SCIENTIFIC NOTE

Occurrence of the Malaria Vector *Anopheles albimanus* Wiedemman (Diptera: Culicidae) in Isla Fuerte, Colombia

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Ocorrência do Vetor da Malária *Anopheles albimanus* Wiedemann (Diptera: Psychodidae) em Isla Fuerte, Colômbia

RESUMO - Pela primeira vez, é registrada a ocorrência do *Anopheles albimanus* Wiedemann em Isla Fuerte, Colômbia. Um total de doze mosquitos fêmeas foi capturado com armadilha Shannon em um ambiente peridomiciliar da ilha. Discute-se a relevância epidemiológica desta descoberta.

PALAVRAS-CHAVE: Anophelinae, inseto vetor, mosquito, distribuição geográfica, Caribe colombiano

ABSTRACT - This is the first report of the occurrence of *Anopheles albimanus* Wiedemann in Isla Fuerte, Colombia. Twelve female mosquitoes were collected using an illuminated Shannon trap in a peridomestic environment of the island. The epidemiological relevance of this finding is discussed.

KEY WORDS: Anophelinae, insect vector, mosquito, geographical distribution, Colombian Caribbean coast

Anopheles albimanus was originally described by Wiedemann, 1820, from specimens collected in Santo Domingo, Dominican Republic. It is predominantly a tropical lowland species most abundant at elevations less than 100 m and occurring in greatest abundance in coastal plains or along waterways running to the coast (Faran 1980, Frederickson 1993). *A. albimanus* has a wide geographical distribution extending from the Southern United States to Northern Peru, including the following islands: Antigua, Bahamas, Barbados, Barbuda, Cayman, Cuba, Florida Keys, Guadeloupe, Hispaniola, Jamaica, Marie Galante, Montserrat, Nevis, Puerto Rico, Saint Martin, San Andrés, and Virgins (Faran 1980, Frederickson 1993, Olano *et al.* 2000).

Although predominantly zoophilic and exophilic in host-seeking and feeding behavior (Elliot 1968, Quiñones *et al.* 1987), *A. albimanus* is an important vector of malaria throughout its distribution. In Colombia, *A. albimanus* is the main vector of malaria in rural and periurban areas of the Caribbean and Pacific coast, and is reported to be responsible for 56.3% and 70.5% of the total capture of adults and larvae mosquitoes throughout coastal zone (Quiñones *et al.* 1987). During September 1, 2000, while conducting entomological studies in Isla Fuerte, Colombia, we found 12 females of *A. albimanus* in a peridomestic environment. This is the first report of the occurrence of this malaria vector over the island. Mosquitoes were collected using an illuminated Shannon trap, and morphologically identified according to the taxonomic key of Suárez *et al.* (1988).

Isla Fuerte is an insular territory of Colombia, situated 9° 23' N and 76° 11' W, and lies 11 km of the Caribbean coast. The island has an area of 3.25 km^2 and a maximum altitude of 12 m (Anderson 1975). The climate is tropical, with an average annual temperature of 27°C and a mean annual rainfall of 1300 mm (IGAC 1975). The agriculture, one of the major activities on the island, has changed the environment in some areas from forest to fields of coconuts and fruits. In recent years, human activities derived from the tourism have also destroyed part of the original habitat.

The presence of *A. albimanus* in Isla Fuerte poses a potential risk for the interaction of this mosquito species with *Plasmodium*-infected humans, the parasite causing the malaria. *Plasmodium* spp. can persist in humans as an asymptomatic disease for many years following an untreated or incompletely treated primary infection (Arnot 2002). In fact, a very high percentage of asymptomatic individuals has been detected in Colombia's endemic zones (Jiménez *et al.* unpublished). In Isla Fuerte during the last two years, a lot of people displaced by the violence have arrived from disease-endemic areas, representing a high risk of spreading malaria. Given the co-occurrence of vector and parasite over the island, the local health authorities need to be aware of the risk of appearance of autochthonous malaria cases. More studies are necessary to know the biology and binomics of *A. albimanus* in Isla Fuerte, as well as to evaluate its relationship with the man in this island.

The specimens collected were deposited in the

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