorsal breadth of the head being occupied by one large oval eye, not as in the present instance, finding room for two well separated organs of vision to supplement the fully developed lateral pair.

In other respects the genus has characters already known in the family Gammaridæ, though not in precisely the same combination. The third uropods resemble those in *Megaluropus*, Norman, a genus in several other features very distinct from the present. Sexual difference is here marked by the smaller size of the female and characters affecting the antennæ as well as the gnathopods.

Quadrivisio bengalensis, n.sp.

(Plate VII.)

Head much longer than first segment of peræon, rostral projection minute, ocular lobes rounded. Second and third side-plates rather deeper than first and fourth, the fourth excavate behind for the anterior margin of the bi-lobed fifth. Postero-lateral angles in the large pleon segments 1—3 produced into a very minute tooth. The fourth and one or two other of the pleon segments carry on the hind margin a widely spaced pair of denticles, very small and difficult to observe. The telson is small, not so long as broad, divided to the base, each lobe having several little spines down the inner margin, and some of those round the apex close-set.

Eyes dark, placed near the margin of the head, all with numerous lenses, the lateral pair rounded, the dorsal pair crescent-shaped, with the concavity in front.

First antennæ.—First joint rather stout and long, second much thinner, in male longer than the first, in female subequal to it; third joint small, flagellum nearly as long as peduncle, having in the male more than twenty joints, the long and slender accessory flagellum ten-jointed.

Second antennæ.—Peduncle very elongate, especially in the male, gland-cone prominent, fifth joint in male considerably longer than the long fourth joint, both slightly curved; in the female the fifth joint straight, not longer than the fourth, the flagellum shorter than the peduncle, attaining the number of 17 joints, which is slightly exceeded in the other sex.

Mandibles.—Cutting edge six-dentate, accessory plate stronger on the left than on the right mandible, spines of spine row numerous, molar strong, palp slight as in *Melita obtusata* (Montagu) and, among the Atylidæ, in *Nototropis swammerdamei* (Milne-Edwards); the third joint slightly longer than the second, tipped with two long setæ.

First and second maxillæ.—These show a remarkable resemblance to those of *Ceradocus rubromaculatus* (Stimpson), and present the same difficulty in counting the spines on the outer plate of the first pair, which are not fewer than nine, but may be eleven.

Maxillipeds.—Outer plate not reaching end of palp's long second joint. The third joint of the palp appears to be less elongate in the female than it is in the male.

First gnathopods.—The fifth joint is considerably larger than the sixth, strongly fringed on and near the hind margin with groups of spines planted on the inner surface; the sixth joint oblong oval, with scale-like spinules along the hind margin, and seven rows of spines on the inner surface adjacent to the front margin, the palm very short transversely rounded, not overlapped by the small finger.

Second gnathopods.—In the male the fourth joint has the hind margin produced to a sharp apex, the fifth joint distally cup-like, not longer than broad, the sixth longer and much broader than the second, with smooth nearly straight front margin, the hind margin slightly setose and denticulate till it meets the very oblique

palm, over which the powerful finger closes, leaving two gaps, a small one near the hinge, a long one near the hind margin, with a squared denticulate process between them. In the female the fifth joint is not cup-like, longer than broad, densely fringed on the hind margin ; the sixth joint is not longer than the second, the hind margin and most of the front carrying numerous spines, the palm spinulose, oblique, leaving no gaps between it and the closed finger.

Peræopods.—The first and second pairs are slender, the fourth joint longer than the fifth or sixth. The third pair is shorter than the fourth or fifth ; in each the second joint is expanded, but more so in the upper part of the last pair, this joint also having its sinuous hind margin rather more strongly serrate than is the case in the third and fourth peræopods. The fingers are not very large, each with a distinct unguis. The branchial vesicles are simple, large in the second gnathopods and first and second peræopods, diminishing successively in the next two pairs. The marsupial plates are narrow.

Pleopods.—These are narrow, with elongate rami, the inner rami of each pair closely contiguous.

Uropods.—The first pair have the peduncles slightly longer than the equal rami, with a strong spine near the base of the outer margin, and two longitudinal rows of spines ; the shorter second uropods have the peduncles about as long as the subequal rami ; the third pair extend back much beyond the second, the elongate oval rami being only a little unequal and fringed with numerous little spines and setules ; this pair is very easily detachable. Length of male, if straightened out, about 12 mm., female considerably smaller.

Locality.—Port Canning, Lower Bengal, brackish pools. The generic name refers to the fourfold organs of vision, the specific name to the province in which Dr. Annandale discovered this notable species.

EXPLANATION OF PLATE VII.

Quadrivisio bengalensis.

n.s. Line indicating natural size of specimen figured in lateral view.

a.s., *a.i.*; *a.i.* ♀. First and second antennæ of male; second antenna of female.

oc. Front of head flattened to show the four eyes.

l.s.; *m.* ♀., *l.i.* ♀; *mx.* 1, *mx.* 2; *mxp.* Upper lip; mandibles and lower lip of female; first and second maxillæ, and maxillipeds.

gn. 1, *gn.* 2; *gn.* 2 ♀; *prp.* 2, 3, 4, 5. First and second gnathopods of male; second gnathopod of female; peræopods, second to fifth, second and fifth incomplete.

T. urp. 3. Telson and third uropod.

The mouth-organs, with part of gn. 2 and the telson, are magnified on a higher scale than the other details, and parts of the mandibles more highly still.