distribution of these forms, and found the small one (var. *typica*) occurring in all depths, the large one (var. *bathybia*) in depths between 400



Aulographis pandora, Haeckel (about $\frac{2}{1}$). (From Haecker.)

both poles, others only in Antarctic waters; some species live in the surface waters, others between 50 and 400 metres, others between 400 and

1000 metres, others again between 1500 and 5000 From Haecker's metres. report on the Radiolaria of the "Valdivia" Expedition we reproduce some of these species. Protocystis (Challengeria) tridens (Figs. 394, 2 and 3) occurs in the northern and southern cold zones, having been taken as far north Spitsbergen, in the as Norwegian fjords, the Skagerrack, round Greenland, in the Labrador current, and also in Antarctic waters by the "Valdivia"; in Norwegian waters it has been taken in deep water

and 1000 metres; the giant form occurs very rarely in Norwegian fjords.

CHAP.

The Challengeridæ have an egg or lentil-shaped silicious shell of most delicate structure. the aperture being provided with a collar or tubeshaped moulding (see Fig. 394). They occur in all oceans, but sometimes their distribution is very peculiar, for some species live only in abyssal depths under the equator, others at



FIG. 393. Aulacantha scolymantha, Haeckel. a, var. typica ; b, var. bathybia, deep-sea form. (After Haecker, from Steuer.)

up to 50 metres below the surface. *P. swirei* (Fig. 394, 1) has been taken only in the Antarctic from the surface down to a depth of 4000 and 5000 metres. *P. thomsoni* (Fig. 394, 4) belongs to a group of

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