

*Synopsis of the Genera of Thalassicollida.*

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|--|---|--|-----------|---------------------------|
| A. Alveoli neither within nor without the central capsule.                               | { | Nucleus spherical (sometimes ellipsoidal), not branched, | . . . . . | 1. <i>Actissa</i> .       |
| B. Numerous large alveoli within the central capsule (not in the calymma).               | { | Nucleus spherical,                                       | . . . . . | 2. <i>Thalassolampe</i>   |
|  |   | Nucleus branched or covered with radial sacs,            | . . . . . | 3. <i>Thalassopila</i> .  |
| C. Numerous large alveoli without the central capsule, within the jelly-veil or calymma. | { | Nucleus spherical,                                       | . . . . . | 4. <i>Thalassicolla</i> . |
|  |   | Nucleus branched, or covered with radial sacs,           | . . . . . | 5. <i>Thalassophysa</i> . |

Genus 1. *Actissa*,<sup>1</sup> n. gen.

*Definition*.—Thalassicollida with simple spherical nucleus, without any alveoli (either within or outside the central capsule).

The genus *Actissa* is the most simple and typical form of all Radiolaria, and may be regarded as the common ancestral form of the whole class. The spherical body is composed of a simple spherical capsule and a concentric spherical calymma or jelly-envelope. Neither the former nor the latter contains alveoli. The central capsule possesses a strong membrane perforated by small pores, and contains in the intracapsular sarcode numerous small pellucid vacuoles, and in its middle a simple, concentric, spherical nucleus (often with some nucleoli); sometimes also one or more oil-globules. The extracapsularium forms a soft, voluminous, structureless calymma or enveloping jelly-sphere, perforated by the numberless, fine pseudopodia, which radiate outwards from the matrix or the thin granulated sarcode-layer, surrounding the capsule. Often (but not constantly) xanthellæ or yellow cells are scattered in it. *Actissa* differs from the following skeletonless genera in the absence of all alveoli; it has neither intracapsular alveoli (like *Thalassolampe*) nor extracapsular alveoli (like *Thalassicolla*). The first observed species of this genus is that which I found in 1866 at the Canary Islands, *Actissa prototypus*; the second is that which Hertwig accurately described in 1879, from the Mediterranean (Messina), *Actissa primordialis*; the third I observed in 1881 at Ceylon, frequent and sporiparous, *Actissa princeps*. A fourth species (*Actissa radiata*) exhibited a distinct radial segmentation of the capsule-contents. These four species are quite spherical. Six other species, occurring in different preparations from the Challenger, are distinguished by modifications of the spherical capsule-form and may represent three different subgenera (or, perhaps better, genera?)—*Actiprunum* ellipsoidal, *Actidiscus* lenticular, *Actilarcus* lentelliptical; perhaps these are the ancestral forms of the three sections: Prunoidæ, Discoidea, Larcoidea.

<sup>1</sup> *Actissa* = Radiant, *Actis*.