

Infection of symbiotic flagellates to the hybrid larvae of *Reticulitermes*

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SUMMARY

Lower termites possess symbiotic flagellate communities with species-specific compositions in their hindgut. In the initial stage of colony formation, newly hatched larvae receive the flagellates from their parents (king and queen) through proctodeal feeding. However, it is not known whether the larvae receive the symbiotic flagellates from both parents or just one. In this study we produced hybrid incipient colonies of two termite species, *Reticulitermes speratus* and *R. kanmonensis* and investigated the route and timing of flagellate infection. Investigation of specific flagellate species, *Spirolympha porteri*, *Dinenympha rugosa*, and *D. parva*, revealed that at third instar the offspring received flagellates originating from both parents. Mutual infection often also took place between the parents before the hatching of their eggs. The two *Dinenympha* species seem more likely to transfer than *S. porteri*.