The whole group of chelæ, with their almost endless modifications, may be divided into two subgroups according to whether the two ends of the spicule are equal (Fig. V., 5 ; Fig. VI., 2, 2*a*) or unequal (Fig. V., 6 ; Fig. VI., 1, 1*a*); to the former class the name *isochelæ* is applied, and to the latter the name *anisochelæ*.

The most complex form of chela as yet known to us appears to be that of *Melonanchora elliptica*, figured and described by Mr. Carter.[1] Not infrequently the anisochelæ are found in "rosettes" (Pl. XVII. fig. 7), all adhering together by their small ends, which are attached to a central, granular (?) mass; no satisfactory explanation has, so far as we are aware, as yet been given of this state of things, but possibly the rosettes are comparable to the toxodragmata and sigmadragmata, which we have described above, and originate like them by the development of a number of spicules in one and the same cell. Mr. Carter also records this phenomenon in the case of the isochelæ of *Desmacidon titubans*, Schmidt.[2]

In the embryo of *Esperella mammiformis* we have succeeded in tracing the development of the chelæ in a very interesting manner. This developmental history throws an important light on the relationships of the chelæ to other forms of microsclera. In the earliest stage observed the spicule consists of a simple, slender shaft, very slightly curved in the same direction at each end, and also pointed at each end. It appears that the two pointed extremities then curve sharply inwards so as to form each an acute angle with the shaft, thereby giving to the spicule the appearance of a simple sigma with short, sharply recurved hooks and almost straight shaft. At first, as already noted by Carter,[3] the two ends are equal, but this condition does not persist for long. The teeth or palms are now developed ; the central or anterior palm is formed by a delicate, oval, flattened outgrowth from the end of the hook (possibly also in part from the sides of the hook), lying in a plane at right angles to the plane of the original, simple, hooked shaft. The lateral palms are formed as lateral outgrowths from the two ends of the straight portion of the shaft. The hooks of the original spicule form the median falces and tubercles of the adult. Thus it appears that the chelate spicules develop from sigma-like forms by the formation of flattened outgrowths or buds at the two ends ; hence we are justified in grouping sigmata and chelæ in the same category. In *Esperella mammiformis* the lateral outgrowths of the shaft (lateral palms) remain connected with the shaft even in the adult, the spicule (Pl. XV. figs. 18, 18*a*) being palmate; but in other species, as already noted, they often become cut away from the shaft and form distinct teeth (*e.g.*, *Cladorhiza tridentata*, woodcut, Fig. VI., 1, 1*a* ; Pl. XXI. fig. 20); new lateral outgrowths may then be developed on the shaft, and these may again become cut away as teeth (*e.g.*, *Meliiderma stipitatum*, Pl. XXI. fig. 14), or

[1] *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xiv. p. 212, pl. xiii. figs. 9, 10, 11, 12.

[2] *Ann. and Mag. Nat. Hist.*, ser. 5, vol. ix. p. 298, pl. xii. fig. 24, *h*. In this paper will be found a good deal of interesting information concerning the chelæ.

[3] *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xiv. p. 102, pl. x. fig. 13.