Table I. Relative Frequencies of Behavioural Acts by the Three Female Castes in a Single Colony of the Ant *Zacryptocerus varians*. (*N*, Total Number of Behavioural Acts Recorded for Each Caste). Nest Population = One Nest Queen, Sixty-Six Minor Workers, Seven Major Workers, Seven Eggs, Fifty-Eight Larvae, Two Pupae

Behavioural act	Minor workers ($N = 2163$)	Major workers (soldiers) ($N = 61$)	Queen ($N = 7$)
1. Self-grooming	0·2621	0·3443	0
2. Antennal tipping: tips of antennae brought together as body is held rigid	0·0009	0	0
3. Allogroom minor worker	0·0467	0·0656	0
4. Allogroom major worker	0·0028	0	0
5. Allogroom queen	0·0023	0	0
BROOD CARE			
6. Carry or manipulate egg (or eggs in succession)	0·0065	0	0
7. Lick egg (or eggs in succession)	0·0074	0	0
8. Carry or manipulate larvae (or larvae in succession)	0·0518	0·0328	0
9. Lick larvae (or larvae in succession)	0·1188	0·0328	0
10. Assist larval ecdysis	0·0005	0	0
11. Assist ecdysis to pupa	0·0032	0	0
12. Carry or manipulate pupa (or pupae in succession)	0·0055	0	0
13. Lick pupa (or pupae in succession)	0·0079	0·0328	0
14. Assist eclosion to adult	0·0009	0	0
15. Lay normal egg	0	0	0·1429
REGURGITATE			
16. With larva	0·0536	0·0492	0
17. With minor worker	0·2164	0·2951	0·8571
18. With major worker	0·0083	0·0656	0
19. With queen	0·0028	0	0
ABDOMINAL TROPHALLAXIS			
20. Receive or solicit from anal region of minor worker	0·0125	0	0
21. Receive or solicit from anal region of major worker	0·0032	0	0
22. Receive or solicit from anal region of queen	0·0028	0·0164	0
23. Lick wall of nest	0·0060	0·0492	0
24. Forage outside nest	0·0698	0	0
25. Feed on honey outside nest	0·0411	0	0
26. Feed on solid food (trophic egg, larval skin, etc.) inside nest	0·0079	0	0
27. Feed on insect outside nest	0·0171	0	0
28. Carry dead insect	0·0046	0	0
29. Carry dead nestmate	0·0129	0	0
30. Carry live adult nestmate	0	0	0
31. Extrude sting and/or anal tube	0·0023	0	0
32. Lay odour trail to food	0·0023	0	0
33. 'Jittering': vibrating entire body up and down	0·0028	0·0164	0
34. Extrude infrabuccal pellet	0·0014	0	0
35. Feed infrabuccal pellet to larva	0·0018	0	0
36. Lay trophic egg	0·0023	0	0
37. Feed trophic egg to larva	0·0032	0	0
38. Feed trophic egg to minor worker	0·0005	0	0
39. Cannibalism: feeding on own larva	0·0009	0	0
40. Excavating	0·0060	0	0
	1·0	1·0	1·0

to the following strange behaviour observed in certain myrmicine ants: the body is held rigid (sometimes it quivers slightly and is raised by an extension of the legs) and the antennae are held with the tips pointing toward each other and occasionally even touching. The behaviour has been observed in workers of *Pogonomyrmex badius* and *Leptothorax curvispinosus*; Mary Corn (personal communication) has also seen it in *Cephalotes atratus*. The significance of antennal tipping remains unknown.

Jittering. Both minor and major workers were occasionally observed to vibrate their entire bodies in a mostly vertical plane through light but rapid pumping of the legs. Once a minor worker vibrated the fore part of the body steadily while occasionally bringing the abdomen into play as well. In most instances the behaviour, which I have labelled jittering, was accompanied by the licking of another adult or larva or the regurgitating to it. Jittering did not resemble stridulation, and nestmates in the vicinity showed no visible response to it.

Regurgitation. The rate at which the minor workers regurgitate liquid back and forth is exceptionally high for ants, especially for myrmicines. For example, regurgitation with other adults made up 22·8 per cent of all behavioural acts in *Z. varians* minor workers, as opposed to only 7·8 per cent in workers of *Leptothorax curvispinosus*, and was wholly absent in *Pogonomyrmex badius*. This higher frequency apparently reflects the exclusively liquid or semiliquid diet of the *Zacryptocerus*.