

Aedes albopictus IN CHICAGO, ILLINOIS

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The discovery of an *Aedes albopictus* (Skuse) infestation in Harris County, Texas in 1985 (Sprenger and Wuithiranyagool 1986) has initiated the search for other similar situations throughout the United States. Since the first discovery of this species in 1983 in Memphis, Tennessee, (Reiter and Darsie 1984), it has been found in numerous northern locations including southern Illinois, East St. Louis, Ohio, Missouri, (Centers for Disease Control 1986), Delaware (Dr. Chester Stachecki, personal communication) and North Carolina (Dr. Barry Engber, personal communication). On August 13, 1987 two females and one male *Ae. albopictus* were collected on the property of a tire retreader and resaler located in Chicago, Illinois along the north branch of the Chicago River (Lat. 41° 55' N). Our identification of the specimens as *Ae. albopictus* was verified by Dr. Ronald A. Ward, Walter Reed Army Institute of Research, and the specimens were deposited in the collection at the National Museum of Natural History, Smithsonian Institution. Further collections in other parts of the tire storage area immediately following the initial discovery, revealed a large *Ae. albopictus* infestation originating from truck tires innundated with water and organic debris. Landing counts of *Ae. albopictus* varied from 2 to 8 per minute at different locations around the yard.

The owner of the tire yard informed us that the tires were not directly shipped from overseas but had been brought into the plant from other U. S. locations. It appears that the intrastate and interstate movement of tires is a significant source of new *Ae. albopictus* colonies. No accurate data could be obtained concerning the length of time the tires had remained within the yard, leaving open the possibility that the mosquitoes could have overwintered within these tire piles. A helicopter search of the area around the tire yard produced no evidence of any other

tire piles that could have caused the infestation.

The occurrence of *Ae. albopictus* in Chicago represents the northernmost collection of this species in the Midwestern states. Nawrocki and Hawley (1986) estimated that the maximum northern expansion and overwintering range corresponds with the -5°C and 0°C isotherms, respectively. The daily mean temperature in January for Chicago (O'Hare International Airport) is reported to be -6.5°C (National Oceanic and Atmospheric Adm. 1987). This value represents the mean temperatures in outlying areas and not those of the inner city where the mosquitoes were collected. Adjacent to the tire piles is a large sewage discharge station, which empties into the river. The effluent may influence the winter microclimate in the area due to its temperature when entering the river. Also, the Chicago River is reported to rarely freeze over. These factors may raise local microhabitat temperatures, thus enabling *Ae. albopictus* to overwinter in areas north of the 0°C isotherm.

REFERENCES CITED

- Centers for Disease Control. 1986. Update: *Aedes albopictus* infestation - United States. *Morb. Mort. Wkly. Rep.* 35:649-651.
- National Oceanic and Atmospheric Administration. 1986. Annual summary with comparative data: Chicago O'Hare International. NOAA Local Climatological Data. January 1987.
- Nawrocki, S. J. and W. A. Hawley. 1987. Estimation of the northern limits of distribution of *Aedes albopictus* in North America. *J. Am. Mosq. Control Assoc.* 3:314-317.
- Reiter, P. and R. F. Darsie, Jr. 1984. *Aedes albopictus* in Memphis, Tennessee (USA): An achievement of modern transportation? *Mosq. News* 44:396-399.
- Sprenger, D. and T. Wuithiranyagool. 1986. The discovery and distribution of *Aedes albopictus* in Harris County, Texas. *J. Am. Mosq. Control Assoc.* 2:217-219.