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SCIENTIFIC NOTE

SEASONAL INCIDENCE OF *AEDES (RHINOSKUSEA) PORTONOVOENSIS* IN A MANGROVE FOREST OF SOUTH INDIA

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ABSTRACT. The seasonal incidence of *Aedes (Rhinoskusea) portonovoensis* in its type locality is reported. This is the 1st information on the bionomics of this species described from a mangrove forest in South India. Peak density of adults occurred in August. The larval habitat of the species is also defined.

KEY WORDS *Aedes portonovoensis,* seasonal incidence, mangrove forest, crab hole, larval habitat

Aedes (Rhinoskusea) portonovoensis (Tewari and Hiriyan 1991) was first described from a mangrove forest in South India. Except for the brief mention of the immature habitat and adult resting site included in their collection report, no other information is available on the bionomics of this new species. In a recent study on mosquito fauna of mangrove forests, conducted in the type locality of this species, we recorded the seasonal incidence of *Ae. portonovoensis* for the 1st time.

Monthly collections were made in Pichavaram mangrove forest on the eastern coast of South India (11°27′N, 79°47′E) for 1 year, from June 1997 to May 1998. Swamp pools, tree holes, and crab holes were sampled for immatures, and the mangrove vegetation, including aerial roots and tree holes, and the crab holes were searched for resting adults. The number of *Ae. portonovoensis* adults collected monthly from 10 crab holes was used to determine the seasonal incidence of the species. Resting mosquitoes were dislodged by gently blowing air into the crab hole, and all the adults were quickly drawn into an aspirator. Monthly density was expressed as the number of adult mosquitoes per 10 crab holes.

The seasonal distribution of *Ae. portonovoensis* is shown in Fig. 1. Adult abundance, which remained at a low level from February to April, increased from May through July and reached a maximum in August. The number of adults per 10 crab holes ranged from 3 in January to 358 in August. The hottest months are May, June, and July, whereas November and December are cold, with maximum rainfall. During the months of November and December, crab holes remained totally submerged because of inundation of the mangrove swamp, and consequently no adults were captured. Crab holes contained different water levels, and adults rested above the water. Adults were found hovering above the water in some crab holes. When disturbed, adult mosquitoes did not exhibit a tendency to fly away from the crab holes, but flew up and resettled within the hole. Both males and females were collected from crab holes, and the females included blood fed and gravid individuals.

Although adults of *Ae. portonovoensis* were found in crab holes most months of the year, larvae of the species were collected from this habitat only during the months of August, September, October, and January. In swamp pools, except during May, June, and July, larvae were collected during the rest of the year. A high proportion (0.2) of crab holes was found with larvae in September and October. Seasonal fluctuation of adult and immature abundance could not be compared, as larval density was not quantified.

Although our observation supports the report of Tewari and Hiriyan (1991) on the occurrence of

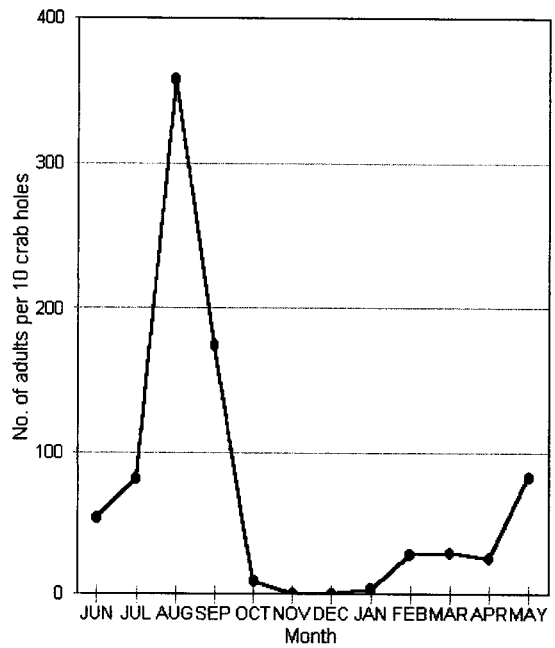

Fig. 1. Seasonal incidence of *Aedes portonovoensis,* June 1997 to May 1998.

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larvae in crab holes and swamp pools, sampling of more than 400 tree holes did not yield larvae of *Ae. portonovoensis*. Tree holes at ground level in this mangrove forest, where larvae were collected by Tewari and Hiriyan (1991), are hollow regions of the trunk that are open and merge with the swamp pools; hence they cannot be considered typical tree holes. We therefore consider crab holes and swamp pools to be the larval habitats of this species, to the exclusion of tree holes.

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REFERENCE CITED

Tewari SC, Hiriyan J. 1991. Description of new species of *Aedes* (*Rhinoskusea*) from South India. *Mosq Syst* 23:123–131.