

Table 2 Head length (HL), head width (HW) and Webers' length (WL) for the social parasite *A. insinuator* and its host *A. echinator* (Schultz et al., 1998).

	HL (mm)	HW (mm)	WL (mm)
Queens			
<i>A. echinator</i> (<i>n</i> = 11, 9 nests)	2.2 ± 0.1	2.6 ± 0.2	3.8 ± 0.1
<i>A. insinuator</i> (<i>n</i> = 25, 5 nests)	1.9 ± 0.1	2.3 ± 0.1	3.3 ± 0.2
Males			
<i>A. echinator</i> (<i>n</i> = 12, 11 nests)	1.4 ± 0.1	1.8 ± 0.1	3.5 ± 0.3
<i>A. insinuator</i> (<i>n</i> = 18, 5 nests)	1.4 ± 0.1	1.6 ± 0.1	3.0 ± 0.2

of the post-petiole in *A. ameliae* has irregular extensions, without the concavity present in the first species.

As in *Acromyrmex insinuator*, reproductives (females and males) *A. ameliae* very much resemble the host species, although there has been a pronounced reduction in body size. From observations of nuptial flights that occurred in the laboratory, we can suspect that a mating flight occurs in the field. However, observations of nuptial flights in the field are necessary to conclude this. We found alate parasites in two different seasons (April and October), unlike the host species, which has only a single synchronized nuptial flight per year in November and December. More than one nuptial flight each year could increase their likelihood of successful invasion of new colonies. The well defined nuptial flight of the hosts is normally observed in November and December so that newly fertilized parasite queens (produced in April) can colonize established colonies of *A. subterraneus subterraneus* and *A. subterraneus brunneus* well before they reproduce themselves. We suggest that further studies should investigate the chemical profile of the involved species to answer the following questions. Does the newly fertilized parasite queen lack external chemical substances, as hypothesized by Lenoir et al. (1999)? Is there an absence of colony specificity in hydrocarbons composition among hosts and parasite species? The chemical ecology of interactions between ants and their social parasites exhibits a potential field for research since it constitutes a multiplicity of complex interactions, yet it has been little studied (Lenoir et al., 2001).

Like *A. insinuator* (Bekkevoold & Boomsma, 2000), *A. ameliae* is one of the rare inquiline parasites that produces workers and resembles its host in morphology, but unlike *A. insinuator*, *A. ameliae* queens differ dramatically from their host queen in size. We excavated 14 colonies of *A.*

subterraneus and found all of them parasitized by *A. ameliae*. Thus, *A. ameliae* appears to be very common, yet always overlooked in the past. Perhaps many other similar social parasites await discovery.

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