

Family VI. OCTOPODIDÆ, d'Orbigny (*em.*).

## OCTOPIDÆ, d'Orbigny.

The subdivision of the Octopoda into smaller groups presents considerable difficulties: Steenstrup and others following him have characterised two considerable groups, according as the suckers are in a single or in several series,<sup>1</sup> but the importance of this character seems to me overrated. In the first place, the character is one rather of degree than of kind, as may be readily seen from the facts that the proximal suckers in the arm of an *Octopus* are almost always arranged in a single series, and that the number of suckers so disposed is greater or less according as the arm is bent outwards or inwards. This circumstance and the arrangement of the suckers, not opposite in pairs but in a zigzag line, at once suggest that the two modes of disposition may pass one into the other (see also pp. 76, 78).

Furthermore, glancing at the results of this method of classification, it is seen that *Eledone* and *Octopus* are separated from each other, and that the former is united with *Cirroteuthis* and the latter with *Tremoctopus* and *Argonauta*. It is not necessary to recapitulate the points of likeness between the first two genera nor those in which they severally differ from the forms with which they are thus brought into contact. Indeed, I do not for the present feel disposed to place *Octopus* and *Eledone* in separate families at all, the only conspicuous internal difference between them being that in the latter the eggs are attached each by a separate stalk to the wall of the ovary.<sup>2</sup> If it were necessary to break up the Octopodidæ, I should propose rather to separate from them the soft semi-gelatinous forms, such as *Bolitæna* and *Japetella*, which in this peculiar constitution of their bodies resemble the Alloposidæ and Cirroteuthidæ (though this may indicate merely analogy not homology), but our knowledge of them is at present too fragmentary to render such a course advisable.

*Octopus*, Lamarck.

This genus continues much the same in general scope as when defined by Lamarck, the only considerable loss it has sustained being the removal of the genus *Eledone*.

There is perhaps no other group which presents so many difficulties to the systematist, for no two authorities seem agreed as to the characters which are to be relied upon for the purpose of defining species; it will therefore be advisable to say a few words regarding the principles which have been followed in the present Report.

The general form and proportions of the body are of some value, though not of much, for the whole consistency is soft, there is no firm internal skeleton to aid in giving a determinate outline, and any one who has watched a living *Octopus* and seen the mantle

<sup>1</sup> Overblik, p. 69; Fischer, *Man. de Conch.*, p. 331.

<sup>2</sup> Grant, *Edin. New Phil. Journ.*, vol. ii. p. 317, 1827; and Brock, *Morphol. Jahrb.*, Bd. vi. pp. 283, 284, 1880.