

the nucleus is filled up by protoplasm, containing numerous spherical vacuoles of equal size (*v*); each vacuole encloses a small, dark, fat-granule. The large nucleus (*n*) is either spherical or lenticular, and more or less depressed in the main axis; its diameter is usually about half as great as that of the enclosing capsule, 0·05 to 0·15, rarely less or more; it contains, enclosed in a clear mass, numerous dark, roundish or oblongish nucleoli (*l*).

Numerous preparations of Aulacanthida exhibited a central capsule with two nuclei (Pl. 101, fig. 6), or a calymma with two central capsules (Pl. 104, figs. 1, 3); so that the process of propagation by self-division, observed already in many different PHÆODARIA, seems to happen very frequently in the Aulacanthida. The voluminous phæodium is usually about twice or three times as large as the central capsule, and covers its oral or anterior half; the colour of the roundish phæodella composing it is sometimes more green or brown, at other times more blackish. The roundish alveoles, which fill up the rather firm jelly of the calymma, exhibit nearly the same shape as in the common *Thalassicolla nucleata*. The surface of the calymma is usually protected by the dense veil of tangential needles, and often forms conical or tent-shaped elevations around the bases of the piercing radial tubes (Pl. 102, fig. 1).

Synopsis of the Genera of Aulacanthida.

Radial tubes simple, without lateral and terminal branches.	{	Surface of the calymma naked, without tangential needles,	665. <i>Aulactinium</i> .
		Surface of the calymma covered by a veil of tangential needles,	666. <i>Aulacantha</i> .
Radial tubes without lateral branches, but with a verticil of terminal branches.	{	Terminal branches simple,	667. <i>Aulographis</i> .
		Terminal branches forked or again ramified,	668. <i>Auloceros</i> .
Radial tubes with lateral and with terminal branches.	{	Lateral branches verticillate,	669. <i>Aulospathis</i> .
		Lateral branches irregularly scattered, not verticillate,	670. <i>Aulodendron</i> .

Subfamily 1. AULACTINIDA, Haeckel.

Definition.—Aulacanthida without external veil of tangential needles on the surface of the calymma.

Genus 665. *Aulactinium*,¹ n. gen.

Definition.—Aulacanthida without a veil of tangential needles, with simple radial tubes, which bear neither lateral nor terminal branches.

¹ *Aulactinium* = With radial tubes; αὐλός, ἀκτίς.