Mosquitoes (Culicidae) biting a fish (Periophthalmidae). J. Med. Ent. 2:16

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MOSQUITOES (CULICIDAE) BITING A FISH (PERIOPHTHALMIDAE)

Abstract: *Aedes (Geushaeus) longiforceps* Edwards was taken biting a mud-skimmer on Gizo I., British Solomon Islands.

Two early records (Murray 1885; Combes 1896) of mosquitoes biting fish were not substantiated by collection and identification of the insects, which Howard, Dyar & Knab (1912) consider were not Culicidae but Simuliidae. As far as we have been able to ascertain, the present case is the first authentic record; the mosquitoes were collected and identified, and the fish can be placed in the Family Periophthalmidae.

While doing a larval survey at Niumada, Gizo I., British Solomon Islands Protectorate on 23 May 1964, R. Slooff observed a "cloud" of culicines hovering over a mud-skimmer on the bank of a tidal stream. A close examination revealed that some mosquitoes had alighted on the fish's head, and were piercing the soft skin between its eyes with their mouthparts. Some were gorged with pale blood obtained from the fish. Although the fish was alive it did not move when the mosquitoes were collected, but subsequently it returned to the water and swam away. The mosquitoes did not attempt to bite the collector or his technician. The six mosquitoes collected were identified (by E.N.M.) as females of *Aedes (Geushaeus) longiforceps* Edwards. Belkin (1962) states that *A. longiforceps* appears to be the dominant species of *Geushaeus* in the Solomon Islands; both larvae and resting adults are found in holes made by land crabs near the coast; on Guadalcanal the females bite man very readily.

Due to lack of equipment the fish could not be preserved, but six specimens of mud-skippers, collected on 6 August 1964 at exactly the same place, were identified by G. P. Whitley as *Periophthalmus musgravei* Whitley. As there may be more than one species of mud-skimmer in the Solomons (Whitley, in litt.), it is not certain that the one attacked by the mosquitoes belonged to the same species.

Mud-skippers can stay a long time out of the water and may rest on roots or trunks of mangroves; some species make burrows in the mud in which they shelter, but they may also use the burrows of crabs and crabs (Whitley 1964). Mud-skippers may thus present the most readily accessible source of vertebrate blood for crab-hole dwelling mosquitoes in the same locality; possibly these mosquitoes will be found also to use mud-skimmer burrows as resting places. A reverse relationship may also occur; Hickson (1889) reported that he had frequently found flies and mosquitoes in the stomachs of mud-skippers.

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REFERENCES


