

## Characteristics of intestinal flagellate faunae in the termite family Rhinotermitidae.

Osamu KITADE (Faculty of Science, Ibaraki University)

The termites in family Rhinotermitidae, composed of 13 genera, usually possess symbiotic flagellate communities in their hindguts, which exhibit strong host specificity. The symbiont compositions of the rhinotermitid termites are, however, only partially investigated, and this prevents our understanding of the evolution of the symbiont community. In this study we collected termite species of three genera in the Rhinotermitidae (*Rhinotermes*, *Dolichorhinotermes*, *Stylotermes*) and of two genera in the closely related Serritermitidae (*Serritermes*, *Glossotermes*), to investigate their symbiont compositions. One to three flagellate genera (*Pseudotrichonympha*, *Spirotrichonympha*, *Hexamastix*) were found in the termites investigated in this study. The composition data from this study and published information about the composition in other host genera suggest that each species in the Rhinotermitidae and the Serritermitidae usually possess single *Pseudotrichonympha* species respectively, except in *Reticulitermes*. The symbiont fauna of the *Reticulitermes* host is unique in the family. Judging from the host phylogeny, host switchings might have taken place between some host lineages. The lack of symbionts in Termitidae, and one-to-one host-symbiont relationships found in some host genera could have evolved independently.