

Community structure of symbiotic flagellates in the hybrid colonies of two termite species

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SUMMARY

The termites are an eusocial wood feeding insect group. They retain multiple species of symbiotic flagellates in their gut and depend on wood decomposition on the flagellates. Species composition of the flagellate community is specific to host termite species. For this study, we produced hybrid colonies of two termite species, *Reticulitermes speratus* and *R. kanmonensis*, and investigated flagellate species composition and the number of each flagellate species in the digestive tracts of offspring. Immediately after foundation of the colony, most hybrid offspring had fauna that were mixtures of flagellate species specific to each parent species. After 700 days from the foundation of the hybrid colonies, however, the rate of offspring with mixed-faunae drastically decreased. Of 18 hybrid colonies, 17 had faunae resembling those of *R. speratus* field colonies, although fauna of one hybrid colony closely resembled those of *R. kanmonensis* field colonies. This result suggests the presence of multiple stable species compositions of the symbiotic flagellates.