

3 to 5 ants out; and the number increased to about 25 by 2:55 PM. At 3:04 PM many pushed out and started off 2 minutes later.

Polyergus raids did not take place at low temperatures. First raids of colony O-26 never started at temperatures lower than 74°F and ended at 68°F or above. One second raid began at 71°F and ended at 69°F. The record for low temperature raiding was reached by a colony on another part of the Reserve, which started a second raid at 67°F and ended it at 65°F.

Ordinarily the ants raided under a great variety of light intensities ranging from 6,300 to 1,400 foot-candles over the nest at the beginning of a raid to from 2,600 to 700 foot-candles at the end. (In early afternoon, light readings might record as high as 10,000 ft-c.) One late third raid started at 400 foot-candles. Another colony began a record raid one cloudy evening when the light meter recorded only 216 ft-c, and the last ants returned in the semi-darkness of 46 ft-c.

Once a sudden drop in light preceding a storm seemed to prevent a raid. Approximately 50 ants were milling about on the nest at 4:10 PM when a solid black cloud reduced light from 1,500 to 800 foot-candles in 9 minutes, causing the retreat of all but 5 ants. (Temperature stayed high, dropping from 81°F to 79°F.) It continued dark, and rain began at 5 PM.

An approaching rain did not always discourage raiding. One group was caught in a downpour when about one-third was still on its way home.

In 1965, on 19 of the 31 days when no raids occurred, it rained in the afternoon or the ground was wet from a morning rain. On 11 days raids seemed to be prevented by low temperatures, and on one by drop in light. On one day in 1965, when weather conditions seemed ideal, the ants never came out in full force and made no attempt to form a raiding column. Once in 1964, again under seemingly ideal conditions, the ants ran about in full force for 30 minutes and a column moved out for 2 feet before all retreated. It seemed as if there were no trail to follow.

LENGTH OF THE RAIDING SEASON

Observations in 1964 did not begin until June 23, after raiding had started; therefore, in order to determine the beginning of the raiding season in 1965, the O-26 nest was watched each afternoon, beginning on June 9. This day, as well as the 10th, 11th, and the 12th, was an adequate raiding day as far as weather was concerned; but only occasionally did a *Polyergus* worker come to the surface,