

OCCURRENCE OF THE GERMAN COCKROACH,
BLATTELA GERMANICA (DICTYOPTERA: BLATTELIDAE),
OUTDOORS IN ALABAMA AND TEXAS

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The German cockroach, *Blattella germanica* (L.), is the most serious indoor insect pest of apartments and food handling facilities worldwide (Ebeling 1975). Although this species is considered an indoor pest, there have been several reports of its occurrence outdoors (see references in Cornwell 1968). Because outdoor populations may serve as nuclei for reinfestations, control of outdoor populations could affect indoor control. Presently, insecticide treatments for *B. germanica* are performed exclusively indoors.

In July 1984, during an outdoor cockroach field study in Houston, Harris Co., Texas (Appel and Rust 1985), a total of 20 *B. germanica* was captured in live traps positioned throughout the 0.23 ha residential site. Adult females accounted for 50% of the trap catch whereas adult males and nymphs represented 20 and 30%, respectively. Four of the 9 traps that captured *B. germanica* were located under or next to houses. The remaining traps were located next to garages or fences, 10-15 m from the closest house. Trap sites and immediate surrounding areas were thoroughly inspected during daylight to locate cockroach harborage sites. Trap sites and nearby areas under houses had small (ca. 30) cockroach populations harboring in cracks between the joist and sill. No cockroaches were observed at or near exposed trap sites next to houses, garages, or fences. An unusual, mixed infestation of all stages of *B. germanica*, and smokybrown, *Periplaneta fuliginosa* (Serville) and American, *P. americana* (L.), cockroach nymphs was found in an old, severely cracked telephone pole.

Cockroaches were live trapped outdoors around homes and storage buildings in Auburn, Lee Co., and Mobile, Mobile Co., Alabama during the spring and early summer 1985. Of the 1997 cockroaches collected, 30% were *B. germanica*. About 20% of the *B. germanica* were adults and 64% of these were females. The area immediately surrounding each trap was examined for harborages. Fifteen of the 26 trap sites where *B. germanica* were captured were under raised construction houses with 0.6-0.8 m open crawl spaces. Small (5-50) to large (> 200) cockroach populations were observed in cracks, on brick foundation pillars, and in crawl space debris near these traps; each of these homes also had established indoor infestations. Because of free air movement in the open crawl spaces, environmental conditions under these houses, viz. temperature and relative humidity, were not significantly different from nearby open areas. Indoor temperatures were significantly lower than outdoor temperatures ($p \geq 0.05$, t-test), but there was no significant difference between indoor and outdoor relative humidities. The remaining 11 trap sites where *B. germanica* were caught included areas such as under trees, inside the base of a bird bath, and in wood piles.

These trap data indicate that *B. germanica* may become established outdoors, at least during the spring and summer. Most (ca. 60%) of the traps that caught *B. germanica* were located under homes with large, established, indoor cockroach infestations

immediately above the trap site. These cockroaches represent the overflow of indoor populations from saturated indoor harborages. Several sites where *B. germanica* were trapped, however, were located as far as 15 m from the nearest building. A foraging range of this size is unlikely for a small cockroach such as *B. germanica*; therefore, the outdoor harborage sites of these cockroaches were probably overlooked. Survival of *B. germanica* outdoors is probably related to the warm, humid environment of the southeastern United States, particularly during the spring and summer. Since outdoor populations may lead to indoor infestations or reinfestations, thorough inspection and treatment of outdoor harborage sites, especially under infested indoor areas, may be advisable.

We thank M. A. Foster and G. L. Miller, Auburn University, AL for their review of this manuscript. Alabama Agric. Exp. Stn. Journal Series No. 15-85860.

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FIRST RECORD OF THE CLEARWING MOTH,
CARMENTA ODDA (LEPIDOPTERA: SESIIDAE)
IN FLORIDA

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The clearwing moth, *Carmentia odda* (Sesiidae) was first described by Duckworth and Eichlin (1977) from a single specimen taken in a pheromone trap in Trenton, Edgefield, Co., South Carolina. It responded to the pheromone, Z, Z-3,13-oc-tadecadienyl acetate, first developed by Tumlinson et al. (1974). Since that date additional specimens were taken by the junior author in South Carolina during August 1985 and an additional specimen in Georgia during June 1983.

During the spring and summer months of 1985, several synthetic pheromones dispersed from rubber septa (500 micrograms per treatment) were used for sampling

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