

The Finding of a Missing Specimen of *Anopheles*
(*Anopheles*) *alongensis* Venhuis

J. A. Reid

4 Glenwood, Dorking, Surrey, England

ABSTRACT. Reid (1968) reported that a female of this little-known species, supposed to be in the British Museum (Nat. Hist.), could not be found. The specimen has since turned up and differs in one important respect from the description.

This species was described independently by Venhuis (1940) as *Anopheles alongensis*, and later in 1940 by Galliard and Ngu as *A. tonkinensis**. Both descriptions were based on collections made from rock-pools in semi-darkness in caves in limestone islets in the Baie d'Along, Gulf of Tonkin. Venhuis described only the larva from six collected in June 1936. Galliard and Ngu described the adult female, male genitalia, pupa and larva from a collection made in May 1938. The latter recorded that their types were in the collection of the laboratory of parasitology of the School of Medicine, Hanoi, with one female in the British Museum (laboratory of F. W. Edwards).

Reid (1968, p. 221), working at the British Museum, was unable to find the specimen mentioned by Galliard and Ngu. However, it turned up in 1976 when a small collection of mosquitoes from Hanoi, loose in glass tubes, was mounted. The tubes were in a box labelled in Edwards' writing as specimens received from Prof. Galliard in 1939, and mentioning a clear-winged Anopheline. In Edwards' correspondence is a letter from Galliard, dated Paris, 17 June 1939, asking to visit Edwards and show him some mosquitoes collected in Indochina, "especially a species of *Anopheles* from caves in the Baie d'Along". Edwards replied offering any time between July 20th and August 20th".

Most of the collection consisted of common species of Culicines and Anophelines. There was only the one Anopheline specimen with unpatterned wings and legs, and at first I mistook it with a hand lens for a member of the *A. aitkenii* group. But under the microscope it was clear that the specimen belonged to the *culiciformis* group, which includes *alongensis* (Reid, 1968), because it had rather broad head scales instead of very narrow ones, the palps were slightly shorter than the proboscis and thicker than those of the *aitkenii* group, and the first flagellomere of the antenna had dark scales not present in '*aitkenii*'.

*Senevet (1947) pointed out that *tonkinensis* Galliard and Ngu was a junior synonym of *alongensis*. The name *tonkinensis* was, in any case, preoccupied by *A. aconitus* var. *tonkinensis* Toumanoff 1931, now treated as a synonym of *jeyporiensis* var. *candidiensis* Koizumi (see Knight and Stone 1977).

Clearly this is the missing specimen, but one considerable puzzle remains. Galliard and Ngu specifically describe the head-scales on the vertex of *alongensis* (their *tonkinensis*) as shining black and the whole mosquito as without ornamentation of any sort. But this specimen has the vertex scales white forming a conspicuous white patch, and there is also a white frontal tuft; in this respect it differs from the known adults of the other members of the *culiciformis* group (*culiciformis*, *sintoni*, and *sintonoides* as well as *alongensis*) which have black or mainly black head-scales.

From what Galliard and Ngu (1946) say about their original collection, it seems probable that the specimen presented to Edwards will have been collected as a mature pupa so that its larval characters will not have been known. If so, it seems just possible that the specimen might be a female of the remaining member of the *culiciformis* group, *A. kyondawensis* Abraham, which so far is known only from the larva. This differs from the larva of *alongensis* chiefly in having setae 2-C (inner anterior clypeals) very close together, while those of *alongensis* are wider apart than is usual in subgenus *Anopheles*, being closer to 3-C (outer clypeals) than to one another. Both species have curved larval antennae and long plumose sub-antennal hairs (setae 11-C), and the known larval habitats show some similarities as pointed out by Harrison and Scanlon (1975).

Acknowledgments

I am grateful to the authorities of the British Museum (Nat. Hist.) for working space and the use of the Museum's many facilities, and to Mr. John Chainey who mounted the specimen.

References

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*The description is the original one of 1940 reprinted without any alteration, except that the illustrations are reduced in size.

**Venhuis, W. G. 1940. Een nieuwe Anopheleslarva uit Indochina, *Anopheles alongensis* nov. sp. Geneesk. Tijdschr. Ned.-Ind. 80:173-178.

**Venhuis marked 4 of his larvae as types and placed them in the malaria department of the Medical Sciences laboratory, Batavia (=Jakarta). But Bonne-Wepster and Swellengrebel (1953, The anopheline mosquitoes of the Indo-Australian region, p. 102) say that the location of his six larvae is unknown. Possibly they were removed during the Japanese occupation of Java, as happened to the collection of Culicines of the Institute for Medical Research in Kuala Lumpur, Malaya.