Table 1. **Evolution from slavemakers to workerless "murder-parasites" in the probably monophyletic group Epimyrma and Myrmoxenus**

Species	Mating flight (MF) or adelphogamy (A)	Colony foundation with throttling	Slave raids	Number of parasite workers
1. *E. ravouxi* (= *goesswaldi*)	MF	+	+	high
2. *E. stumperi*	MF	+	+	high
3. *Myrmoxenus* (= *Epimyrma* ?) *gordiagini*	MF	+	+	high
4. *E. algeriana*	A	+	+	high
5. *E. bernardi*	A	+	+	moderate (?)
6. *E. kraussei* (= *foreli*, = *vandeli*)	A	+	(+)	low or none
7. *E. corsica*	A	+	–	none
8. *E. adlerzi*	A	+	–	none

Among the *Epimyrma* species we observed two evolutionary trends: One is a reduction of the number of *Epimyrma* workers, and a transition from active dulosis to a workerless permanent parasitism. The other concerns sexual behavior, with mating flights predominating in the slave-making species (*E. algeriana* and *E. bernardi* are exceptions), and adelphogamy within the mother nest in the "degenerate slave-makers" and workerless parasites (Tab. 1) (for more details see BUSCHINGER 1989).

This example clearly demonstrates an evolution from one of the classic types of social parasitism, dulosis, to another type, within one most probably monophyletic group. The ultimate condition, however, is different from most known examples of inquilinism in that *E. corsica* and *E. adlerzi*, both workerless, do not coexist with the host species queens, but assassinate them like their dulotic relatives do.

The second example, also from the myrmicine tribe Leptothoracini, is the genus *Chalepoxenus* (BUSCHINGER et al. 1988, 1989; CAGNIANT 1985; EHRHARDT 1987). In this genus which mainly comprises active slavemakers parasitizing *Leptothorax* species, we recently found evidence that one species, *C. brunneus*, has evolved towards a workerless parasitism (Tab. 2). As in *Epimyrma*, the colony foundation behavior remains fairly unaffected, the *C. brunneus* queen eliminates the host queen, as her dulotic congeners do. One major difference is that the dulotic *Chalepoxenus* queens kill or drive off all adult workers, too, whereas the *C. brunneus* queen stings only few of her host workers, and somehow is accepted by the others.

A third example, again represented by members of the tribe Leptothoracini, is different in that a clearly demonstrable evolutionary trend cannot be found. The four parasites of a common host species, *Leptothorax acervorum*, all exhibit different strategies. Nevertheless

Table 2. **Evolution from slavemakers to a workerless "murder-parasite" in the genus Chalepoxenus**

Species	Mating flight (MF) or adelphogamy (A)	Colony foundation with elumination of host ♀	Slave raiding	Number of parasite workers
1. *C. muellerianus* (= *gribodoi*)	MF	+	+	high
2. *C. insubricus* (? = *muellerianus*)	MF	+	+	high
3. *C. siciliensis* (? = *muellerianus*	MF	+	+	high
4. *C. kutteri*	MF	+	+	high
5. *C. brunneus*	MF+A	+	–	none