

face more or less even, outer surface growing out here and there into rounded tubercles. Pores and oscules inconspicuous; the oscules are scattered over the inner surface, with circular slightly raised margins, from 0.16 to 0.2 mm. in diameter; the pores are restricted to the outer surface, situated singly in areas about 0.14 to 0.16 mm. in diameter, and surrounded by desmas; these areas are mostly arranged in longitudinal series.

*Spicules*.—I. Megascleres. 1. *Desma* (Pl. XXXVI. figs. 4–20), presenting the usual diversity of forms; approximately uniaxial varieties are about 0.32 to 0.35 mm. long, the protocladi of quadriradiate forms are about 0.16 mm. long; in each case the diameter of the epirabd or cladus, exclusive of spines, is about 0.02 to 0.025 mm. The epirabd or cladi are produced into short somewhat cylindrical processes, which usually bifurcate at the ends, each of the resulting smaller processes terminates in one, or usually more, simple or usually bifid spines with rounded ends. Beneath the epithelium of the ectosome these spines are free, and lie at about the same level, performing the function of a dermal spicule (Pl. XXXVI. fig. 29); deeper within the sponge they are interlocked and intergrown in the usual manner with the similar spines of adjacent desmas. On the free sides of the desmas that bound the larger canals the spines are stunted in their development, not growing out freely like those beneath the ectosomal epithelium.

2. *Oxea* (Pl. XXXVI. figs. 2, 3), slender, cylindrical, sharply pointed, straight, curved or slightly sinuous, 0.75 by 0.008 mm.; where they occur as hispidating spicules they project about 0.5 mm. beyond the surface.

*Colour*.—Ochreous-white.

*Habitat*.—Off Amboina; depth, 15 to 25 fathoms.

Station 33, off Bermuda, April 4, 1873; lat. 32° 21' 30" N., long. 64° 35' 55" W.; depth, 435 fathoms; bottom, coral mud. Dredged.

Station 56, off Bermuda, May 29, 1873; lat. 32° 8' 45" N., long. 64° 59' 35" W.; depth, 1075 fathoms; bottom, coral mud; bottom temperature, 38° 2 F. Dredged.

Porto Praya, St. Iago, Cape Verde Islands, August 1873; depth from 100 to 128 fathoms.

Bahia.

*Distribution*.—Madeira, Portugal; off Cape St. Vincent, "Porcupine" Expedition, 374 fathoms (Carter).

*Remarks*.—The foregoing description and that which follows are taken from the specimen dredged at Amboina, the only one obtained in a living state, all the others being dead and denuded skeletons merely. The comparison of all the specimens, and their identification with *Azorica pfeifferæ*, will be discussed at the close of these remarks.

The specimen from Amboina is a fragment embracing probably the larger part of the