

An infection of *Ruditapes decussatus* (Bivalvia) by *Rickettsia*

ERIC MIALHE¹, DOMINIQUE CHAGOT¹, VIVIANE BOULO¹, MICHEL COMPS²,
FRANCISCO RUANO³ and HENRI GRIZEL¹

¹IFREMER, LPGIM, Ronce les Bains, 17390 La Tremblade (France)

²IFREMER, 1 rue Jean Vilar, 34200 Sète (France)

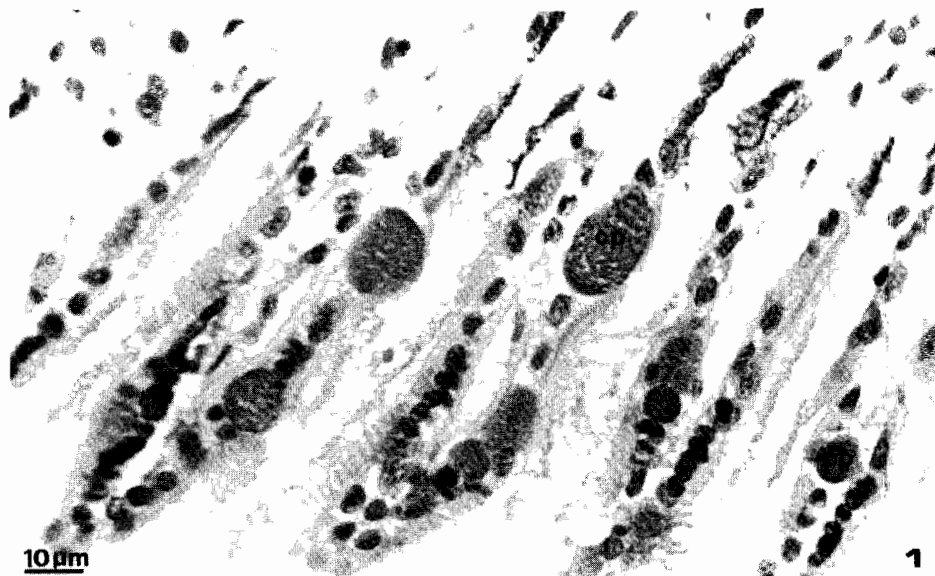
³INIP, Avenida de Brasília, 1400 Lisbon (Portugal)

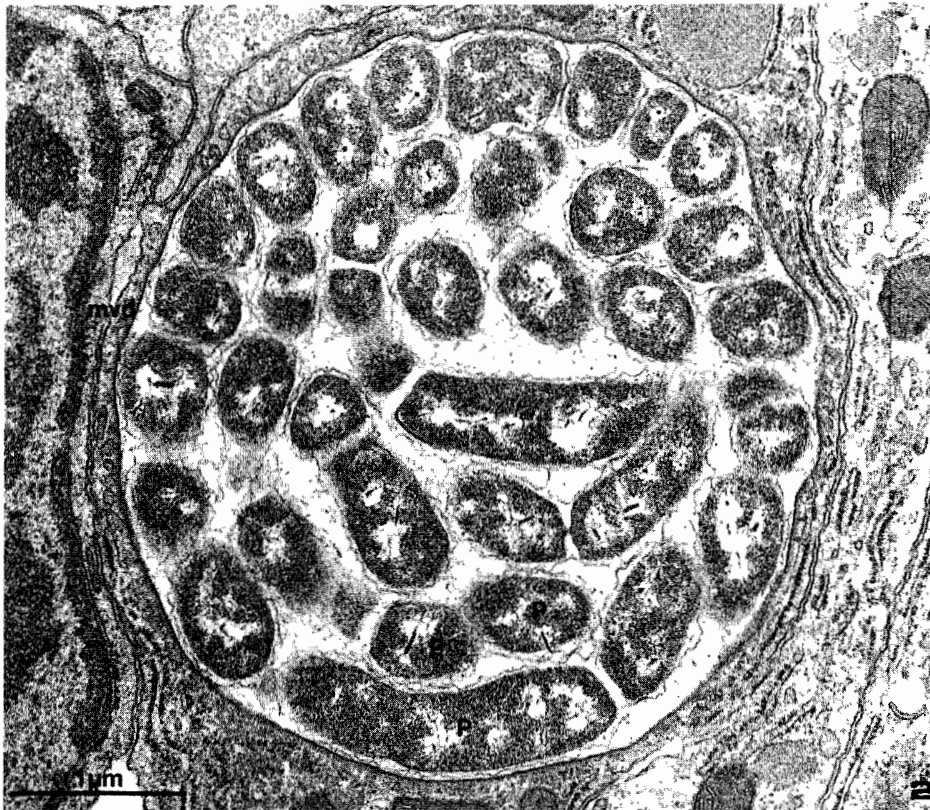
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Clams have been associated with several microorganisms. Indeed Chlamydia-like procaryotes were described for two species, *Ruditapes decussatus* (Joly and Comps, 1980) and *R. philippinarum* (Comps, 1983), in the epithelium of digestive diverticulae. Later, Joly (1982) gave a clear indication of bacterial infection in gill tissue of *R. decussatus*. Finally, a *Rickettsia*-like microorganism was observed in *Tapes japonica* gills (Elston, 1986).

We report the presence of a *Rickettsia* in *Ruditapes decussatus* from natural populations of the Algarve (Portugal). Light microscopy shows infections of varying importance in gill tissues. Some enclose small procaryotic colonies (cp) (Fig. 1) scattered in all lamellae; in others, the colonies are scarce and hypertrophic (100 μm). These different pictures suggest an amplification process.

Digestive diverticulae may also be infected, but to a lesser extent. The ultrastructural features of this intravacuolar (mvd: densified vacuolar membrane) (Fig. 2) procaryote (P) and its multiplication by scission without a complex developmental cycle allows its classification in the order Rickettsiales. The existence of a new *Rickettsia* of *Ruditapes decussatus* emphasizes the importance of associations of this mollusc with intracellular procaryotes from different groups. The nature of this association remains to be determined.





Figs. 1 and 2. For explanation see text.

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