turnal habitats of these animals and the results probably are not a measure of their usual contact with vectors. It is suspected that the methods and locations of these tests increased exposure to vector attack.

Only *C. tarsalis* is referred to in the data presented in Tables 2 and 3. This species was the most abundant with all baits, and in the series of animal exposures it often was the only mosquito attracted. *Culex erythrothorax* was attracted in small numbers and fed on chickens, *Citellus beecheyi, Citellus nelsoni, Dipodomys heermanni, Dipodomys nitratoides, Peromyscus maniculatus, Mus musculus,* and *Sceloporus occidentalis.* This mosquito also was attracted to but did not feed on *Rana catesbeiana* and *Bufo boreas.*

These observations extend the known range of host species attractive to and fed on by *C. tarsalis.* The relatively low attractiveness of the several species of reptiles and amphibia, would indicate that they are less likely to serve as effective natural hosts of WEE and SLE viruses and sources of vector infection than are warm blooded hosts.

SUMMARY. *Culex tarsalis* was attracted to mosquito traps baited with 7 species of rodents, 7 species of reptiles and 2 species of amphibians. The number of *C. tarsalis* attracted was proportional to the size of the hosts within each major group. Rodents were more attractive than reptiles or amphibians, but less so than 8-week-old chickens or dry ice. A high proportion of mosquitoes fed on most hosts if the animals were adequately immobilized.

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OBSERVATIONS ON MOSQUITO FEEDING ACTIVITY ON THE FLOWER HEADS OF *EUPATORIUM* AND *SOLIDAGO* (COMPOSITAE)

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As pointed out by Bates (1949), it is assumed that in nature plant juices, particularly flowers, form the principal food of male mosquitoes and of females of species not known to suck blood. Early records of mosquitoes as flower visitors are summarized by Howard, Dyar, and Knab (1912). Subsequent records, e.g., Britten (1937) and Philip (1943), add little to the general fact that mosquitoes of both sexes

FIG. 1—Upper portion—male *Aedes vexans,* proboscis extended, on a flower head of *Solidago*; lower portion—stand of *Eupatorium* (note embayment of Wheeler Reservoir). Photo by P. K. Anderson.

are fairly frequently found at flowers. Although general statements on this subject are traditional in mosquito literature, reports of actual observation are scant.

The purpose of this paper is to report recent observations on important mosquito species visiting the flower heads of *Eupatorium* and *Solidago*. This activity was observed from late August through September, 1960, in the Flint Creek area of Wheeler Reservoir near Decatur, Alabama.

On August 30, a male specimen of

Psorophora cyanescens was discovered feeding on a flower head of *Eupatorium serotinum*. Since *P. cyanescens* is a viciously biting floodwater mosquito and *Eupatorium* is quite common in low areas of the Tennessee Valley, followup observations were made on the association. The following day, 26 mosquito specimens, including both males and females, were collected after being observed to feed on *Eupatorium* flower heads. The collections, taken from three different localities in the Flint Creek area of Wheeler Reservoir, yielded four floodwater species: (*Psorophora cyanescens* —2 females; *P. ferox*—2 males, 13 females; *P. ciliata*—1 male; *Aedes trivittatus*—4 males, 4 females).

Casual observations continued through September, and on the 28th a great amount of mosquito feeding was found on the flower heads of goldenrod, *Solidago altissima*. This collection yielded 15 specimens (12 males, 3 females) of *Aedes vexans*, the most abundant floodwater pest species in the Tennessee Valley. Also collected on this date were 12 specimens of *P. ferox* (9 males, 3 females) and 19 specimens of *Ae. trivittatus* (10 males, 9 females).

All of the foregoing observations and collections were made in the morning hours (9–11 a.m.) during the course of other routine mosquito inspections in the area. Mosquito activity was seemingly confined to shaded stands of *Eupatorium* and/or *Solidago* at a woodland-open field ecotone on bright, sunny days, but was observed on an overcast day in a stand of *Solidago* along a fence row dividing two open fields.

Evidence indicates that some of the male specimens of *Ae. vexans* were freshly emerged in that their bodies were yet soft and moist, the genitalia had not rotated, and pigmentation had not fully darkened. This implies that the flower heads of goldenrod, in this instance, were the very first food source for the specimens.

It is to be noted that representative specimens of all of the species herein mentioned were observed to assume characteristic feeding positions preceded by probing action. The specimens exhibited persistence in their activity to the point that they were not easily disturbed even by the handling of flower heads during photography. Despite the fact that the females of all of these mosquito species are fierce biters of man, they showed no inclination to forsake the flower heads in favor of the human blood source during collections.

The upper portion of figure 1 shows a male specimen of *Ae. vexans*, with proboscis extended, on a flower head of *Solidago;* the lower portion shows a stand of *Eupatorium* with a small embayment of Wheeler Reservoir in the background.

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