

12500-1117

(Reprinted from the Proceedings of the Entomological Society of Washington,
Vol. 47, No. 3, March, 1945.)

SOUTH EAST ASIA MOSQUITO PROJECT
DEPARTMENT OF ENTOMOLOGY
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C. 20560

A NEW SPECIES OF AEDES FROM SAIPAN AND THE LARVA OF
AEDES PANDANI (Diptera: Culicidae)

By ALAN STONE

*Bureau of Entomology and Plant Quarantine, United States Department of
Agriculture*

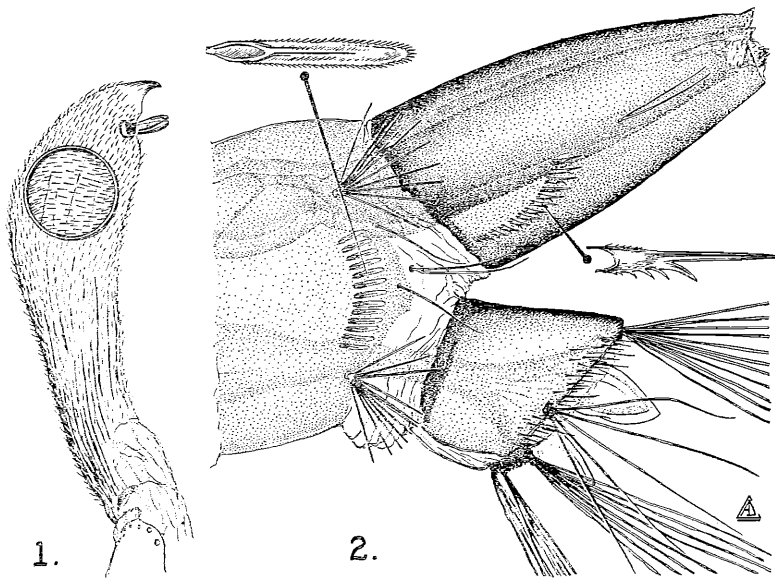
As the result of recent collecting by Army and Navy entomologists on the island of Saipan, Marianas Islands, a series of specimens has been received of what appears to be an undescribed species of mosquito. This was tentatively determined in the field as *Aedes pandani* Stone, a species known only from Guam, but the coloration of both sexes and the structure of the male genitalia show the two species to be quite distinct although related. I am indebted to Lt. (jg) Joseph Greenberg, USNR, and to Capt. David G. Hall, AUS, for these specimens.

Before the male of the new species was discovered, it was thought possible that the material from Saipan was no more than a race of *Aedes pandani* from Guam. The need for larvae of the latter species was expressed, and the National Naval Medical School requested these from the Naval Epidemiological Unit on Guam. I am indebted to these organizations, and particularly to the collector, Lt. (jg) Engel L. R. Gilbert, for so promptly supplying the desired specimens, which confirm the close relationship but specific distinctness of the two species.

