

9. Peristichopus papillatus Djakonov, sp.n. (Figs 11-14)

Twenty-eight specimens, perfectly preserved but with retracted tentacles, were obtained. Thus, this holothurian represents the main bulk of the Echinodermata collected at this station. The largest specimen is 65 mm long, 17 mm wide and 15.2 mm high, the smallest is 15 mm long, 5.5 mm wide and 3.5 mm high. The 30.5 mm long specimen is 11.2 mm wide and 6.8 mm high. Its body has an elongated, torpedo-like shape, narrowing toward the anterior and posterior extremities, the anterior being rounded and the posterior slightly swollen, showing a deep vertical groove with thickened lateral "labia". In large specimens, the abdominal side is obviously swollen and convex, and in small ones (under 30 mm) it is markedly flattened, sole-like. Dorsal side only slightly convex.

Mouth orifice on anterior end subventral, the anal one opening between the labia of the vertical groove also subventrally. Ambulacral appendages rare and poorly visible, resembling very small, delicate and pointed papillae sitting one by one on the thickened like a wart, pigmented portion of the skin. The papillae are arranged only over two dorsal and two ventro-lateral radiuses, in two often irregular and here and there broken rows. Near the anterior and the posterior extremities of the body, the papillae are somewhat larger, for the rest they are mainly quite uniform. Along the medio-ventral ambulacrum there are no appendages of any kind.

There are, apparently, 20 tentacles; it was impossible to determine their exact number since they are, all of them, retracted, and to examine them even on the dissected specimen was very difficult. Skin thin and transparent, the viscera showing well, in places, through its smooth surface, and almost without adhering foreign particles, which, exactly, is typical of most of the species of genus Pseudostichopus. Some single sand grains present only here and there, and it can be seen under the microscope on portions of skin that the skin contains quite a number of diatomaceous algae (mainly Coscinodiscus and partly others, too). Rarely, single small foraminiferae or radiolarians are found on the skin. Sponge needles absent. The skin contains absolutely no calcareous formations (spicula) which are observed, in small quantities, in the perianal part where they resemble straight or somewhat bent rods 140-200 μ in size, smooth on the margins and usually with a small thickening (nodule) in the middle (Fig.11). Rarely, among such corpuscles, there happen to occur larger, 300 μ in size, thin, sharply bent C-like, slightly spine-like spicula (Fig.11,a).

In the walls of the papillae there are rare small supporting spicula in the shape of straight or slightly bent rods 80-180 μ in size (Fig.12), usually also with a thickening in the middle. On the other hand, the tentacles are very

densely packed with spicula of various shapes and different sizes; these are usually bent and more rarely straight, thin or thick, often irregular corpuscles or rods 190-300 μ in size (Fig.13). No calcareous formations whatsoever in internal organs - neither in genital ducts nor in the respiratory tree.

The calcareous pharyngeal ring is well developed and consists of 10 dense parts (Fig.14). The radial parts are markedly larger and form 3 protrusions on the anterior extremity: 2 lateral rounded ones and 1 central, split at the end: the posterior end forms a semicircular depression and is slightly indented, like in Pseudostichopus trachus Sluiter. The inter-radial parts are narrower and lower, extended anteriorly into one central protrusion and having posteriorly a slight depression. There is one voluminous Polian vesicle; it was not possible to find any trace of the stone canal: it is obviously atrophied.

The gonads form 2 voluminous bundles and occupy most of the body cavity; genital tubes do not ramify. The respiratory tree forms two trunks, the right-hand one of them being shorter. The lung canal widens proximally very strongly, over one margin of the canal are arranged, in two rows, slightly pinnate lateral outgrowths or papillae. Radial muscles fused, very strongly developed in the shape of protuberant longitudinal ridges. Intestinal canal voluminous, thick-walled. The colour of specimens in alcohol is light grey and somewhat opalescent with the viscera showing through.

Peristichopus

Small holothurians, torpedo like; ventral face arched, but flat in small specimens; dorsal surface convex. Ambulacral appendages restricted to small papillae gathered on warts. These are none, distributed in the two dorsal ambulacra and the ventral lateral ambulacra; medio-ventral ambulacrum is naked. Deep vertical groove at the rear of the body. Ossicles lack in gonads and respiratory trees; calcareous ring well developed; stone canal rudimentary or absent.