



Vector Hazard Report

The mosquito *Haemagogus equinus* has been found in Texas for first time in over 50 years.

POC: For more information, please contact Mr. David Pecor, Walter Reed Biosystematics Unit, pecord@si.edu. Or visit the WRBU website: <https://www.wrbu.si.edu/>.

Summary: In October 2022, WRBU confirmed the identification of a single *Haemagogus equinus* female specimen submitted by Dr. William Sames. Confirmation of this species is the first recorded occurrence of this species in Texas since 1962. This report details the bionomics, distribution and identification of this species to increase awareness among those conducting mosquito surveillance in Texas.

Haemagogus equinus (Theobald, 1903)



Bionomics: *Haemagogus equinus* is a tree hole breeding species and is found in areas supporting medium to large trees. In South Texas, these areas are most commonly found in riparian zones. Increased rainfall may offer more opportunities to collect this species as larvae from recently filled tree holes.

Medical Importance: Dengue, Yellow fever virus has been detected in *Hg. equinus* (De Bodaniche & Galindo, 1957, os Souza, & Freieri, 1991). Although vector capacity has not been fully evaluated for these and other arboviruses found across the Neotropical region, other species of this genus can spread disease to humans such as Dengue, Yellow fever, Zika and Mayaro viruses (WRBU, 2022).

Distribution: This species has been found across Central America, as well as Jamaica, Trinidad and Tobago and Venezuela. In the US, it has only ever been collected from Cameron County, TX with the last collection recorded in 1962. This latest record was reported from Kinney County and is evidence that this species may be more widely distributed in South Texas than previously known. A map displaying the known distribution of this species is provided in **Figure 1**.

Identification: A visually striking mosquito, adult *Hg. equinus* have broad, flat scales that are iridescent and white. They will appear blue silver at times depending on ambient lighting. Pre and postspiracular setae are absent and the antepnotum is large (nearly mid-dorsal) in adult females. Adult females and larvae of this species can be identified using Darsie & Ward, 2005. Images of the *Hg. equinus* specimen collected in Texas are presented in **Figure 2**.

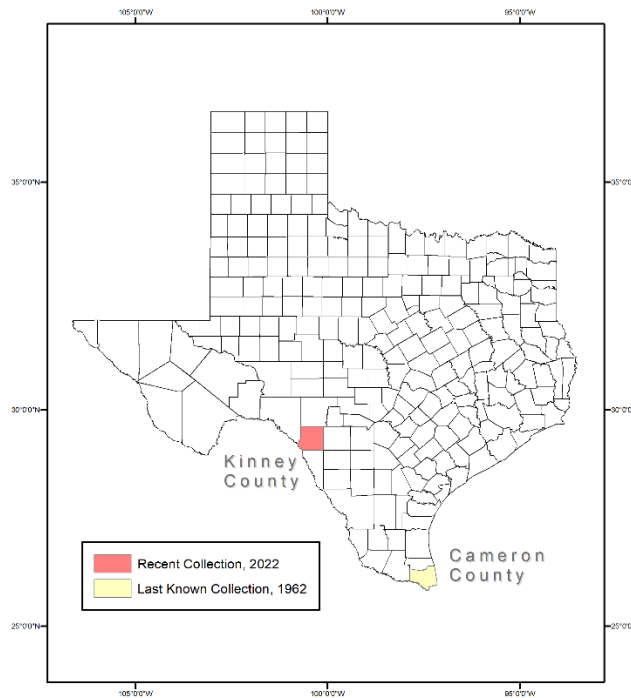


Figure 1: Distribution Map of *Hg. equinus* in Texas.

