

FUNCTIONAL MONOGYNY IN THE AMERICAN GUEST ANT *FORMICOXENUS HIRTICORNIS* (EMERY) (= *LEPTOTHORAX HIRTICORNIS*), (HYM., FORM.)

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SUMMARY

12 samples of *Formicoxenus hirticornis* (Emery) were collected from 4 *Formica obscuripes* nests in the Yellowstone Park, Wyoming, in August, 1977. The dealate females and intermorphs, and some workers were dissected. All 16 females and 13 of the 16 intermorphs were inseminated, but only 10 females and 4 intermorphs were egg-laying. It seems that each colony normally contains only one fully fertile specimen, and a few additional, inseminated but sterile females or intermorphs. These results are very similar to our observations on the European guest-ant *Formicoxenus nitidulus* (Nyl.). We conclude that *F. hirticornis* (and maybe the closely related *F. diversipilosus*, too) is functionally monogynous like *F. nitidulus* and *Leptothorax gredleri* Mayr, which means that supernumerary inseminated females and intermorphs are accepted in queenright colonies, but they are kept sterile by a mechanism which is not yet known.

Leptothorax hirticornis Emery and *L. diversipilosus* M.R. Smith in my opinion belong to the genus *Formicoxenus*, since they have, together with *F. nitidulus*, a number of unique, common characters: The males of all three species are wingless and workerlike, they all live as guest ants in the mound nests of *Formica* species, and they have a peculiar female polymorphism with both dealate and intermorphous queens besides normal workers.

ZUSAMMENFASSUNG

Funktionelle Monogynie bei der amerikanischen Gastameise *Formicoxenus hirticornis* (Emery) (= *Leptothorax hirticornis*), (Hym., Form.)

12 Proben von *Formicoxenus hirticornis* (Emery) wurden im August 1977 im Yellowstone Park, Wyoming, aus 4 Nestern von *Formica obscuripes* entnommen. Die entflügelten Weibchen und Intermorphen sowie einige Arbeiterinnen wurden seziert. Alle 16 Weibchen und 13 der Intermorphen waren begattet, doch legten nur 10 Weibchen und 4 Intermorphe Eier. des Volk scheint normalerweise nur ein voll fertiles und daneben einige zusätzliche, begattete, aber sterile Weibchen oder Intermorphe zu