

## Note on a British Cephalopod—*Illex eblanæ* (Ball).

By

**William E. Hoyle,**

Keeper of the Manchester Museum.

A SHORT time ago I received from my friend Mr. J. T. Cunningham a Cephalopod which had been taken by a trawler in the neighbourhood of Plymouth, with the remark that it appeared to fit well with the description of *Ommastrephes eblanæ* (Ball) as given by Forbes and Hanley,\* and that it undoubtedly belonged to the genus *Illex* of Steenstrup.

I have compared the specimen with all the examples of the genus *Illex* at my disposal, and satisfied myself that Mr. Cunningham's surmise was correct; and since this species has generally been referred to the category of forms inadequately described,† I have much pleasure in acceding to the suggestion that I should contribute a few notes upon it to this Journal.

That the Cephalopod belongs to the genus *Illex* was at once obvious from (1) the smooth siphuncular recess, (2) the absence of fixing pads and cushions at the base of the tentacular club, and (3) the absence of a membranous wing on the third pair of arms. Two species of this genus have been hitherto described, *Illex coindeti* (= *Ommastrephes sagittatus*, *auctorum plurimorum*) from the Mediterranean, and *Illex illecebrosus* from the American coast. Both these have the horny ring of the large tentacular suckers either smooth or with broad truncated teeth, and the small suckers at the end of the tentacular club arranged in eight rows.‡ In the example from Plymouth the horny ring of the large tentacular suckers is armed with acute teeth, separated by interspaces broader than the bases of the teeth themselves, and the terminal tentacular suckers are in four (rather irregular) rows.

On referring to the definition of *Ommastrephes eblanæ* as given

\* Brit. Moll., iv, p. 235, 1853.

† Steenstrup, *Ommatostrephagtige Blæksprutter*, p. 97 (27); Hoyle, "Challenger" Cephalopoda, p. 33.

‡ Steenstrup, loc. cit., p. 91 (21).

by Forbes and Hanley, we find it distinguished from *O. sagittatus* (*Illex coindetii*) by two characters: (1) body elongated in the latter, proportionately short in the former; (2) terminal tentacular suckers in many (about eight) rows in the latter, in four rows in the former; (3) the fin of *O. sagittatus* is rhomboidal, of *O. eblanæ* more elliptical. The character first mentioned is not specific but sexual, as may be seen from Verany's beautiful figures of the Mediterranean form; \* whilst as regards the two latter, the Plymouth specimen agrees with the description of *O. eblanæ*.

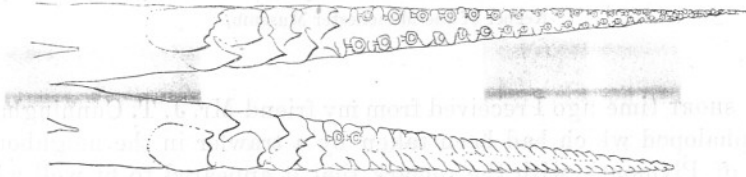


FIG. 1.—Ventral arms of *Illex eblanæ*, to show the hectocotylisation.

Among the specimens with which I have been able to compare it are two Irish examples, labelled *Ommastrephes eblanæ*, and presumably named by comparison with Ball's type, which I understand still exists in the museum of Trinity College, Dublin.†

It resembles these in all essential characters, and hence there can be no doubt that it belongs to the species which we must now call *Illex eblanæ* (Ball), whose synonymy and definition will be as follows:—

*ILLEX EBLANÆ* (Ball).

1841. *LOLIGO EBLANÆ*, Ball. Proc. Roy. Irish Acad., vol. i, p. 363, figs. 1—7.  
 1849. — — Gray. Brit. Mus. Cat., p. 65.  
 1853. *AMMASTREPHES EBLANÆ*, Forbes and Hanley. Brit. Moll., vol. iv, p. 235, pl. sss, fig. 2.  
 1856. *LOLIGO EBLANÆ*, Thompson. Nat. Hist. Ireland, vol. iv, p. 270.  
 1880. *AMMASTREPHES EBLANÆ*, Steenstrup. Ommatostrephagtige Blæksprutter, Oversigt k. Dansk. Vid. Selsk. Forhandl., p. 97 (27).

*Fin* very broadly rounded, sub-elliptical (see figs. 2, 3); *tentacular*

\* Moll. médit., Céph., pls. xxxi, xxxii, 1851.

† Since the above was in type my friend Dr. Scharff, to whom I am indebted for much help regarding the Irish specimens, informs me that he has compared my description of the Plymouth specimen sent to him for the purpose with Ball's type. "This has," he says, "been very much knocked about, and could not be taken out of the bottle. It is a much smaller specimen, . . . and . . . the fin was more elongated in the type," but that otherwise the description fitted.

