

USED TIRES AS A MEANS OF DISPERSAL OF *Aedes Aegypti* IN TEXAS

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The yellow fever mosquito, *Aedes aegypti* (Linnaeus), lays its eggs in water-holding containers such as tin cans, bottles, flower vases, and tires. In the Texas *Aedes aegypti* Eradication Program, *Ae. aegypti* larvae have been found more often in tires than in any other type of container (Table 1).

TABLE 1.—Frequency of tires as a source of *Aedes aegypti* larvae in unsprayed areas of Texas, 1964-1965

City	Total number of containers with <i>aegypti</i>	Tires	
		Total number of tires	Percent of total
Austin	435	139	32.0
Dallas	274	109	40.0
Fort Worth	87	44	50.6
Houston	1,437	871	60.6
Longview	82	37	45.1
Kilgore	46	35	76.1
San Antonio	1,505	373	24.8
Waco	126	56	44.4

Mosquito control workers have long recognized that live *Ae. aegypti* eggs can be transported long distances in used tires. This phenomenon becomes very important when infested tires are transported to uninfested areas or to areas that have achieved eradication.

Through communication with used tire dealers, it has been learned that tire shipment is widespread in Texas, probably constituting the most efficient means of dispersing this mosquito.

This paper reports two cases in which *Ae. aegypti* infestations due to shipment of tires were discovered in the Lower Rio Grande Valley in Cameron and Hidalgo counties. According to available information, this mosquito has been absent from this area since December of 1961.

The *Aedes aegypti* Eradication Program began inspection work in May of 1964. Collections were negative for *Ae. aegypti* until October 22, 1964, when larvae of this species were taken from a single tire at a tire store in McAllen, Hidalgo County. This tire had been transferred away from McAllen earlier, then after a 45-day absence had been transferred back again. At the time of the inspection, when it was found positive, it had been back in McAllen two weeks.

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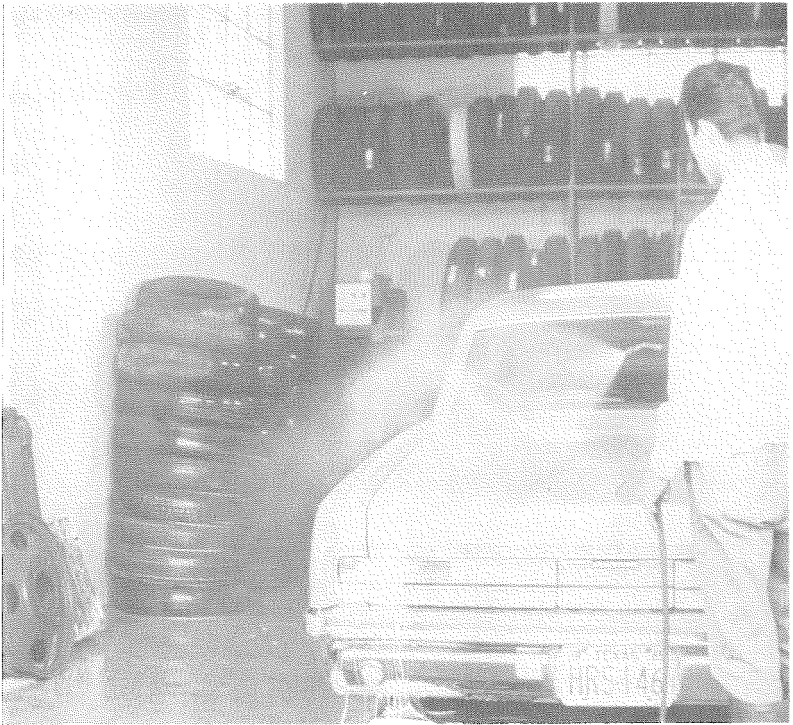


FIG. 1.—Flooding of *Aedes aegypti* eggs in tires during car washing operation. Donna Texas.

Two other mosquito species, *Orthopodomyia signifera* (Coquillett) and *Aedes atropalpus* (Coquillett), were also taken from this tire. According to Hill, *et al.* (1958), these two species had not been previously recorded in either Cameron or Hidalgo county. Subsequent inspections in the immediate area around the tire company were negative for *Ae. aegypti*, *O. signifera*, and *Ae. atropalpus*.

Because of the discovery mentioned above, a routine inspection of sixty tire yards and other establishments concerned with the movement of tires in the Lower Rio Grande Valley was initiated in March of 1965. These sixty sites were inspected nine times between March 1 and October 29, 1965. *Ae. aegypti* was collected one time—on April 5, 1965, when 26 third and fourth instar larvae were

found in two tires at a service station in Donna, Hidalgo County (Figure 1). These tires had been purchased on August 11, 1964 from a tire dealer in San Antonio, a city known to be heavily infested with *Ae. aegypti*.

In order to determine whether the infestation had spread in Donna, 76 blocks and 1,059 premises in the area surrounding the service station were inspected.

All collections were negative for *Ae. aegypti*. In addition to searching for positive containers, scrapings from the inside of tires were examined microscopically for the presence of eggs. The results were negative.

From the above instances the importance of locating tire distributors in *Ae. aegypti* infested areas and preventing the shipment of infested tires is apparent. In

addition to being of intra-state importance, the shipping of infested tires may also be of interstate and international significance in the dispersal of *Ae. aegypti*.

SUMMARY. Mosquito-control workers have long recognized that live *Aedes aegypti* eggs can be transported long distances in used tires. In Texas, the practice of shipping used tires is widespread and probably constitutes the most efficient means of dispersing this mosquito, often

from infested areas to uninfested areas or areas that have achieved eradication.

This paper details two instances of the spread of *Ae. aegypti* from infested to clean areas via used tires.

Reference Cited

- HILL, S. O., SMITTLE, B. J., and PHILIPS, F. M. 1958. Distribution of Mosquitoes in Fourth U. S. Army Area. Entomology Division, Fourth U. S. Army Medical Laboratory, Fort Sam Houston, Texas. 155 p.