Table 6. Clumping of *Oecophylla* workers following the introduction of five African tree ants (*Polyrhachis militaris*) into an arena patrolled by *Oecophylla longinoda* workers. The numbers reflect the changing pattern of spatial distribution of the *Oecophylla* over an array of 93 10 × 10 cm quadrats

Time (min)	Total no. of ants	Mean no. per quadrat	Variance	Variance / Mean	Clumping in spatial pattern
0	86	0.925	1.575	1.703	Weak
5	90	0.968	1.558	1.610	Weak
10	77	0.828	1.411	1.704	Weak
20	74	0.796	1.152	1.447	Weak
Polyrhachis introduced at 25 min					
30	87	0.935	4.039	4.320	Moderate
35	96	1.032	3.429	3.323	Moderate
40	108	1.161	4.673	4.025	Moderate
45	103	1.108	3.085	2.784	Moderate
50	123	1.322	3.960	2.995	Moderate
55	88	0.946	3.771	3.986	Moderate

anterior to the anus and acidopore, with no sign of an extrusion of the rectal gland, we considered the newly discovered sternal gland (Figs. 5–7) to be a likely source of the pheromone.

In fact, when approximately one-gland equivalents were placed in *Oecophylla*-sized dummies of folded filter paper and presented to *Oecophylla* major workers on their territories, the ants responded in a manner indistinguishable from that comprising natural short-range recruitment. The details of the experimental procedure are as follows. The preparations of a given body part usually consisted of the accumulated parts from 10 to 30 major workers placed in 0.5 ml ether and chilled for an hour or longer. The fraction of extract then injected into a dummy was calibrated so as to contain the equivalent of approximately one body part. Another method was simply to crush a single body part directly into the paper dummy. Following either technique the dummy containing the material was then tested in competition with a control dummy (containing either an injection of pure ether or nothing at all, depending on whether the experimental dummy received an ether extract or an unextracted gland) or with an experimental dummy containing the equivalent of another kind of body part. We recorded the number of ants approaching within 5 cm of the two dummies during a sequence of 16 30-s periods. The results are summarized in Table 7. The sternal gland preparations proved much more attractive than simple controls, and the response of the ants to them was seemingly identical to their response during natural short-term recruitment. Poison glands and Dufour's glands were also attractive, although to a somewhat lesser degree. This is not surprising, since these glands have been shown to contain alarm pheromones in other species of formicine ants (Hölldobler, 1977). And in fact