**Selfing in a malacostracan crustacean: why a tanaidacean but not decapods**

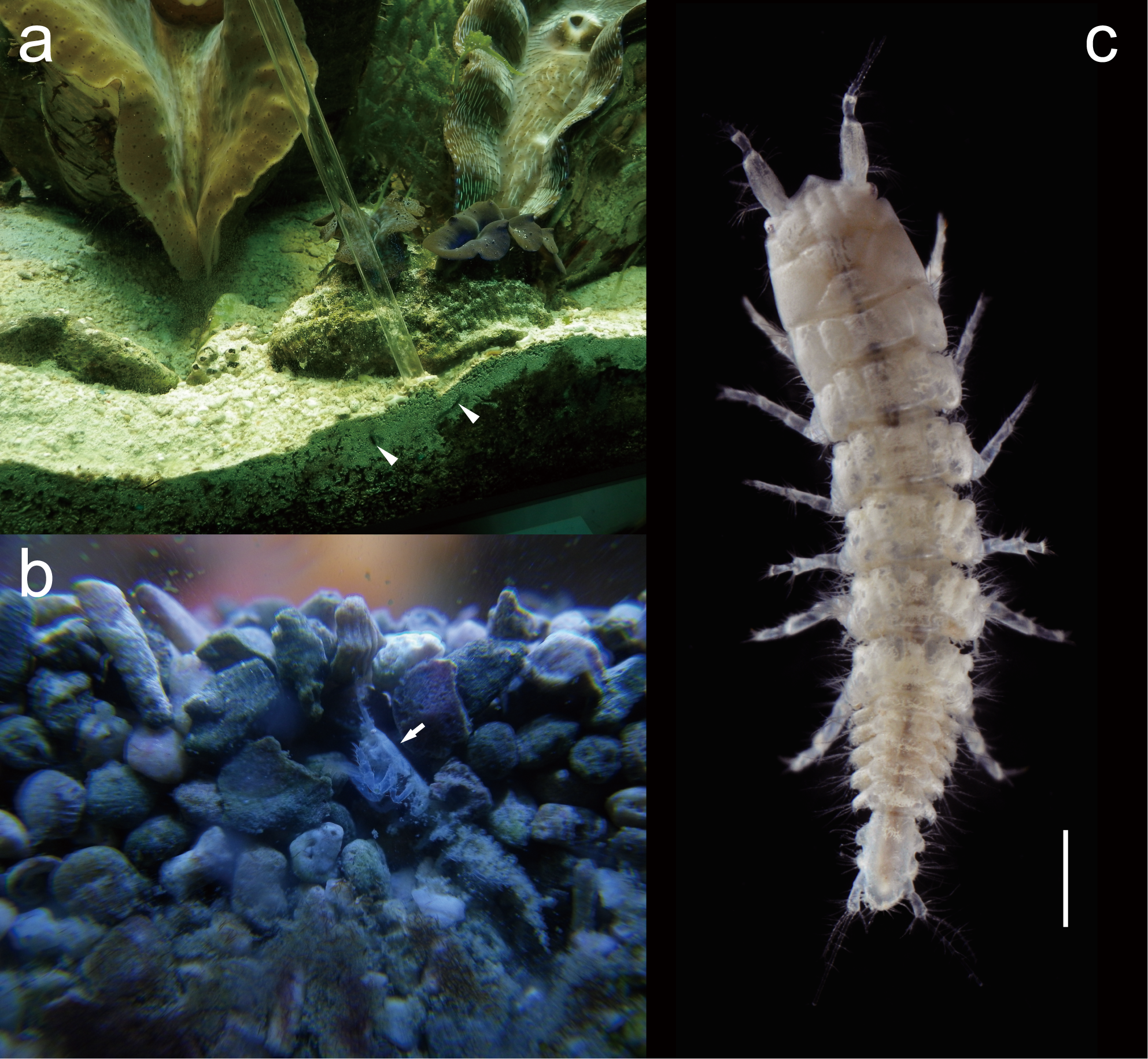
**Naturwissenschaften**

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**Electronic Supplementary Material 1**



