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DEER HOOFPRINTS AS OVIPOSITION SITES FOR *AEDES SOLLICITANS* IN LOUISIANA COASTAL MARSH

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Horsfall (1956) stated that depressions in salt marsh areas just above the level of normal high tides were attractive as breeding sites for the salt marsh mosquito, *Aedes sollicitans* (Walker). Recently, Meek and Olson (1976) showed that tire tracks and hoofprints of cattle were among the most attractive oviposition sites for *Psorophora columbiae* (Dyar and Knab) that occurred in Texas ricelands. Recent surveys of the deer population on Rockefeller Wildlife Refuge, Cameron Parish, Louisiana showed there was an average of 1 deer/40 hectare on the 32,000 hectares contained within the refuge. Deer hoofprints in the Louisiana coastal marsh impoundment areas were collected in soil samples to determine if they serve as oviposition sites for *Ae. sollicitans.*

MATERIALS AND METHODS. Soil samples of deer hoofprints were randomly collected in fresh and brackish water impoundments on Rockefeller Wildlife Refuge. All soil surrounding and within each hoofprint was completely removed with the aid of a mortar trowel, placed in individual plastic bags, and transported to the laboratory. These samples were then processed by a modification of the egg separating device described by Horsfall (1956) and Meek (1975) to initially separate the *Ae. sollicitans* eggs from each soil sample. The remaining residue which contained the eggs was then subjected to a salt flotation process described by Horsfall (1956) and Meek (1975). The eggs were then keyed to the species level with the use of a stereomicroscope and the taxonomic keys developed by Ross and Horsfall (1965). A total of 38 hoofprints was collected: 14 each from an intermediate marsh impoundment and a brackish marsh pumpout, 6 from a brackish marsh impoundment and 4 from a natural salt marsh area.

RESULTS AND DISCUSSION. An average of 12.9 *Ae. sollicitans* eggs was collected per soil sample per collection date, with the range from 2-28 eggs per sample. This agrees with data of Meek and Olson (1976) in which they reported similar numbers of *Ps. columbiae* eggs in cattle hoofprints. The soil in these depressions tended to hold moisture longer than the flat open areas and also afforded the gravid female some protection from physical factors, such as wind, during the process of oviposition. Meek (1975) reported that the moisture content of the soil was important in the choice of an oviposition site by a gravid female, *Ps. columbiae.* If these depressions held moisture longer than the surrounding areas, oviposition in these hoofprints would continue over a longer period of time resulting in a larger accumulation of eggs than would normally be collected from a similar size soil sample from the surrounding area.

The average number of eggs per deer hoofprint sample (12.9) was similar to the mean number of *Ae. sollicitans* eggs collected from soil samples containing *Distichlis spicata* (L) Greene (12.13 eggs/sample/collection date) as reported by Fleetwood et al. (1978) which indicated that soil depressions such as deer hoofprints were as attractive to *Ae. sollicitans* for ovipositional sites as the most preferred plant habitats sampled.

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NEW RECORD FOR *AEDES FULVUS PALLENS* IN MISSOURI

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Aedes fulvus pallens Ross, 1943, has been collected in New Jersey light traps, CDC miniature light traps, truck traps, and biting collections (Harden and Poolson 1969). This mosquito is reportedly a fierce biter (Carpenter et al. 1946). *Ae. fulvus pallens* has been reported in the following states: Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia (Carpenter and LaCasse, 1955; Carpenter, 1968, 1970, 1974).

On 5 August 1977, *Ae. fulvus pallens* was collected (CDC miniature light trap baited with dry ice) near Happy Hollow Picnic Area about 50 m from the Big Piney River, Fort Leonard Wood, Missouri, by Danny E. Wilder, Preventive Medicine Specialist, Health and Environment Activity, Fort Leonard Wood, Missouri. Happy Hollow Picnic Area, a low area subject to flooding, has knee high vegetation and is heavily wooded (maple, cottonwood, oak, and papaw trees). During the trapping period (4:00 p.m. to 9:00 a.m.) temperature and humidity ranged between 23°C–34°C and 35–81%, respectively.

This record, new to Missouri, constitutes the most northwesterly distribution of the species. Identifications made by this Agency as *Ae. fulvus pallens* were confirmed by T. V. Gaffigan, Medical Entomology Project, US National Museum of Natural History (USNM), Smithsonian Institution, Washington, D.C., to whom we are indebted. The specimen is deposited in the USNM.

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[1] The opinions or assertions contained herein are the private views of the author and are not to be construed as reflecting the views of the Department of the Army or the Department of Defense.