

circular pores, three to four times as broad as the bars. All following chambers cap-like, tapering towards both poles, with more irregular, roundish pores, with a circle of ten to twelve larger square pores at the base. Middle cortical shell with smaller roundish pores. Outer cortical shell with larger polygonal, quite irregular pores. Both medullary shells lenticular. Polar tubes conical or cylindrical with conical apex, of very variable length, sometimes not longer than one internal chamber, at other times twice to four times as long (in the figured specimen not fully developed, as also a part of the shells). Differs from *Zygocampe chrysalis* only by the production of polar tubes.

*Dimensions*.—Length of the six-chambered inner cortical shell 0·25, of the middle 0·3, of the outer 0·35; greatest breadth of the first 0·07, of the second 0·11, of the third 0·14; other measures the same as in *Zygocampe chrysalis*; length of the tubes 0·05 to 0·12 or more.

*Habitat*.—Pacific, central area, Stations 270 to 274, depth 2350 to 2925 fathoms.

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Suborder V. DISCOIDEA, Haeckel (Pls. 31–38, 41–48).

*Discida* vel *Discoidea*, Haeckel, 1862, Monogr. d. Radiol., pp. 56, 476.

*Discoida*, *Discoidea*, *Discida*, Haeckel, 1878, Protistenreich, p. 103.

*Definition*.—SPUMELLARIA with discoidal or lenticular central capsule (often with radial prolongations, rarely allomorphic); with discoidal or lenticular fenestrated siliceous shell (often with radial spines or fenestrated arms, rarely allomorphic). Growth reduced or diminished in the direction of one dimensive axis.

The section *Discoidea* comprises those SPUMELLARIA in which the fenestrated shell is more or less discoidal or lenticular, flattened or compressed in the direction of one axis. The geometric fundamental form of the latticed shell, which in the *Sphæroidea* is a sphere, here becomes a flat disk, like a medal, or a biconvex lens, sometimes also a biconcave lens. The *Discoidea* can be derived from the *Sphæroidea* by shortening of one axis. This shortened vertical axis is the main axis of the disk; both its poles are constantly equal. Perpendicular to this axis is the equatorial plane of the disk by which it becomes divided into equal halves. In the simplest forms of *Discoidea* all axes of this horizontal equatorial plane (all "equatorial axes" or "cross axes") are equal; in the most of the genera and species these cross axes are different, so that rays of stronger growth ("perradii") alternate with rays of weaker growth ("interradii"). The number of these cross axes distinguishable is commonly two to four, rarely more. In the direction of these are developed either radial marginal spines or spongy arms.

The order *Discoidea* was founded in my Monograph (1862, p. 476) as the family "Discida" (*Radiolaria* with flat discoidal or biconvex lenticular shell), comprising the