



Fig. 6. Karyotype of *Epimyrma adlerzi* sp. n.

which these three colonies were taken. Thus, *E. adlerzi* is perhaps more flexible than the other nest-mating *Epimyrma* species, with respect to the season of colony foundation. Presumably this is correlated with different climatic conditions in the various areas of distribution. Laboratory experiments were conducted with material from the Loutraki population, in early spring 1986, after the females had spent the winter in their mother nests. Several females were observed to leave the nests already during the artificial hibernation, in temperatures of 8–10° (their offspring, one year later, exhibited the same behavior). Females were removed when they spontaneously had left the nests, crawling around in the food and water chambers of the formicaries. They were then placed into parts of formicaries inhabited by complete (queenright) host species colonies of various sizes.

The results of the female transplant experiments revealed that females of *E. adlerzi* exhibit nearly the same colony foundation behaviour as we had observed in other *Epimyrma* species. The *E. adlerzi* female, often shortly after having been placed in the host species formicary, enters the nest, and if not seized by the host species workers and evicted, she soon locates the host colony queen and begins to throttle her with the mandibles around her neck or throat (Fig. 7). During this throttling, which often lasts for hours and may be repeated during up to three weeks, the *Epimyrma* female frequently brushes with her forelegs over the head and thorax of her victim, and

then, with curiously contorted legs, over her own body. She interrupts the throttling frequently and licks the mouthparts or the surface of the host queen which is sometimes paralyzed already after half an hour of throttling. Now and then she also solicits food from the host workers which appear surprisingly unaffected of what happens to their queen. The host queen is usually kept paralyzed for about two weeks (once 4 weeks) until she finally dies and is carried out of the nest. During colony foundation, the *Epimyrma* female sometimes stings one or a few host workers which may either die after 2 or 3 days, or recover. However, in *E. adlerzi* we saw this behavior much rarer than, e.g. in *E. krausseii* (Winter & Buschinger 1983). In order to give an impression of the colony founding process, we present extracts of an experiment which should represent what we believe is a "normal" colony foundation, with as little experimental manipulation as any possible:

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13.20

E. adlerzi ♀ put into formicary with queenright *L. exilis* colony of ca. 30 ♀♀. The *E. a.* colony had been brought from hibernation (10°C) into "spring conditions" (10°/20°C) on 03.02.86. Observations under laboratory conditions (ca. 22°C, light). The *L. e.* colony is outside the nest, in the food chamber of the formicary.

13.24

E. a. ♀ begins alternately to throttle *L. e.* ♀, and to lick and palpate the head, pedicel and gaster of *L. e.* ♀. The *L. e.* ♀ vigorously tries to escape her grip.