

A Note on the Status of *Aedes malayensis*
and the Distribution of *Aedes albopictus*

by

D. H. Colless
Division of Entomology
CSIRO, P. O. Box 1700
Canberra City A.C.T. 2601

In a recent review, Huang (1972) has elevated the former *Aedes scutellaris malayensis* to the rank of species. Its original, subspecific status was based on the demonstration of reciprocal fertility, under laboratory conditions, between it and *Aedes scutellaris scutellaris* (Colless 1962). Huang, however, regards the evidence as still inconclusive, on the curious grounds that hybrid specimens lodged in the B.M. & U.S.N.M. all come from a cross in the single direction, *malayensis* ♂ x *scutellaris* ♀.

Perhaps, then, I should reiterate what was stated in the original paper: that the cross was performed in both directions (once with *scutellaris* as male parent, and twice with *malayensis* in that role), without any obvious differences as regards morphology or biology in the resulting F₁ or F₂ hybrids. The specimens donated to museums came from the cross that was duplicated and that consequently produced more abundant material. However, the Australian National Insect Collection still holds 40♂♂ and 30♀♀ from the F₁ of *scutellaris* ♂ x *malayensis* ♀, plus abundant F₂ material; these are available for examination by interested parties. Perhaps my original statement, that "the cross appeared to be a complete success in both directions", gave the wrong impression; the word "appeared" was included just because the experiments were run on a qualitative, rather than a quantitative basis.

I am not concerned here to argue the point as to the more desirable status for the taxon concerned, which I leave to those still working in that field. I would however use this example to illustrate an ambivalence sometimes to be found with respect to species concepts. Many, perhaps most, taxonomists pay at least lip-service to the "biological species concept", but in practice, they rarely have available anything more than morphological evidence. This can, in my opinion, sometimes result in an over-tenacious adherence to a purely morphological species concept, and an apparent inconsistency, both logical and biological, that can do nothing but disservice to our discipline.

In the present instance, the evidence is by no means complete or final; but it makes a fair, *prima facie* case, to the effect that the two forms would be likely to lose their separate identities were they to come into intimate contact. It might be noticed that the currently accepted status of *A. s. katherinensis* is much more weakly based, since the cross with *A. s. scutellaris* is fully fertile in only one direction (Woodhill 1949). In the latter case, certainly, and in the case of *malayensis*, possibly, one could marshal evolutionary-biological arguments

in favour of specific status for the forms concerned, or, as some do, one could explicitly reject the biological species concept. My point is that one or the other course should be followed, if taxonomy is to be seen as more than inspired hack-work.

As a postscript, Huang (1972) does not include New Guinea in the distribution of *A. albopictus*, no doubt in view of her discovery of very similar species masquerading under that name. And there is little doubt that early records were in part or whole erroneous (Belkin 1962). However, I am now in a position to state that the record from Hollandia (Colless 1962) refers to *A. albopictus* and no other. I have re-examined the specimens, lodged in the Australian National Insect Collection, and they conform quite precisely with Huang's description and figures. The species has presumably been introduced there quite recently (as has *Anopheles karwari*) and it would be very interesting to follow its subsequent history.

REFERENCES

- Belkin, J. N., 1962. The Mosquitoes of the South Pacific (Diptera: Culicidae). Univ. of California Press, Berkeley; 2 vols. 608 and 412 p.
- Colless, D. H., 1962. Notes on the taxonomy of the *Aedes scutellaris* group, and new records of *A. paullusi* and *A. albopictus* (Diptera: Culicidae). Proc. Linn. Soc. N.S.W. 87: 312-315.
- Huang, Y-M., 1972. Contributions to the mosquito fauna of Southeast Asia. XIV. The subgenus *Stegomyia* of *Aedes* in Southeast Asia. I - The *scutellaris* group of species: Contr. Amer. ent. Inst. 9: 1-109.
- Woodhill, A. R., 1949. A note on experimental crossing of *Aedes* (*Stegomyia*) *scutellaris scutellaris* Walker and *Aedes* (*Stegomyia*) *scutellaris katherinensis* Woodhill (Diptera, Culicidae). Proc. Linn. Soc. N.S.W. 74: 224-226.