*club* with the central suckers about four times as great in diameter as the laterals, and provided with very acute teeth, separated by interspaces somewhat larger than the breadth of the tooth at its base; terminal suckers in four rows.

*Habitat*.—Britain: Dublin Bay (Ball), Antrim (Museum of Science and Art, Dublin, *vide* Scharff); North Sea (Captain Gray); Plymouth (Marine Biological Laboratory); Mediterranean: Naples (Zoological Station).

Among the material examined were four males, which exhibited the interesting form of hectocotylistation I now propose to describe

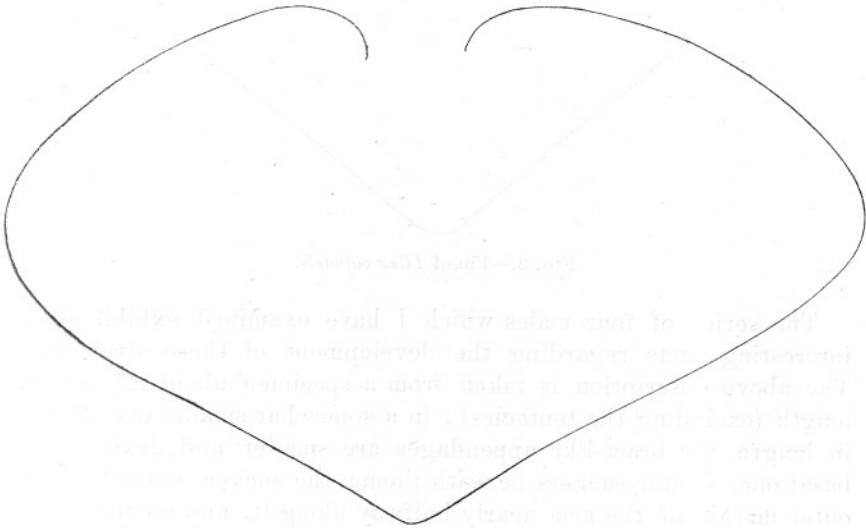


FIG. 2.—Fin of *Illex eblanæ*.

(see fig. 1). The alteration affects both arms symmetrically in their basal portions, but the right arm only is modified to the tip. About 2 cm. from the base of each arm, instead of a sucker, is a flattened bract-like appendage, growing out from a broad base. Its distal margin is slightly notched, and at the inner extremity bears a sharp tooth; at the outer margin it curves into the general surface of the arm. On the outer side of the oval surface of the arm this appendage is succeeded by three similar ones, gradually decreasing in size. On the inner margin of the arm, alternating with them, are three conical teeth, also directed towards the tip of the arm. The points of all these teeth are tough, and feel almost cartilaginous. Beyond this the left arm presents the normal arrangement of suckers, but the right arm has only two suckers placed near the inner margin; on the outer margin is a series of conical tubercles, ex-

tending the whole way to the tip and gradually diminishing in size. The inner margin is occupied by a series of slight swellings, some of the proximal ones of which look as though suckers had fallen from them.

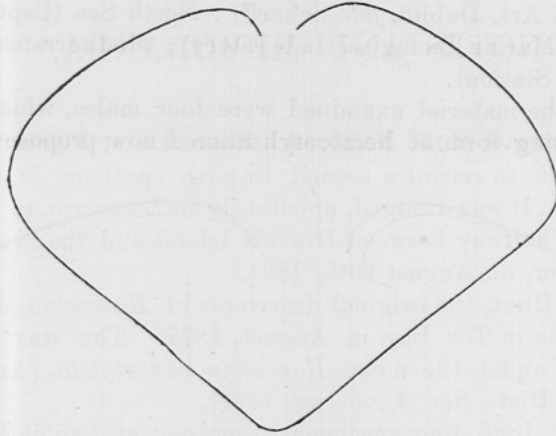


FIG. 3.—Fin of *Illex coindetii*.

The series of four males which I have examined exhibit some interesting facts regarding the development of these structures. The above description is taken from a specimen about 27 cm. in length (excluding the tentacles); in a somewhat smaller one, 20 cm. in length, the bract-like appendages are smaller and (except the basal one) shelter suckers beneath them: the suckers extend on the outer margin of the arm nearly halfway along it, and on the inner margin along three quarters of its length before they give place to the conical or rounded prominences.

In two still smaller specimens (about 10 cm. long) both series of suckers are present up to the tips of the arms, and the bract-like appendages are just beginning to appear at the bases of from three to five proximal suckers. It would appear, therefore, that on these hectocotyliised arms suckers are normally developed, and then gradually disappear as the animal approaches maturity.