Aedes (Stegomyia) saipanensis, new species

Female.—Length 3.6 mm., wing 2.5 mm. Scales of vertex flat, creamy white medially, flanked on each side by a dark-brown patch of about the same width, and a broad lateral patch of creamy-white scales usually broken by a narrow line of dark ones; a narrow line of pale scales and overhanging yellow setae between the eyes, and flat yellowish scales on the yellow tori; clypeus dark brown; palpus about one-fourth length of proboscis, nearly black, with a small apicodorsal white area; proboscis dark brown, the labella and a narrow mid-ventral line slightly paler. Anterior pronotum with long yellow setae above and flattened yellowish-white scales below; posterior pronotum with a patch of flat white scales; scales of mesoscutum narrow, deep reddish brown except for a pattern of yellow scales as follows: A narrow median line slightly narrowed to the prescutellar bare area and divided to border this area to the scutellum; a pair of narrow sublateral stripes from level of anterior spiracle to the scutellum; a marginal band on each side from front of scutum to above wing base; the sublateral stripe, which borders the supra-alar area, does not join the marginal stripe anteriorly; scales of scutellum broad, those on median lobe pale yellow, on lateral lobes dark brown; paratergites with broad yellow scales; pleuron with flat white scales on propleuron, a patch on upper portion of sternopleuron widening posteriorly and bordering hind margin below, and a patch on mesepimeron above and medially; postspiracular setae few; no lower mesepimeral setae. Wing scales all dark; halter pale yellow with only a few dark scales dorsally near base of knob, the rest of scales yellow. Coxae yellow with patches of broad white scales; fore femur anteriorly mainly dark-scaled with a narrow row of pale scales not reaching apex and a very small apical yellow spot; posteriorly all but ventral margin with pale-yellow scales; fore tibia dark brown with scattered pale scales posteriorly; fore tarsus dark, the first segment with a small patch and the second with several white scales dorsally; mid femur dark anteriorly except for a very small yellow spot at apex, mostly pale posteriorly; mid tibia dark except for a pale posterior stripe; mid tarsus dark except for complete, narrow white bands on first two segments; hind femur pale except for a narrow dorsal stripe widening apically; apex narrowly yellow; hind tibia almost entirely dark; first hind tarsal segment with a white band about one-fourth length of segment, broken by a dark stripe on inner surface; second and third segments with complete white rings about one-fourth and one-third of the segments, respectively; usually a few white scales or narrow bands at bases of segments 4 and 5. Abdomen dark brown with complete basal bands of whitish scales on tergites 2-7; these bands widen laterally except on tergite 7, where the band is widest medially; sternites white, with a broad apical dark band on sternite 6 and traces of dark bands on the more anterior sternites.

Male.—Color essentially as in female, but tori somewhat darker. Palpus nearly as long as proboscis, with white bands, sometimes incomplete, at bases of segments 3-5. Dorsal abdominal pale bands often broken medially. Genitalia: Rather similar to those in *pandani* but the dististyle (fig. 1) broader subapically and more densely covered with fine pile, which points medially on the dorsal surface, distally on the ventral surface, and the subapical spine stouter and double; the basal lobe forms a concave shelf, broad dorsally, narrowed ven-



Aedes (Stegomyia) saipanensis, n. sp. Fig. 1.—Dististyle, ventral view (portion in circle shows direction of setae on dorsal surface). Fig. 2.—Larva, eighth and ninth segments; comb scale and pecten tooth, enlarged. (Drawn by Arthur D. Cushman.)

trally, densely clothed with hairs which are longer and straighter on dorsal portion, shorter and with an inward bend on ventral portion; ninth tergite concave medially, with a few hairs on the broad lateral lobes.

Holotype female and 19 paratypes, U. S. National Museum No. 57197 and British Museum.

Type locality.—Saipan, Marianas Islands.

Collection data.—Holotype and 6 female paratypes, June-July 1944 (Joseph Greenberg); 6 male paratypes, October 1, 1944 (Joseph Greenberg); 3 female, 4 male paratypes, Hashigaro and Laulau, Saipan, August 22 to September 6, 1944 (David G. Hall).

The color characters which most readily separate this species from the closely related *pandani* are the narrow line of paler scales on the under surface of the proboscis, the abundant pale scales on the knob of the halter (these are all dark in *pandani*), the somewhat darker integument most noticeable on the pleuron and the postnotum, and the complete abdominal bands of the female.

The larva of this species was also collected by Lt. (jg) Joseph Greenberg in considerable numbers and is herein described.

