

1. *Phractaspis prototypus*, n. sp. (Pl. 137, fig. 2).

Radial spines cylindrical, thin, pointed; the outer and inner halves of nearly equal size. Each spine bears in its middle part two opposite apophyses, which are simply forked; the four condyles of each spine (or the thickened ends of the fork-branches) are united with the meeting condyles of the neighbouring spines by sutures. Therefore the network of the spherical shell is composed of twenty-two large meshes: two square polar meshes on each pole (*a a a a* and *e e e e*); eight triangular circumpolar meshes (each between two polar and one tropical spine, *a b a* and *e d e*); eight tropical rhomboidal meshes (each between one polar, one equatorial, and two tropical spines: *abcb* and *cdcd*); and four rhomboidal equatorial meshes (each between two tropical and two equatorial spines *c b e d*).

*Dimensions*.—Diameter of the shell 0.1, of the meshes 0.03 to 0.04; breadth of the spines and bars 0.005.

*Habitat*.—Cosmopolitan; Mediterranean (Corfu), Atlantic (Stations 348, 354), Indian Ocean (Ceylon), Pacific (Stations 253, 265, 274), &c., surface.

2. *Phractaspis complanata*, n. sp. (Pl. 137, fig. 1).

Radial spines leaf-shaped, strongly compressed, two-edged, pointed; their outer part longer than the inner. Each spine with two opposite apophyses which are simply forked, therefore with four condyles. The network with forty sutures and twenty-two large meshes, as in the foregoing species. The broad faces of the eight polar spines lie in two meridian planes, of the four equatorial spines in the equatorial plane, of the eight tropical spines in two planes parallel to the latter. The planes of the leaf-shaped fork-branches lie in the spherical face.

*Dimensions*.—Diameter of the shell 0.1, of the meshes 0.02 to 0.03; breadth of the fork-branches 0.012.

*Habitat*.—South Atlantic, Station 343, surface.

3. *Phractaspis condylophora*, n. sp.

Radial spines quadrangular, thin; their outer pyramidal part shorter than the inner. Each spine with four branches, its two opposite apophyses being simply forked. The eighty condyles (or sutural ends of the branches) much thickened, twice to four times as broad as the branches themselves. Network with forty sutures and twenty-two large meshes, as in both foregoing species.

*Dimensions*.—Diameter of the shell 0.12, of the meshes 0.03 to 0.04; breadth of the condyles 0.01.

*Habitat*.—South Pacific, Station 288, surface.

4. *Phractaspis bipennis*, Haeckel.

*Dorataspis bipennis*, Haeckel, 1862, Monogr. d. Radiol., p. 413, Taf. xxi. figs. 1, 2.

*Phractasplenium bipenne*, Haeckel, 1882, Manuscript.

Radial spines very thin, quadrangular; their outer pyramidal part shorter than the inner. Each spine with four bent branches, its two opposite apophyses being simply forked. Eighty