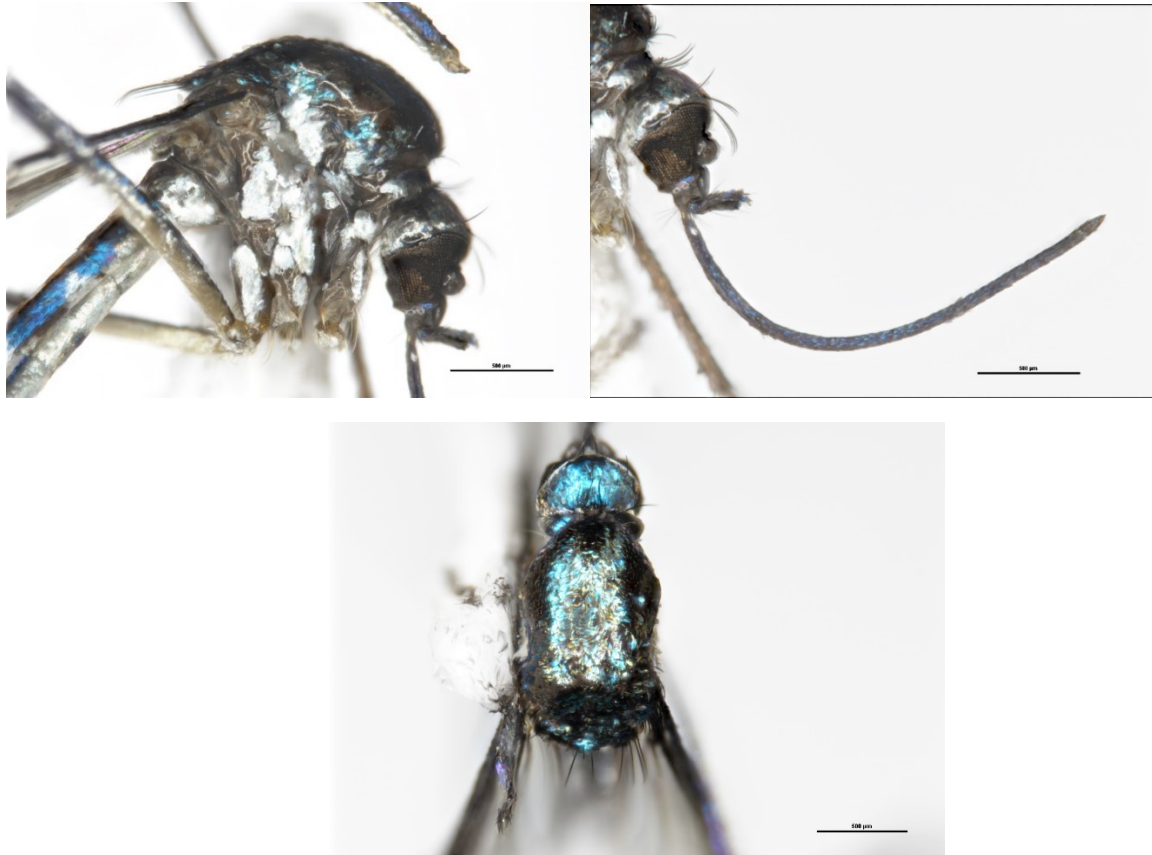


Figure 2: View of *Hg. equinus* (clockwise from L): Lateral view of thorax (pleuron), lateral view of head and proboscis; dorsal view of thorax (scutum). Photo Credit: WRBU

References:

os Souza, M.A., & Freieri, J. E. (1991). Vertical transmission of dengue 1 virus by *Haemagogus equinus* mosquitoes.

Darsie, R.F. AND Ward, R.A. and (2005). *Identification and Geographical Distribution of the Mosquitoes of North America, North of Mexico*. University Press of Florida, USA, 2005. ISBN0 8130 2784 5. USA.

De Bodaniche, E., & Galindo, P. (1957). Isolation of yellow fever virus from *Haemagogus mesodentatus*, *H. equinus* and *Sabethes chloropterus* captured in Guatemala in 1956. *American Journal of Tropical Medicine and Hygiene*, 6(2), 232-7.

Walter Reed Biosystematics Unit (2022). *Haemagogus* genus page. Walter Reed Biosystematics Unit Website, <http://wrbu.si.edu/vectorspecies/genera/haemagogus>, accessed on 16 Oct 2022.