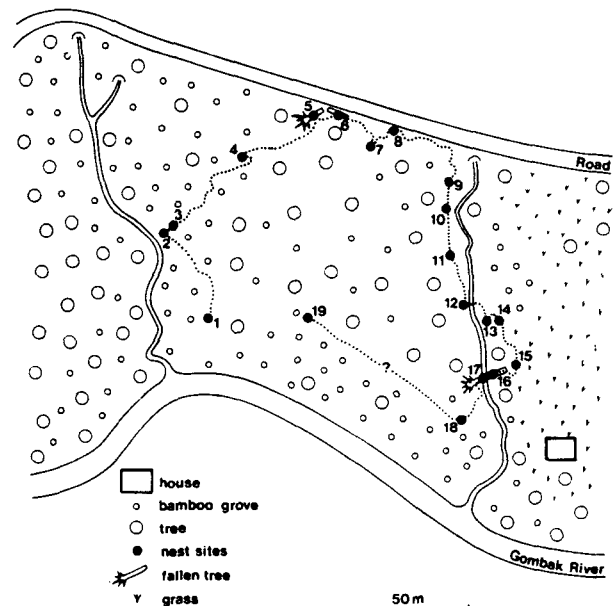


**Table 1.** Emigrations of *Leptogenys* sp. 1. Colony 1, during a 7 week period: start, duration, and distance of colony movements, and the location of the new bivouac. Three short range site shifts (<3 m) along the rotten log were observed between nights 13–23

Night	Into bivouac No	Stay at bivouac (days)	Start (h)	Duration (min)	Distance (m)	Nest site
1	1	3	0300	?	?	leaf litter
4	2	1	0320	161	49	ground cavity
5	3	5	2230	230	6	leaf litter
10	4	3	0310	170	30	ground cavity
13	5	10	0100	167	38	rotten log
23	6	4	2150	213	11	rotten log
27	7	4	2010	159	24	leaf litter
31	8	6	0020	165	19	rotten log
37	9	0	0335	153	58	leaf litter
	10	2	0500	?	9	ground cavity
39	11	0	2000	?	22	leaf litter
	12	1	0020	173	27	leaf litter
40	13	0	2220	124	15	leaf litter
	14	1	0320	175	5	ground cavity
41	15	1	0230	171	19	leaf litter
42	16	1	2110	170	11	rotten log
43	17	1	?	?	5	rotten log
44	18	3	0300	?	29	ground cavity
47	19	?	0330	?	?	ground cavity
		$n = 18$ $\bar{x} = 1.5$		$n = 12$ $\bar{x} = 166$	$n = 17$ $\bar{x} = 19$	

*Frequency of colony emigrations.* From the beginning of our observations in 1973, we found that the colonies usually left their nesting sites within 1 to 3 days. This indicates a frequent relocation of nesting sites. For 7 weeks we observed the emigration behavior of one colony of *Leptogenys* sp. 1. During this period, the whole colony moved 19 times over longer distances (>3 m). The colony stayed in one site up to 10 days ( $\bar{x} = 1.5$  days,  $n = 18$ ). During the 10-day stay, the ants shifted their nesting site three times over short distances (<3 m). However, in the 37th, 39th and 40th night, the ants abandoned their new bivouac already after a few hours. In each of these nights, therefore, we observed two emigrations. More details are given in Table 1.

*Distances and directions of colony emigrations.* In Fig. 6 a map of the movements of this colony during the 7 weeks is given. The distance covered by a single emigration varied from 5 to 58.7 m ( $\bar{x} = 19$  m,  $n = 17$ ). The statistical analysis (Raleigh-test, Batschelet 1981) of the directions of the emigrations shows that the choice of a new nest site is not made at random. The direction from the old to the new site deviated  $28^\circ$  on average from the direction chosen in the previous emigration, even if the  $90^\circ$  turns (bivouacs 2, 15, 18), which were obviously induced by hitting an obstacle (stream,



**Fig. 6.** Nest relocations of a colony of *Leptogenys* sp. 1 during an observation period of 49 nights

road, forest border), are included ( $r = 0.70$ ,  $n = 17$ ,  $P < 0.001$ ).

#### Guests

Like the colonies of Dorylinae and Ecitoninae, *Leptogenys* sp. 1 was accompanied by a large