

Fig. 9. Structure of a raid exemplified by a section of a developing swarm (s = swarm front; f = fan-shaped network of trails)

In the following description the data for swarm and fan are combined, because a reliable discrimination between the formations was not always possible. The swarm and fan covered up to 10.5 m in width (3.1–10.5 m, \bar{x} = 6.8 m, n = 17) and 15.5 m in depth (4.6–15.5 m, \bar{x} = 9.5 m, n = 16). Its area ranged from 16 to 58 m² (\bar{x} = 37.5 m², n = 14). The advancing swarm kept a main direction of progress. The maximum distance covered by the forays was 56 m (7.3–56 m, \bar{x} = 24 m, n = 13). The course and advance of one swarm raid is documented in Fig. 10. Further details are given in Table 3.

We estimated that an area of approximately 300 m² was raided by the swarm every night (ex-

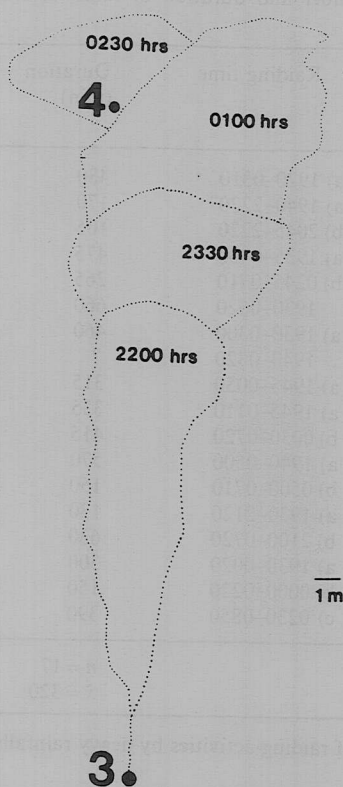


Fig. 10. Development of a swarm raid on night 10

pansions on the flanks and in vertical directions were not considered). A detailed analysis of swarm raiding behavior will be given in a forthcoming study.

Diet

The diet of *Leptogenys* sp. 1 consists mainly of adult and immature arthropods, but also includes to a limited extent other invertebrates like planarians, snails, and earthworms. The largest arthropod prey individual was a scolopender (12 cm long). Vertebrates usually escaped by running away when they got in contact with the biting and stinging ants. The only vertebrate victims were a frog (5 cm long) and a snake (15 cm long), which presumably got cornered in inadequate retreats. Non-animal food did not seem to play any role in the natural diet of *Leptogenys* sp. 1, although three times the ants retrieved fresh papaya seeds that were presented to them. Carbohydrate foods (bread, cookies, fruit) were not collected by the workers. Artificially offered mantids, phasmids, cicadas, diptera, and bees were taken, as well as the meat of fish or canned dog food. The ants did not attack big *Achatina* snails but preyed on them if the shell was destroyed.