

**A107**            **Why does a fundatrix of the aphid, *Ceratovacuna nekoashi* (Homoptera: Hormaphididae), produce "outsiders"?**

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Fundatrices (colony foundresses) of *Ceratovacuna nekoashi* induce "cat's-paw" galls by attacking axillary buds on the snowbell tree, *Styrax japonica*, in spring. In the process of gall formation some of the 2nd-generation larvae are forced to become altruistic. When subgalls are not completely closed, a fundatrix produces the 1st-instar larvae who enter subgalls. They are named insiders. After all the subgalls are closed, the fundatrix produces the late 1st-instar larvae. They were left outside of the gall and thus called outsiders. Insiders reproduce in each of subgalls but outsiders cannot get into subgalls to reproduce. Instead, they are believed to perform colony defence as soldiers. The insider's progeny will then produce 2nd-instar soldiers within subgalls. The soldiers help increase their colony's survival rate and reduce predation rate. The objectives of our investigation were: (1) why fundatrices produce outsiders and (2) what are the selective advantages of investing in outsiders. We examined whether producing outsiders would increase survival rate and/or reduce predation rate. Galls in 20 trees were treated in the following four ways: (1) outsiders removed and galls not covered, 2) outsiders untouched and galls not covered, 3) outsiders removed and galls covered with cloth-bag and 4) outsiders untouched and galls covered with cloth-bag. The results suggest that producing outsiders in *C. nekoashi* provides no selective advantages and outsiders do not show efficient defence against predators.

**A108**            **Five jumping spiders of the family Salticidae (Arachnida: Araneae) from China**

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The present paper deals with 5 species of the family Salticidae from China; 4 new species: *Pancorius goulufengensis* sp. nov., *Plexippoides zhangii* sp. nov., *Synagelides huangsangensis* sp. nov. and *Telemonia luxiensis* sp. nov., 1 new to China: *Menemerus bivittatus*. Diagnostic structures, such as body and genital organ, are illustrated to each species. Descriptions and known data of geographical distribution also are given. In addition, detailed comparisons of each new species and its similar species are discussed. All type specimens are deposited in department of biology, Hunan Normal Univ., Chang, Hunan, China.