

without ring and dimple. Four edges of the spines smooth; their length scarcely equals half the shell-radius.

*Dimensions*.—Diameter of the shell 0·15; length of the spines 0·03, of the tubuli 0·08.

*Habitat*.—South Atlantic (east coast of Patagonia), Station 318, surface.

### Subfamily 3. CENOCAPSIDA, Haeckel.

*Definition*.—Radial spines completely reduced and absent; shell cavity therefore simple; shell pierced by twenty perspinal pores (each placed in the direction of one radial spine which has disappeared).

#### Genus 348. *Cenocapsa*,<sup>1</sup> n. gen.

*Definition*.—Sphærocapsida without radial spines, with simple cavity of the spherical shell, which is pierced by twenty perspinal holes (each one placed in the radial direction of one spine which has disappeared).

The genus *Cenocapsa* comprises only a single species, but is very remarkable in that it is the most reduced form among all Sphærocapsida. The twenty radial spines of the Icosacantha have perfectly disappeared by complete retrograde metamorphosis, and the only evidence of their former existence (in the ancestral genus *Porocapsa*) are the twenty perspinal holes remaining in the shell. *Cenocapsa* is the only form of ACANTHARIA which possesses no radial spines.

#### 1. *Cenocapsa nirvana*, n. sp. (133, fig. 11, 11a).

Perspinal holes four-lobed, cruciform, with four short triangular teeth between the four lobes of the cross. Poruli of the shell in the bottom of an elliptical dimple surrounded by an elevated ring.

*Dimensions*.—Diameter of the shell 0·2 to 0·3, of the aspinal holes 0·02.

*Habitat*.—North Pacific, Station 248, surface.

### Family XL. DORATASPIDA, Haeckel (Pls. 134–138).

*Dorataspida*, Haeckel, 1862, Monogr. d. Radiol., p. 412.

*Definition*.—ACANTHARIA with simple spherical lattice-shell, composed of the branched apophyses of twenty equal radial spines meeting in its centre and disposed according to the Müllerian law of Icosacantha. Central capsule spherical, enclosed in the fenestrated shell.

The family *Dorataspida* is the most important family of the Acanthophracta, or of those ACANTHARIA in which the radial spines are connected by a complete extracapsular lattice-shell. The *Dorataspida* represent probably the ancestral

<sup>1</sup> *Cenocapsa* = Hollow capsule; κενός, κήψα.