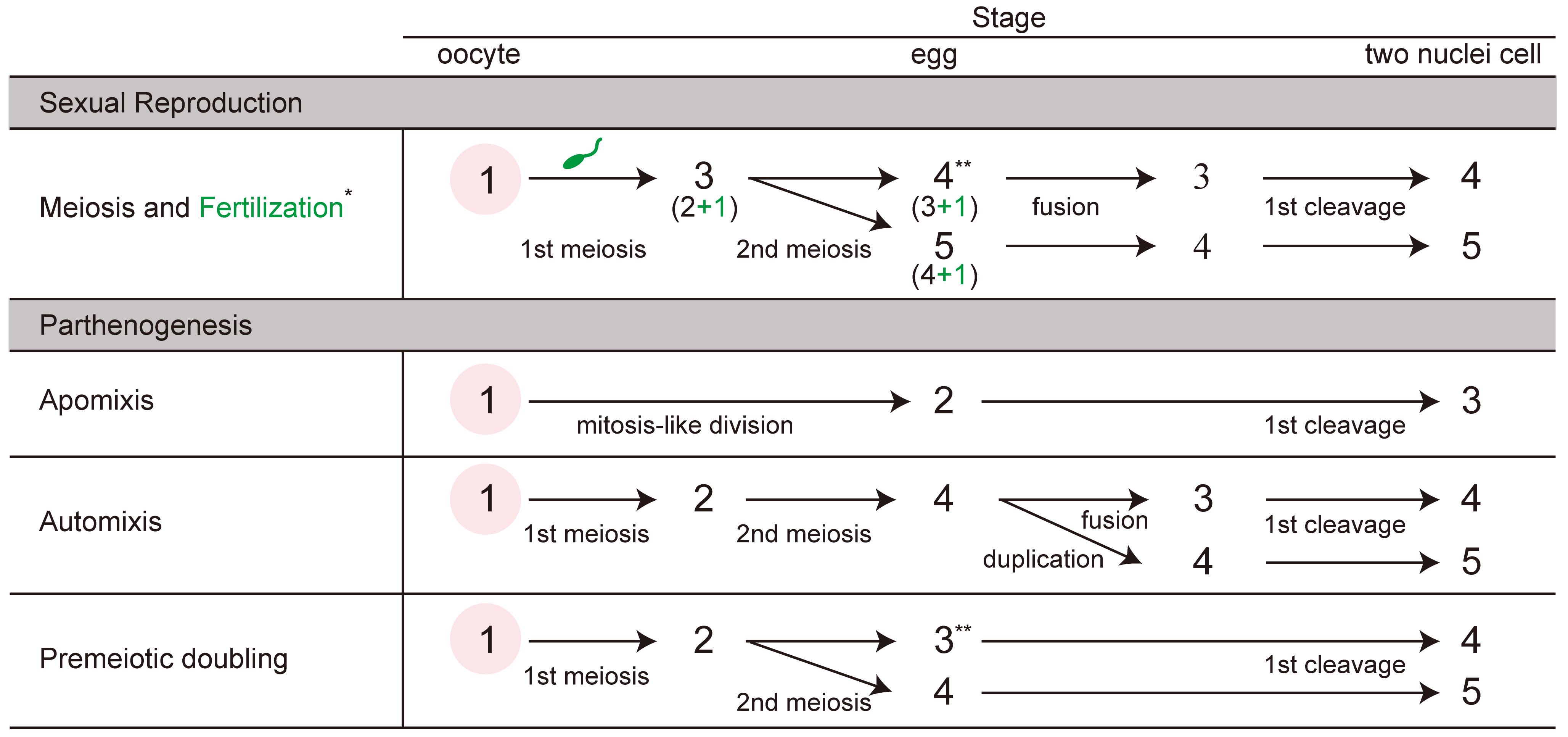
**Fig. S1 Habitat and habitus of *Apseudes* sp.**

**a** Habitat in the Port of Nagoya Public Aquarium. Arrowheads indicate tunnels of *Apseudes* sp. in the sand bottom. The glass tube between the arrowheads was used to collect specimens. **b** *Apseudes* sp. (*arrow*) in its tunnel. **c** Living adult, dorsal view. Scale bar: 1 mm

**Electronic Supplementary Material 2**

**Different numbers of DAPI (4′,6-diamidino-2-phenylindole)-staining spots in eggs are expected through time among sexual pathway and three parthenogenetic pathways.**

When simultaneously hermaphroditic individuals propagate independently, they produce offspring by either self-fertilization or parthenogenesis. Figure S2 shows the numbers of DAPI-staining spots (DAPI binds to DNA and fluoresces strongly when bound) expected through time for the sexual and three parthenogenetic pathways. In **sexual reproduction**, a sperm fertilizes the egg during meiotic arrest at metaphase I. Parthenogenesis encompasses three types of division (Suomalainen et al. 1987; Stenberg and Saura 2009). In **apomixis**, division occurs only once before the first cleavage, because the oocyte is produced by mitosis. In **automixis**, meiosis is maintained and the diploid stage is restored by the fusion of meiotic products or by duplication before the first cleavage. In **premeiotic doubling**, the divisions appear similar to those in normal meiosis, although the genome is doubled before meiosis and fertilization does not occur.



**Fig. S2 Expected numbers of DAPI-staining spots during oogenesis and subsequent early development in four reproductive modes**

\*, In common with many other arthropods, the stage of meiotic arrest in oocytes at which sperm penetration occurs is expected to be first meiotic metaphase. \*\*, It is not clear whether the first polar body divides; values in the upper row indicate no division of the first polar body, and those in the lower row indicate division

**References**

Suomalainen E, Saura A, Lokki J (1987) Cytology and evolution in parthenogenesis. CRC Press, Boca Raton

Stenberg P, Saura A (2009) Cytology of asexual animals. In: Schön I, Martens K, Dijk PV (eds) Lost sex: the evolutionary biology of parthenogenesis. Springer, New York, pp 63–74