On the Genus Cumanotus.

By

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(See Eliot on *Coryphella beaumonti* in Notes on some British Nudibranchs, *Journ. Mar. Biol. Assoc.*, vol. vii., No. 3, June, 1906, pp. 361–3; and Nils Odhner on *Cumanotus laticeps* in Northern and Arctic Invertebrates, iii. *Opisthobranchia. Kngl. Svenska Vetenskapsakademiens Handlingar. Band* 41, No. 4, 1907, pp. 29, 80, and 101–2).

In describing (l.c.) *Coryphella beaumonti* as a new species, I pointed out that in many important characters it differs markedly from the other known *Coryphellæ*, and might be made the type of a new genus. But I did not create a new genus, thinking it might be well to examine further specimens, both of this animal and of allied forms, before deciding on its place in the classification. In the next year Odhner created (l.c.) the genus *Cumanotus*,* to which *Coryphella beaumonti* is certainly referable, and which is shown by his researches to be well characterized. It is allied to *Coryphella* inasmuch as it has unperfoliate rhinophores, tentacular angles to the foot, a triseriate radula and denticulate jaws; but it also possesses the following special characters: (1) The oral tentacles are very small and connected by a cutaneous fold which runs across the head; (2) there are several (at least, as many as three) rows of cerata in front of the rhinophores; (3) the verge is deeply grooved, and there is a bursa copulatrix, the entrance to which bears on its upper and lower margin a circular pad, armed on the periphery with twelve small cones terminating in hooks.

In the specimen which I dissected, the reproductive organs were much contracted, and I supposed these cones to be an armature on the male genitalia, such as is not uncommon in aeolids; but a dissection of more specimens, as well as an examination of the animals in life, has shown that Mr. Odhner is perfectly correct in describing the arrangement as two pads placed at the entrance of the bursa copulatrix. I have not seen the animals alive myself, but Mr. L. R. Crawshay, who observed their movements in the tanks of the Plymouth Laboratory, writes to me that: "Though in appearance the arrangement suggests

* He says it is from κῦμα, a wave, and νῶτον, back; but if so, would not *Cymanotus* be the more usual form?

that the hooked pads are associated with the ♂ rather than with the ♀ organ . . . at the same time, what was observed in the Laboratory points strongly to the conclusion that they are really ♀ clasping organs. If the organs of the one individual are called A (♂), B (♀), and of the other, X (♂), Y (♀), what was observed was as follows: The two individuals were placed right to right with the complete apparatus of both extended and approximating. The base of A (♂) was grasped laterally by an upward extension (i.e. presumably the pads) on both sides of Y (♀), and the base of X (♂) was similarly grasped by upward lateral extensions of B (♀). In each case a sort of peristaltic movement on the part of B (♀) and Y (♀) occurred. As the grasp of B (♀) and Y (♀) extensions relaxed, the flow of spermatozoa from X (♂) and A (♂) respectively was distinctly visible, while as the grasp of the extensions closed round the base of X (♂) and A (♂), the flow of spermatozoa was checked." As far as I am aware, a female clasping organ of this kind has not yet been recorded among Nudibranchs, but it is possible that in some other genera of aeolids its nature may have been misunderstood.

It is doubtful whether *Cumanotus beaumonti* and *Cumanotus laticeps* are specifically the same. The identity is not improbable, but Odhner's specimens (judging from the figures) had lost all the cerata. *Cumanotus beaumonti* is remarkable for having a short truncated body and extremely long snaky cerata, but when these have fallen off the Plymouth specimens look very like Odhner's figures, and have the margin of the foot similarly expanded. There may also be differences in the denticulation of the jaws and lateral teeth. But these are slight divergences, and hardly of specific value unless associated with others. Still, until a complete specimen of the Norwegian form has been examined it is safer not to unite the two species, and provisionally I think the genus may be tabulated as follows:—

Cumanotus, Odhner, 1907.

1. *C. beaumonti* (Eliot), 1906.
2. *C. laticeps*, Odhner, 1907.

If the species are united the name *beaumonti* has priority.

I hope to publish figures of the living *C. beaumonti* in a supplement to Alder and Hancock's *British Nudibranchiate Mollusca*, which will soon be issued by the Ray Society.

C. laticeps is known by four specimens obtained at Sörvær, in the extreme north of Norway, in 5–10 fathoms of water. *C. beaumonti* has been captured at Plymouth, twice in Barn Pool and on several occasions in Jennycliffe Bay, at a depth of 2–5 fathoms, and though far from common, appears to be a resident and not merely a visitor.