Holothuria (Halodeima) manningi, new species

FIGURE 11*f–i*

MATERIAL EXAMINED.—Holotype: USNM E16167, total length 90 mm. Asc. 3G-76, 12 Jul 1976, English Bay, Ascension Island, collected by snorkeling from depths of approximately 5 m in broad surge channel; substrate rock or coarse coralline "sand." Water temperature 25°C, salinity 34‰. Paratypes: USNM E16168, total length 95 and 80 mm. Same locality data as holotype.

ETYMOLOGY.—The species is named for Dr. Raymond B. Manning, Department of Invertebrate Zoology, National Museum of Natural History, who has contributed so much to our knowledge of Ascension Island invertebrates by his assiduous collecting and who was the first to discover the specimens described herein.

DIAGNOSIS.—Deposits include tables of average height 54 μm with completely reduced disk and with spire surmounted by 12 projections, and minute circular buttons of average diameter 22 μm, typically with 2 large and 2 small perforations, but

nature and disposition of perforations highly variable.

DESCRIPTION.—Body cylindrical, lacking conspicuous tubercles dorsally. In life, dark brown dorsally, darker along mid-dorsal interradius, fading to lighter brown on flanks; ventral surface light brown. In alcohol, color similar. Tentacles olive green in life, yellowish green in alcohol. Skin slightly rough to touch due to presence of numerous ossicles. Dorsal and ventral tube feet identical. Dorsally, feet sparsely scattered; ventrally, feet much more numerous, but not forming conspicuous sole. Largest specimen with conspicuous naked band along mid-ventral radius, but naked area not obvious in smaller specimens.

Ossicles in dorsal and ventral body wall identical, consisting of tables and buttons. Tables with completely reduced disc; basal portion rounded (Figure 11*f*). Top of spire with "maltese cross" comprising 12 projections, none of which appear to point vertically. Spire with one crossbar. Average height of tables 54 μm (SD 3.63). Buttons minute, tending to be circular. Typical form (Figure 11*g*) has four perforations, two larger and two smaller, but nature and disposition of perforations highly variable. Most buttons with only two perforations. Average diameter 22 μm (SD 2.28).

Tube feet contain end plates, tables, buttons, and flat perforated plates (Figure 11*i*), usually with two larger perforations and numerous small perforations at ends. Developmental stages of these plates common.

Tentacles contain scattered minute straight or curved spinous rods (Figure 11*h*), averaging approximately 50 μm in length.

REMARKS.—This species falls within the subgenus *Halodeima* of the genus *Holothuria* as defined by Rowe (1969). It is immediately distinguished from all species listed by Rowe, except *Holothuria (Halodeima) edulis* Lesson, in having tables with a completely reduced disc. This Indo-Pacific species has tables that closely resemble those of *Holothuria (Halodeima) manningi,* but the buttons in both species are very different, for in *H (H.) edulis* the buttons tend to be elongate, have generally larger holes, and are frequently reduced to form X-shaped granules. Further, this latter species has distinctive coloration, being brown dorsally and rose red ventrally when alive (Clark, 1946); this color is quite consistent and distinctive.

While relationship with *H. (H.) edulis* might be postulated, *H. (H.) manningi* appears to bear no close relationship to any species of *Holothuria* in the Atlantic Ocean.

The species was found only at English Bay, and only in minimum depths of 3–4 meters. Further searching in the English Bay area revealed that the species is relatively common and conspicuous, lying exposed on rocks and calcareous sand.

