SCIENTIFIC NOTES

NOTES ON THE MOSQUITO, *Haemagogus equinus* THEOBALD

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The mosquito, *Haemagogus equinus* Theobald, was first reported from the United States in 1956 (Trapido and Galindo, 1956). This species, collected from Brownsville, Texas, is considered to be of significance in the epidemiology of yellow fever. Following the publication of the above report, several investigators, over a period of about three years, collected intensively in the Brownsville area and along the Texas-Mexico border as far west as El Paso, Texas. The mosquito was recovered on several occasions, but all collections were in the vicinity of Brownsville, Texas (see Eads and Strom, 1957; Breland, 1957, 1958).

Until a short time ago, the writer made his last collection in the Brownsville area in the summer of 1959. A few *H. equinus* were collected at that time, but since then, several collections by graduate students, and by other investigators (verbal reports) have failed to recover the species. These developments have apparently caused some workers to conclude that *H. equinus* is no longer occurs in the United States.

The present note is to report the recent recovery of *Haemagogus equinus* from the Brownsville, Texas area. The collection site was approximately 16 miles east of Brownsville, and in a cavity in a Texas ebony tree from which the writer collected the species several years previously. When this tree hole was first examined on June 19, 1962, no free water was present, but there were traces of moisture. Strained pond water was added to this and several other cavities in the vicinity. Approximately 30 hours later, on June 20, the water was recovered from this and two other cavities to which water had been added. The next morning, first instar larvae were noted in the collecting jars from two of the cavities, and from one of these, three specimens of *H. equinus* were reared. Five other larvae were also present, one of *Aedes triseriatus* (Say) and four of *A. zoosophus* D. & K. Only *A. zoosophus* was recovered from the other tree hole.

This collection strengthens the suggestion that *H. equinus* is well established in the Brownsville area (Breland, 1958). It also confirms the value of the addition of water, in the absence of natural tree water, for the collection of tree hole breeding species. A third point to be noted is that the absence of a given species from an area or site at a particular time, does *not necessarily* mean that the species does not occur in the region. The writer, over a period of several years, has collected eleven times from the same tree hole from which *H. equinus* was recovered. *Haemagogus equinus* has been found only twice in this particular cavity.

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Literature Cited

BRELAND, OSMOND P. 1957. Some factors that might influence the reintroduction of the yellow fever virus into the United States. Texas Jour. Sci. 9:262–266.

BRELAND, OSMOND P. 1958. A report on *Haemagogus* mosquitoes in the United States with notes on identification (Diptera: Culicidae). Ann. Ent. Soc. Amer. 51:217–221.

EADS, R. B., and STROM, L. G. 1957. An additional United States record of *Haemagogus equinus*. Mosquito News 17:86–89.

TRAPIDO, HAROLD, and GALINDO, PEDRO. 1956. Genus *Haemagogus* in the United States. Science 123:634.

RECOVERY OF A CYNIPOID PARASITE FROM *Hippelates* PUPAE

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During the course of studies on the breeding niches of *Hippelates* eye gnats (Mulla 1962) large quantities of soil were washed for the recovery of *Hippelates* pupae and puparia. A simple technique was perfected where *Hippelates* pupae or puparia were floated out of the soil by means of water. The soil washing and the work on the recovery of pupae and puparia were carried on in cooperation with the Coachella Valley Mosquito Abatement District in Riverside County, California. Recovery of pupae or puparia by flotation from the soil was initiated in 1958.

A number of pupae recovered during 1958 were placed individually in shell vials containing moist sand or a wad of cotton. The pupae were held for gnat emergence for several weeks (Mulla 1962) at room temperature.

After the emergence of most of the gnats, a