

Final Report 84SA9019-07
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The first part of the study was a survey of 69 households in the SF Bay Area, conducted for 18 months (1/98-7/99). Each household reported weekly on the abundance of Argentine ants in their home, and on pesticide use. The results showed that the abundance inside homes was highest in cold rainy weather, and there was a second smaller peak of ant abundance in hot, dry weather. Pesticide use in the home decreased ant abundance, from one week to the next, only when ant abundance was extremely high. Otherwise pesticide use had no significant effect on ant abundance. This work was reported in D. M. Gordon, L. Moses, M. Falkovitz-Halpern, E. H. Wong. 2001. Effect of weather on infestation of buildings by the invasive Argentine ant, *Linepithema humile*. *American Midland Naturalist* 146:321-328.

The second part of the project was a study of ant infestations outside. The goal was to determine whether Argentine ants are likely to seek a new nest site and move in unfavorable weather conditions, even where there are no new buildings to move into. This was continued for 18 months. We found that relocation outside does not occur in the same weather conditions in which it occurs inside. This suggests that ants are stimulated to move inside buildings by the especially favorable conditions available in buildings (warm and dry when it is cold and wet outside in winter; humid when it is very dry outside in late summer). Apparently ants move inside because buildings are attractive, not because they are already on the move outside when no buildings are available. These data are currently being prepared for publication.

The third part of the project was an attempt to offer ants alternative nests outside buildings, to see if ants moving into alternative nests would diminish their numbers inside buildings. We were not able to find an inexpensive, simple nest site which ants prefer to a building. The only alternative ants preferred by the ants were containers filled with soil that was as warm as the interior of building, and we could find no inexpensive way of keeping containers this warm.