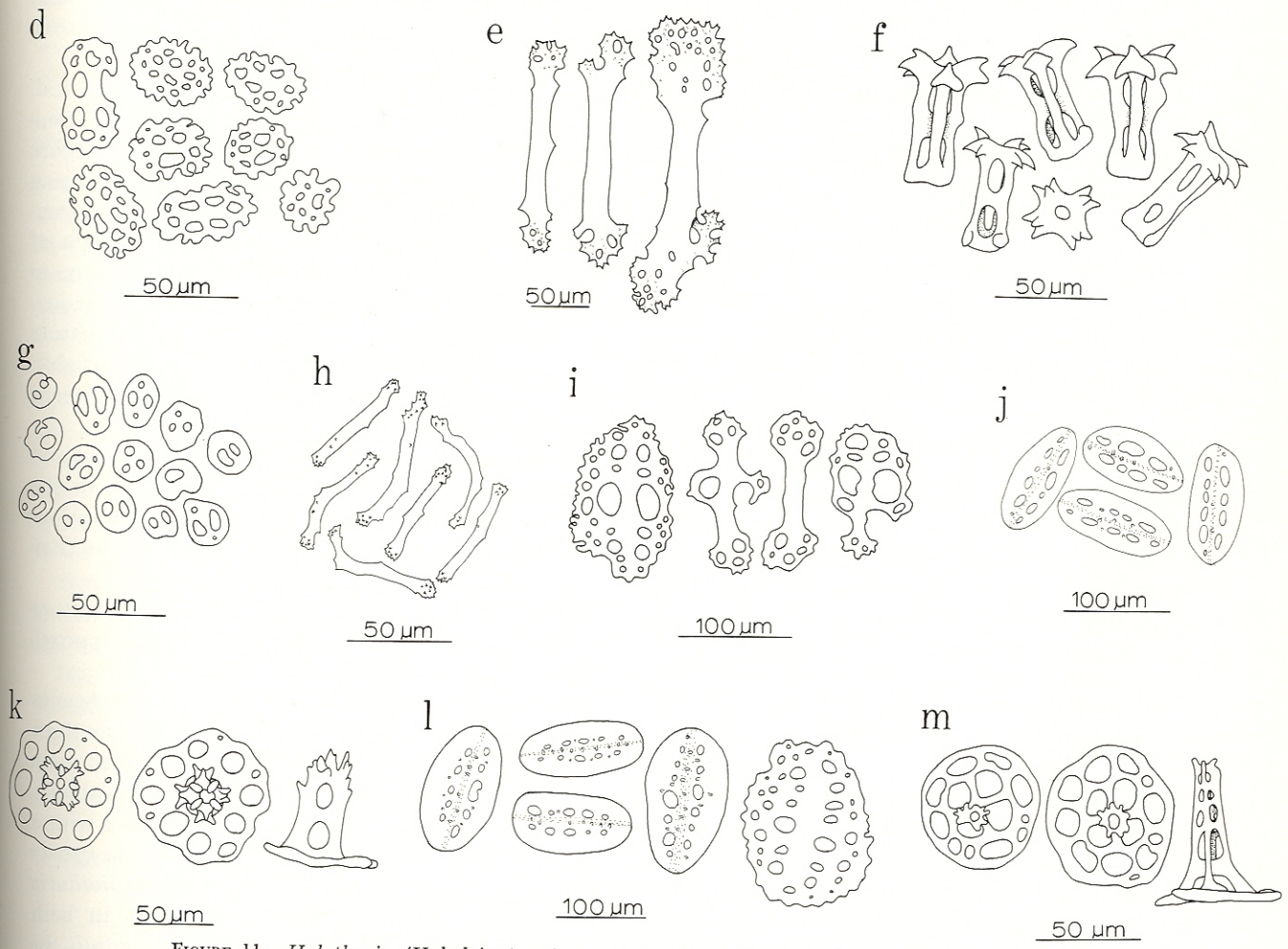

FIGURE 11.—*Holothuria* (*Halodeima*) *grisea* Selenka: *a*, tables from body wall; *b*, rods from ventral tube feet of Ascension specimens; *c*, rods from ventral tube feet of specimen from the Bahamas (USNM 32489); *d*, buttons from body wall; *e*, rods from tentacles. *Holothuria* (*Halodeima*) *manningi*, new species: *f*, tables from body wall; *g*, buttons from body wall; *h*, rods from tentacles; *i*, perforated plates from tube feet. *Holothuria* (*Platyperona*) *sanctori* Delle Chiaje: *j*, buttons from body wall of specimen from Naples (USNM 17025); *k*, tables from body wall; *l*, buttons from body wall. *Isostichopus badionotus* (Selenka): *m*, tables from body wall of juvenile specimens.