

gelatinous points" were in reality tentacles. This opinion is strengthened by the fact that the presence of denticles in front of the eyes, which are so usual in species of *Pterotrachea*, have not since been observed in any form of *Firoloida*.

D'Orbigny was the next to describe two animals belonging to this genus, which he named *Firola* (*Cerophora*) *gaimardii* and *Firola* (*Cerophora*) *lesueurii*. The figures of these two so-called species, which were considered (probably correctly) identical by Souleyet, appear to be rather fanciful, judging by the more accurate illustrations of Eydoux and Souleyet and Macdonald, and an examination of the Challenger and other specimens, both *Firoloida gaimardii* and *Firoloida lesueurii* exhibit tentacles and doubtless were males.

Souleyet in the Voyage of the "Bonite" next described an animal which he identified with the *Firoloida desmarestii* of Lesueur. This also was a female without tentacles. He also described and figured a second example under the name *Firoloida lesueurii*, which was a male and provided with tentacles.

In 1855 Troschel characterised two new species which he believed to represent a new genus, and which he styled *Firolella*, considering it distinct from *Firoloida* in having no tentacles. It seems to me certain that he never consulted Lesueur's account of that genus, but must have based his opinion upon the writings of d'Orbigny and Souleyet. Lesueur distinctly mentions the absence of tentacles in his diagnosis of the genus.

The first of Troschel's species, *Firolella gracilis*, was a female, the second, *Firolella vigilans*, he supposed to be a male. In the latter I should have expected the presence of tentacles, but according to Troschel none existed. Their absence, I think, might possibly be due to the very young state of the animal, which was less than a quarter of an inch in length. They might not have been developed in an animal apparently so young,¹ or even have escaped observation on account of their minuteness.

The next representation of a species of *Firoloida* is that given by Macdonald, who describes and figures a male with tentacles and a sucker on the ventral fin, a feature not previously noted. Fewkes has since recorded the presence of a fin-sucker in females of *Firoloida lesueurii*. In the Challenger specimens and others which I have examined belonging to this genus, the males only have this organ, and also possess tentacles, the females on the contrary being destitute of both.

From these remarks it will be observed that *the presence or absence of tentacles is presumed to be a sexual and not a specific or generic character.*

Formerly the possession or want of a sucker on the fin was regarded as indicative of sex in the species of *Pterotrachea*, and a similar result might have been expected with regard to *Firoloida*. In both instances, however, it has been demonstrated by Paneth and Fewkes that the presence or absence of this character is not constant in either

¹ Krohn also regards this as a very young, recently metamorphosed, example of a *Firoloida* or *Pterotrachea*.