

shown in the figure. Usually, at any rate, the spicule is more or less contort, the two hooks lying in two different planes.

4. *Chelæ* (woodcuts, Fig. V., 5, 6, and Fig. VI.); these are the most complex of all the microsclera, and present us with a considerable range of variation in detail. The fundamental shape will be best understood from the accompanying figures, so we shall make the description short.

It will be seen that each spicule consists of a more or less curved "shaft" (*s*), bearing at each end a variable number of sharply recurved processes (*at*, *at'*, *lt*, *lt'*) which may be conveniently spoken of as the "teeth," or, when they are broad and much expanded, the "palms." Each tooth or palm is connected with the shaft by a buttress-like projection of the latter, called by Mr. Carter¹ the "falx," and generally itself consists of a thin, flattened, oval lamella, so transparent as to be very difficult to make out. The terminal portion of the falx, upon which the tooth or palm directly rests, has been called by Mr. Carter the "tubercle" (*t*, *t'*); it is generally very conspicuous through the transparent lamella. Very commonly there is a single central or anterior tooth (*at*, *at'*), and two lateral teeth (*lt*, *lt'*) placed one on each side of it. When the teeth are comparatively narrow and the two lateral teeth are completely cut away from the shaft, as in Fig. VI., 1, 1*a*, the spicule is said to be "tridentate;" when, however, they are broad (forming palms) and the lateral palms remain adherent to the shaft for their entire length, the central palm alone being completely separated, as in Fig. VI., 2, 2*a*, the spicule is said to be "palmate."

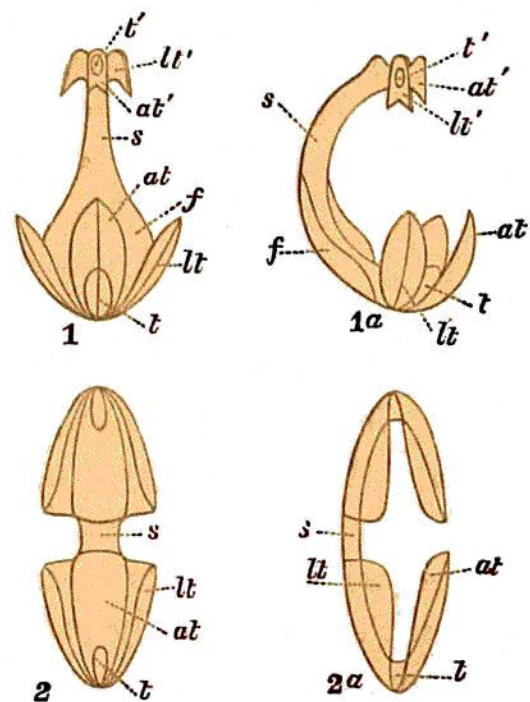


FIG. VI.—Structure of the chelæ. 1, tridentate anisochela, front view; 1*a*, same, side view; 2, palmate isochela, front view; 2*a*, same, side view; *t*, *t'*, tubercle; *at*, *at'*, anterior tooth or palm; *lt*, *lt'*, lateral tooth or palm; *s*, shaft; *f*, fimbria.

Numberless gradations exist between these two types, depending upon the extent to which the incisions between the lateral teeth and the shaft are carried, and upon the breadth of the teeth or palms. The distinction between the two types is, as has already been pointed out, a purely artificial one, but for the sake of convenience it may be retained. In some species (e.g., *Chondrocladia concrescens* (?)) there may be as many as seven teeth completely cut away from the shaft and from one another (Pl. XXI. fig. 12), while in one species (*Sideroderma navicelligerum*) there is a very remarkable little chela (Pl. IX. fig. 8) in which there is only a single (the median) tooth at each end. The shaft itself is frequently expanded laterally into wing-like processes, or fimbriæ (woodcut, Fig. VI., *f*), which may extend along its whole length, but are more generally confined to one (or the two) ends.

¹ *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xiv. pp. 208, 209.