The employment of antennae and rostrum in the detection of terrestrial trails may greatly enhance the ability of predatory pentatomids to locate prey. Selection for utilization of kairomones in prey location may be especially strong in predators with small eyes, like these pentatomids.—D. K. McLain, Dept. of Biology, Emory Univ., Atlanta, GA 30322.

**FALL ARMYWORM IN FLORIDA PASTUREGRASS: 1977**\(^1,2\)—(Note). Armyworms are a cyclical pasture pest characterized by population outbreaks in certain years. In 1977, Florida pastures, hay fields and forage crops were attacked by large numbers of fall armyworms, *Spodoptera frugiperda* (J. E. Smith). Damaging populations of record densities were reported by researchers, especially in the drought-stricken (Northern) areas of Florida (Anon. 1977, Coop. Plant Pest Rep. 2(31), 584).

Effectiveness of armyworm control in Florida pastures with certain insecticides was reported by P. G. Koehler, R. J. Gouger and D. E. Short (1977; Fla. Ent. 60:103-4). This study was conducted to determine the extent of the armyworm problem on pastures and forages and to evaluate the effectiveness of certain insecticides.

Three insecticides were evaluated for fall armyworm control in August 1977. The insecticides included in the present study were: permethrin (Ambush\(^®\)), carbaryl (Sevin 4 Oil\(^®\)) diluted in water and oil, carbaryl (Sevin 80% \(\times \) 2\(^®\)), and methomyl (Lannate L\(^®\)). All materials were applied by air with a Cessna Ag-Truck (188 series) equipped with a Transland spray system. The carbaryl oil formulation was applied 2 ways: diluted 1:1 in fuel oil and diluted 1:1 in water with 1.89 liter emulsifier (Blend\(^®\)). Both were applied at 1.12 kg AI/ha with 30 D4 nozzles. Permethrin, methomyl, and carbaryl WP were applied in 28.03 liters of water/ha at 0.112, 0.252, and 1.12 kg AI/ha, respectively. Six experimental plots were established within a pasture as 6 swaths, 18.29 m wide running the length of the pasture. One plot was left as a check area; the others were treated with insecticides on 13 August 1977.

Armyworm populations were sampled in a coastal bermudagrass, *Cynodon dactylon* (L.), pasture near Hague, FL, at 4 time intervals: 1 h pretreatment, 24, 48, and 72 h posttreatment. A frame (237 cm\(^2\)) was randomly thrown into each treatment area 10 times on each sampling date. The grass within the area of the frame was shaken so the armyworms would fall to the ground. All armyworm larvae were collected from the area within the frame and taken to the laboratory for identification and counting. All the specimens collected were *S. frugiperda*. Percent control was calculated by comparing pretreatment with posttreatment larval counts.

A telephone survey of county agents was conducted on 11 August 1977, involving 35 counties in the designated drought-stricken areas of Florida. The remaining 32 counties were surveyed by mail. The purpose of the survey was to determine the extent of the fall armyworm problem in pastures and the effectiveness of control measures which were being implemented. On 24 May 1978, a follow-up survey was conducted in all 67 counties to determine the amount of methomyl applied for armyworm control.

\(^1\)Lepidoptera: Noctuidae.
\(^2\)Univ. Florida Agricultural Experiment Station Journal Series No. 1390.
On 30 August 1976, pretreatment counts in the test pasture indicated a mean population density of 34.97 fall armyworms/m² (Koehler, P. G., et al. 1977; Fla. Ent. 60:103-4). On 13 August 1977, pretreatment counts on a similar pasture indicated a mean density of 046.7 fall armyworms m⁻². Unsprayed check areas were completely defoliated within 48 h of pretreatment counts.

All insecticides provided significant mortality of fall armyworm larvae within 24 h, ranging from 85 to 100%. After 72 h, all materials except Sevin 4 Oil® diluted in water provided 95% control.

A survey of Florida’s 67 counties indicated a total of 912,118.6 ha of improved pasture and 146,625.5 ha of hay pasture. In the 35 drought-stricken counties, 98% of the improved pasture acreage and 78% of the hay pastures were attacked by fall armyworms. Outside the drought-stricken area only 3% of the improved pasture and 12% of the hay acreage were infested. Statewide, 258,232 ha (28%) of improved pasture and 71,512 ha (48%) of hay pasture were severely attacked by fall armyworms. Control efforts were widespread throughout the state in early August with 258,242 ha sprayed by ground equipment and 80,437 ha sprayed by aircraft. Carbaryl was applied to 78% of the ha treated prior to 16 August. Eighty-seven% of the county agents felt that carbaryl provided poor to moderate control. Due to the reported poor control with carbaryl, a crisis exemption of the use of methomyl on pasture and forage in Florida was issued 10 August 1977. Subsequently, 32,421 ha of pasture and hay were treated in 33 Florida counties with 17,064 kg AI of methomyl (R. L. Lipsky, unpublished data).

Presently, carbaryl (Sevin 80S®) is labeled and is the most commonly used insecticide for control of lepidopterous larvae in pastures. This study indicates that carbaryl (Sevin 4 Oil®), methomyl, and permethrin (Ambush®) control the fall armyworm as effectively as carbaryl (Sevin 80S®).

As a result of this study, methomyl and carbaryl (Sevin 4 Oil®) have been registered in Florida for control of fall armyworms in Bermudagrass pasture.—P. G. KOEHLER AND D. E. SCHRÖT, Department of Entomology and Nematology, University of Florida, Gainesville, 32611.

ANNUAL MEETING

The 62nd Annual Meeting of the FLORIDA ENTOMOLOGICAL SOCIETY will be held 4-7 September 1979 at the Ramada Inn West, 2121 Tennessee Street (904-576-6121, 800-222-2828) in Tallahassee, FL. See the March issue, Fla. Ent. 62(1) for details and the entry form for submitting papers.

NOTICE TO MEMBERS

The Honors and Awards Committee will welcome nominations from the membership for candidates for the following categories of awards:

a) Entomologist of the Year
b) Certificate of Appreciation

If you care to submit a name for nomination, please include: category suggested, and, briefly, what the nominee has done to warrant recognition. Send information as soon as possible but no later than 14 July 1979, to:
A. G. Selhime; 2120 Camden Road; Orlando, FL 32803.