Ultrastructural study of sporulated instars of a haplosporidian parasitizing the clam *Ruditapes decussatus*

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In 1951, Vilela pointed out the presence of a haplosporidian parasitizing *Ruditapes decussatus* from Portuguese waters and created the species *Haplosporidium tapetis*. Later, a haplosporidian was found in the same species originating from the pound of Thau (France). The ultrastructural study of plasmodial instars showed that this parasite belongs in the order Balanosporida (Joly and Comps, 1979). Recently, histological examinations demonstrated a pathogenic agent pertaining to this group of protozoans on *Ruditapes decussatus* from the area of the Algarve (Portugal). The sporulated instars were studied by means of light and electron microscopy. The first signs of the haplosporidian infection are plasmodial forms (p) (Fig. 2), mostly located in the digestive epithelia, whereas intense sporulation occurs in the interstitial connective tissue underlying the digestive gland and the gills (s: spores) (Fig. 1). The spore (Fig. 5) has an operculum (op), is slightly ovoid and averages 5 to 6 μm length and 4 to 6 μm width. It is delimited by a thick wall consisting of two principal layers which result from the stacking of several dense and lucent strata. The wall is extended by a flattened lid whose free edges are finely bristling with filamentous matter (mf) (Fig. 4). Typical organelles of haplosporidian spores are present: spherules (sp), haplosporosomes (h), mitochondria (m) (Figs. 3, 5). The characteristics of these spores permit one to link the parasite with the order Balanosporida (Sprague, 1979). Nevertheless, absence of ornamentation and filaments stemming from the spore wall, a character which is considered as a taxonomic criterion for the genus (Ormières, 1980; Perkins and Van Banning, 1981) lead us to classify this haplosporidian in the genus *Minchinia* under the appellation *Minchinia tapetis*.

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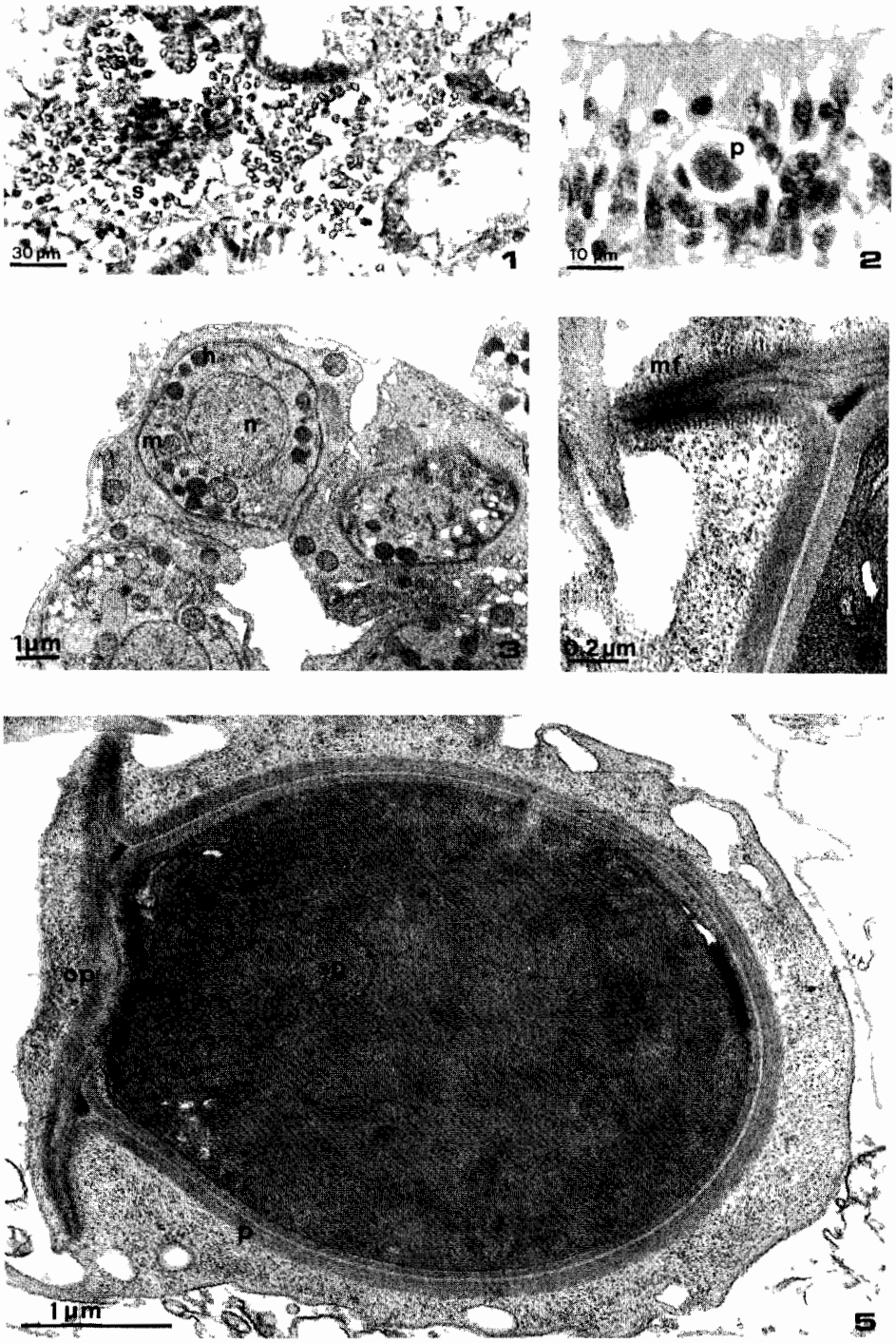

Figs. 1–5. For explanation see text.