

New Associations between the Scallop *Pedum spondyloideum* (Bivalvia, Pteriomorpha: Pectiniidae) and Scleractinian Corals from the Northeastern Coast of Borneo (Malaysia)

Patrick Scaps

Laboratoire de Biologie Animale, Université des Sciences et Technologies de Lille, 59 655 Villeneuve d'Ascq Cédex, France

(Accepted November 27, 2008)

The nestling and facultatively boring pectinid bivalve *Pedum spondyloideum* (Gmelin, 1791) is an obligate associate of living scleractinian corals that occurs in the Indo-Pacific. It attaches byssally and lives embedded in the coral skeleton; it is usually completely surrounded by live tissue on the coral surface, but not inside the dwelling. Associations between *P. spondyloideum* and host corals are known from the northern Red Sea (Kleemann 1990 2001) and from only a limited number of localities in Indonesia (northeastern and southeastern coasts of Sulawesi (Scaps et al. 2005, Scaps and Denis 2007), and the Derawan, Komodo, and Alor Is. (Scaps et al. 2008).

During a recent survey (7-16 Apr. 2008) around the northeastern coast of Borneo (Buhayan, Mantabuan, Sibuan, and Sipadan Is., Malaysia), 3 new associations between *P. spondyloideum* and its scleractinian host corals (*Montipora digitata* (Fig. 1A), *Porites lichen* (Fig. 1B), and *Psammocora digitata* (Fig. 1C)) were identified. This is notably the first time that *P. spondyloideum* is reported to be associated with a coral belonging to the family Siderastreidae (*Psa. digitata*) in the West Pacific. To date, 50 species of scleractinian corals are known to be infested by *P. spondyloideum* in the Red Sea and West Pacific. Thus, *P. spondyloideum* has been observed in 17 genera belonging to 7 scleractinian families: the Acroporidae (*Acropora*, *Astreopora*, and *Montipora*), Agaricidae (*Coeloseris*, *Gardineroseris*, *Pachyseris*, and *Pavona*), Siderastreidae (*Coscinarea* and *Psammocora*), Faviidae (*Cyphastrea*, *Echinopora*, *Favia*, *Goniastrea*, and *Leptastrea*), Merulinidae (*Hydnophora*), Poritidae (*Porites*), and Dendrophyllidae (*Turbinaria*). The majority of infestations take place at shallow depths of 0.5-20 m in zones with higher coral densities. <http://zoolstud.sinica.edu.tw/Journals/48.4/492.pdf>

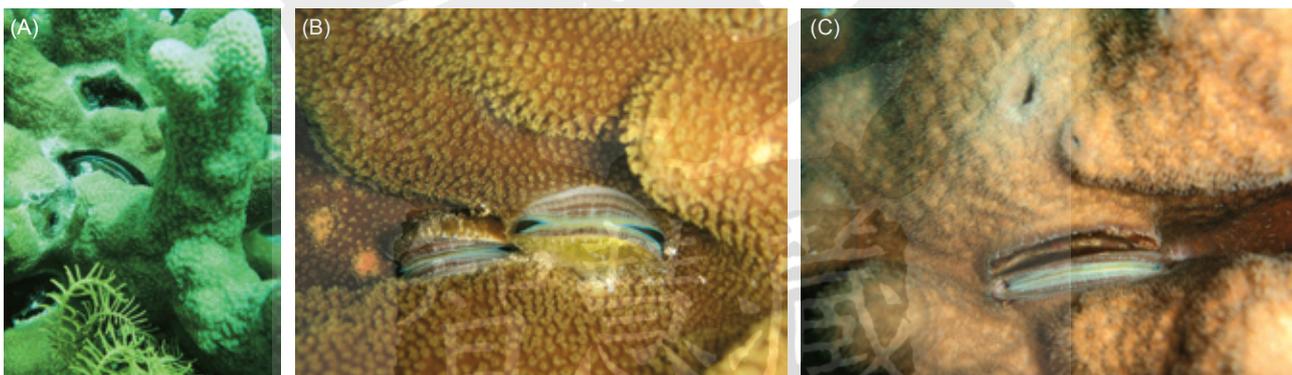


Fig. 1. New associations between the scallop *Pedum spondyloideum* and scleractinian corals. (A) *Montipora digitata* inhabited by *P. spondyloideum*; (B) *Porites lichen* with *P. spondyloideum*; (C) *P. spondyloideum* imbedded in *Psammocora digitata*.

Acknowledgments: I am particularly grateful to G. Allard for assistance with field data collection.

REFERENCES

- Kleemann K. 1990. Coral associations, bio corrosion, and space competition in *Pedum spondyloideum* (Gmelin) (Pectinacea, Bivalvia). PSZN: Mar. Ecol. **11**: 77-94.
- Kleemann K. 2001. The pectinid bivalve *Pedum spondyloideum* (Gmelin, 1791): amount of surface and volume occupied in host corals from the Red Sea. PSZN: Mar. Ecol. **22**: 111-133.
- Scaps P, V Denis. 2007. Associations between the scallop *Pedum spondyloideum* (Bivalvia, Pteriomorpha: Pectiniidae) and scleractinian corals from the Wakatobi Marine National Park (southeastern Sulawesi, Indonesia). Raffles Bull. Zool. **55**: 1-10.
- Scaps P, V Denis, S Berhimpon. 2008. Comparison of associations between the pectinid bivalve *Pedum spondyloideum* (Bivalvia, Pteriomorpha: Pectiniidae) and scleractinian hermatypic corals in the Red Sea and the West Pacific Ocean. Bull. Soc. Zool. Fr. **133**: 39-50.
- Scaps P, V Denis, S Berhimpon, F Kaligis. 2005. Coral associations and space competitors of *Pedum spondyloideum* (Gmelin, 1791) (Bivalvia, Pteriomorpha: Pectiniidae) from the northeast coast of Sulawesi, Indonesia. Basteria **69**: 157-166.

*To whom correspondence and reprint requests should be addressed. E-mail:Patrick.scaps@univ-lille1.fr