Larva (fig. 2).—Length 5.25 to 6.25 mm. Head slightly broader than long; antenna about 6 times as long as greatest width, scarcely tapering, its length about one-fourth width of head; no spicules; a single antennal hair at about five-eighths distance from base; clypeal spines single, slender, pale, curved downward; anteantennal hair (A) double; lower head hair (B) single or double, placed close to front of clypeus; upper head hair (C) long, single, placed well anterior to hair A; postclypeal hair (d) a small tuft of about 8 hairs slightly anterior to and mesad of hair B; sutural hair (e) and transutural hair (f) both very fine, single. Thorax: Prothoracic submedian hairs 3, the inner posterior one a tuft of about 5 long, slender hairs, the outer anterior one a tuft of about 10 straight, rather short, stouter setae, and the third, between these tufts, a single long, slender hair; 3 more pairs of dorsal stellate tufts and 4 ventral pairs on thorax; a very short basal spine on metathoracic pleural hair tuft. Abdomen: Segments 1-7 each with an anterior submedian, a posterior submedian, and a posterior sublateral pair of stellate hairs dorsally, and a posterior submedian pair of stellate hairs ventrally; lateral tuft of first segment with 5-6 hairs, of second with 4-5 hairs, and of the remaining segments with 2-3 hairs; comb of 16-18 long, finely fringed scales, closely set in a curved row; eighth segment with 2 siphonal tufts, 1 stellate, 1 a single hair, 2 subsiphonal hairs, 1 double, 1 single, and 1 stellate anal hair; siphon very sparsely pilose, the index about 2.0; no acus; pecten of about 15 teeth set in a row which curves dorsoapically and reaches only about two-thirds length of siphon, each tooth with several lateral teeth subbasally on the ventral side; siphonal hair double, somewhat beyond middle; anal ring rather widely separated ventrally, the hind margin strongly curved so that the dorsal length of the saddle is decidedly greater than its ventral length; saddle very sparsely spicular pilose except near the hind margin, where the pile is longer and merges into the irregular fringe of longer hairs; saddle hair tuft of 4-6 rather short, stout hairs; gills stout, pointed apically, the dorsal pair slightly longer than the ventral pair and both usually shorter than dorsal length of saddle.

The larvae were found in water held in holes in breadfruit and banyan trees, and less frequently in the axils of *Pandanus* leaves.

Aedes (*Stegomyia*) *pandani* Stone

Aedes (*Stegomyia*) *pandani* Stone, 1939, Ent. Soc. Wash., Proc. 41: 162.

Larva.—Length 6 to 7 mm. Head slightly broader than long; antenna about 4.5 times as long as greatest width, scarcely tapering, its length about one-fourth width of head; no spicules; a single antennal hair about at middle; clypeal spine pale, stout at base and split into 2-4 downward curving filaments; anteantennal hair (A) double; lower head hair (B) single or double, placed close to front of clypeus; upper head hair (C) long, simple, placed about on level with hair A; postclypeal hair (d) a small tuft of about 8 hairs slightly anterior and mesad of hair B; sutural hair (e) double, transutural hair (f) single, both very fine. Thorax: Prothoracic submedian hairs, 3 a long single one between 2 multiple ones, the hairs of posterior tuft decidedly longer than those of anterior tuft; stellate tufts arranged, both on thorax and abdomen as in *saipanensis*, but the elements all longer, thinner and paler, and with sparse lateral fraying and an acute apex;

abdominal lateral tufts of 5-6 hairs on first 2 segments, of 2-3 hairs on remainder; comb of about 15-19 long, slender, acutely pointed teeth that are very finely fringed laterally, closely set in a curved row; eighth segment finely spicular-pilose; 2 siphonal hairs, 1 stellate, 1 single, 2 subsiphonal hairs, 1 triple, 1 single, and 1 stellate anal hair. Siphon finely but rather densely pilose, the index about 2.5, its greatest width near middle; no acus; pecten of 22-28 teeth starting a short distance from base and curving abruptly dorsally near middle of pecten, so that the apical half runs nearly at right angles before the middle of the siphon; each pecten tooth almost exactly like a tooth of the comb, although slightly smaller; basal teeth smaller than the long ones of the outer two-thirds; siphonal tuft of 4 hairs, a little beyond middle of siphon, the apex of the nearest pecten tooth almost reaching it; anal ring complete, longest dorsally, the surface rather densely spicular-pilose and this pile gradually lengthening towards hind margin; saddle hair tuft of 8-9 hairs; gills slender, the dorsal pair distinctly longer than dorsal length of anal ring, the ventral pair about equal to this length.

These larvae were collected in the axils of *Pandanus*. Adults from the same source were reared, although they were not submitted. The most obvious differences between the larva of *pandani* and that of *saiipanensis* are found in the clypeal spines, the character of the stellate hairs, and the shape of the pecten teeth.
