

greyish-yellow, and sometimes irregularly banded with brownish-red patches. The difference in the shape of the plates of the abactinal system readily distinguishes this species from *Dorocidaris papillata*; the ocular plates are broadly triangular, extending to the edge of the anal system, which is covered by a smaller number of plates relatively larger than in *Dorocidaris papillata*. The whole abactinal system is covered by finer granules more closely packed than in that species. The ambulacral system is relatively much narrower, both the poriferous zone and the median interporiferous space. The scrobicular area is scarcely sunken, the coronal plates are not high. Otherwise, the test closely resembles that of the Atlantic *Dorocidaris papillata*, but with less distinct and smaller secondary and miliary tubercles.

The short-headed long-stemmed ambulacral pedicellariæ of *Dorocidaris bracteata* differ from those of *Dorocidaris papillata* in being broadest at the base, supported by a longer pedicel and a comparatively more slender rod (Pl. XLII. fig. 1).

Amboyna, 100 fathoms.

Amboyna, 15 to 25 fathoms.

### *Dorocidaris (Cidaris) papillata.*

*Cidaris papillata*, Leske, 1778, Kl. Add.

*Dorocidaris papillata*, A. Agassiz, 1869, Bull. Mus. Comp. Zool., vol. i.

The collections of the Challenger show that this species has an extensive geographical range both in the Atlantic and Pacific. Its distribution in the Western and Southern Atlantic corresponds with that of *Cidaris tribuloides*; the latter has, however, as yet not been found in the Eastern Atlantic north of the Cape Verde Islands, while, as is well known, *Dorocidaris papillata* is found also far north in the North-Eastern Atlantic. The specimens collected in the Philippine Islands cannot be distinguished from those of the Atlantic. The deep water forms generally resemble the variety I had described as *Dorocidaris abyssicola*. The whole question of the specific characters of *Dorocidaris papillata* having been reopened by the discovery of *Dorocidaris blakii*, this identification of the Pacific and Atlantic specimens is of course subject to considerable doubt.

St Paul's Rocks. 70 to 80 fathoms.

Station 24. March 25, 1873. Off Culebra Island; 390 fathoms; mud.

Gomera, Canary Islands; 70 fathoms.

Station 320. February 14, 1876. Lat. 37° 17' S., long. 53° 52' W.; 600 fathoms; bottom temperature, 2·7° C.; hard ground.

Station 210. January 25, 1875. Lat. 9° 26' N., long. 123° 45' E.; 375 fathoms; bottom temperature, 12·2° C.; mud.

Station 204. November 2, 1874. Lat. 12° 43' N., long. 122° 10' E.; 100 fathoms; and 115 fathoms; mud.