at right angles to its surface, 0·17 mm. in diameter, immeasurably thin, crepis 0·04 mm. in length, when a stalk-like process is present, its diameter does not exceed 0·008 mm.

II. Microscleres. 4. *Somal microxea*, fusiform, slightly curved, surface minutely roughened, 0·055 by 0·004 mm. 5. *Choanosomal amphiaster*, a slender, straight axis, and a whorl of several slender, hair-like actines near each end, total length 0·0118 mm., length of a single actine about 0·004 mm.

The microxeas are distributed tangentially in a layer beneath the outer epithelium, overlying the layer of discs; they also extend throughout the sponge in such numbers as to constitute almost as considerable a part of the skeleton as the desmas. The amphiasters appear to occur only in the choanosome, and are not abundant even there.

Colour.—Yellowish-grey in spirits. Size, 35 mm. in height by 25 mm. in maximum diameter.

Habitat.—Locality not given by Schmidt; the sponge bears a label "Ag. 79, 134," and the bottle a metal foil with the number 255.

Remarks.—The skeleton of this sponge is the loosest and most fragile of all the Lithistids, and no species probably is better fitted for minute histological examination, unless possibly *Discodermia dissoluta*. It was to be expected that thin slices would furnish interesting results, but unfortunately the soft parts of the specimen are not sufficiently well preserved to exhibit structure.

Neopelta imperfecta, O. Schmidt.

Neopelta imperfecta, O. Schmidt, Spong. Meerb. Mexico, p. 88, pl. ix. fig. 11, 1880.

Sponge.—Small, papilla-like, compressed at the upper end, and produced into small oscular tubes. Longitudinal canals visible beneath the surface, running the whole length of the sponge. Pores simple (one measured 0·065 mm. in diameter).

Spicules.—I. Megascleres. 1. *Desma*, epirabd smooth, more or less straight, or curved, or triradiate, crepidial axis 0·04 mm. in length, zygosis by rounded tubercles, chiefly terminal.

2. *Disc*, more or less oval in outline, margin entire or lobate, sometimes notched by a rhabdal sinus, under surface impressed by the underlying discs; maximum diameter 0·35 mm. Crepidial strongyle either wholly or partly immersed in the disc, when only partly immersed projecting as a shaft from the lower surface. Crepidial axis from 0·04 to 0·087 mm. in length. 3. *Rhabdus* (?).

II. Microscleres. 4. *Microxea*, fusiform, sharply pointed, smooth, slightly curved, 0·071 by 0·004 mm. 5. *Amphiaster*, small, actines few, 0·0118 mm. in length.

Colour.—Dark-brown. Size, the largest specimen is 10 mm. in length, by 4 mm.