Morphe kann gleichartige Nachkommen haben, eine andere Morphe, oder auch beide nebeneinander als potentielle Jungköniginnen produzieren. Wir vermuten eine genetische Grundlage für den Königinnenpolymorphismus dieser Art, wie bei *Harpagoxenus sublaevis* nachgewiesen. Die Art ist mit *Leptothorax muscorum* (Nyl.) verwandt, jedoch nicht endgültig determiniert. Der Königinnenpolymorphismus wird beschrieben, seine bisher bekannte Verbreitung und vorläufige Ergebnisse von Zuchtversuchen werden mitgeteilt.

INTRODUCTION

In most species of ants the queen is easily distinguished from the worker caste by its morphology. It has three ocelli, a thorax with clearly separate pro-, meso-, meta- and epinotum, and two pairs of wings which are shed after mating.

The worker on the other hand has no traces of wings, and its thorax is much smaller with the sclerites widely fused. The ocelli are absent in many species, particularly in the Myrmicinae.

Several ant species are known, however, where the queen is ergatoid, i.e. workerlike, or where a queen polymorphism does occur, in that two or more morphologically different female forms may function as reproductives. In such species it is sometimes difficult to tell apart queen and worker by morphology. BUSCHINGER & WINTER (1976) therefore have proposed to restrict the terms "queen" and "worker" to designate the role, and thus caste (MICHENER, 1974), of an individual, and to denote its morphological aspect as gynomorphic, intermorphic, or ergatomorphic, irrespective of its function.

Ergatomorphic or more or less intermorphic females as the only queen morphs are quite frequent in more primitive ant subfamilies, like the Cerapachyinae and Ponerinae (for a survey see HASKINS & WHELDEN, 1965). Such queens have been reported also from several myrmicine ants, especially from species of the *Monomorium salomonis* - group (BOLTON, 1986). A queen polymorphism, however, with several queen morphs within one species, is apparently rare. Occasionally intermorphs have been found in species with gynomorphic queens, like *Myrmica rubra* (BRIAN, 1955), *Leptothorax acervorum* (BERNARD, 1948, 1951), *L. gredleri* (BUSCHINGER, 1974 a), *L. nylanderi* (PLATEAUX, 1970), *Harpagoxenus americanus* (BUSCHINGER & ALLOWAY, 1977), and *H. canadensis* (BUSCHINGER & ALLOWAY, 1978). These either lack a spermatheca or have at least not been found inseminated and fertile (A.B., unpubl. results).

Queen polymorphism with gynomorphic, intermorphic, and/or ergatomorphic reproductive females has been described in *Rhytidoponera metallica* (HASKINS & WHELDEN, 1965; HÖLLDOBLER & HASKINS, 1977), and in *Hypoponera eduardi* (LE MASNE, 1953, 1956).