

The 2,018 ants (adult plus brood) revealed in the digging in mid-August were only part of the production for the year since flights had been going on since June 16. If only 20 to 25 flew a day on a possible 30 to 35 favorable days, then 600 to 800 had already escaped, giving approximately 2,600 to 2,800 as the total estimated population. If 44% of these were females, then 1,100 to 1,200 females might have left this nest in 1971 if it had not been dug.

*Flights.* Since the ants had a long flying season, flights were not watched constantly. After the flight pattern was determined, they were checked at various times during the summer to determine that adult alates were being produced constantly and that flying took place on each day that weather permitted. Flying ants were seen to leave the nest on 48 days.

The "field nest" gave the earliest record for a flight (6-16-71). In 1970 it ran out of alates by September, but the "cherry" and "cedar" nests both had flights on September 20 and had a few males in the nest as late as October 1. This gave a possible flying season of about 100 days. If two-thirds of these had proper weather for flying, there could have been 75 flight days in a season. This extended flight period is in marked contrast to that of the host species *F. obscuripes*, which has its flights within a period of approximately 30 days (during June), and in that time individual colonies may have 5 to 16 flights (Talbot, 1972).

Flights were tedious to watch because the small males and females were inconspicuous and because many flights were sparse and prolonged, with only a few ants coming up on plants at a time. Often there were only one to 16 alates on plants above the nest and from 10 to 15 males and from 6 to 12 females moving about on the mound. They were most abundant on the nest or on plants above when flying conditions were submarginal, and they were encouraged to come out but not to fly just before the temperature was high enough or when the sky darkened or temperature dropped. One peculiarity of the alates was their reluctance to return to the nest once they had climbed plants and were ready to fly. This sometimes lengthened flights and once, when conditions did not improve, 3 males were still hanging onto grasses at 4:30 p.m. Flying rate was often very slow. A mean of one ant flying a minute was usual and 3 or 4 a minute constituted a good flight. Sometimes 2 to 8 minutes elapsed between the takeoff of 2 ants.