

## Unrecorded *Aedes* (*Edwardsaedes*) *bekkui* (Diptera: Culicidae) from Korea:

Notes on Taxonomic Diagnosis of Adult and Larva

Kwan Woo Lee, Robert S. Edgecomb and Thomas J. Zorka  
5th Preventive Medicine Unit, 18th Medical Command, U.S. Army,  
APO 96301-0020

As a part of on going mosquito surveillance program, the field survey was conducted in an area of National Forest, Kwangnung, Kyungki Province in June 1987. A rare forest breeder and daytime feeder, *Aedes bekkui*, was collected and identified as a new record to Korea. Thirty-six females and 1 male were captured from human biting, and 2 pupal and 4th instar larval skins and 1 female adult of the first generation were gained from individual rearing of the females captured. The specimens of all stages and both sexes were prepared and preserved in good condition in 5th Preventive Medicine Unit.

Mogi(1977) described in detail both sexes and 4th instar larva and pupa of *Aedes bekkui* as new species from Japan. He established a fact that the records of *Aedes imprimens* by former workers in Japan have sufficient description and figures for judging that they refer to *A. bekkui*. He considered that the misidentification of *A. bekkui* as *A. imprimens* in Japan should be attributed to the earliest record by Yamada (1927) who included only females which are insufficient for identifying the species.

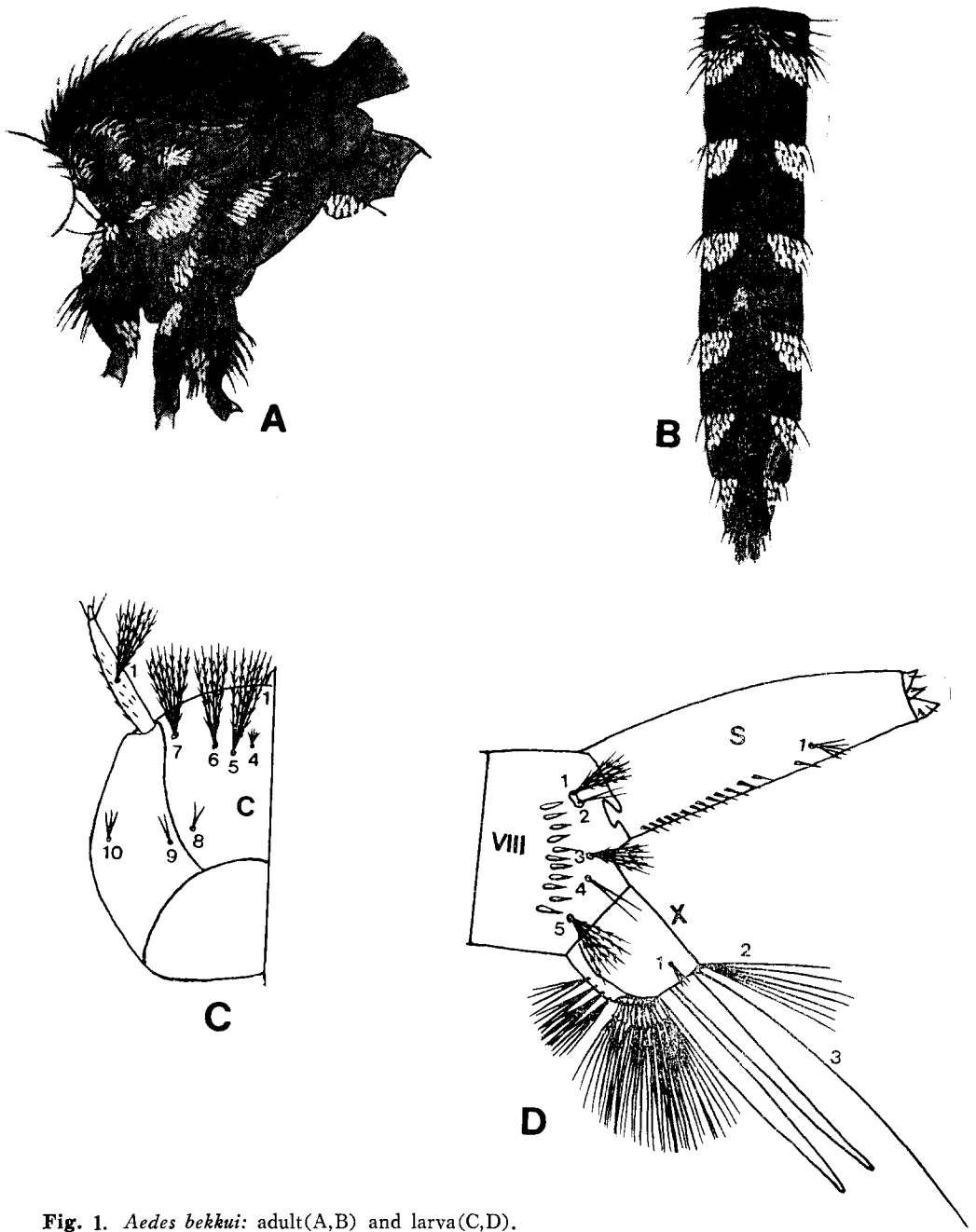
The subgenus *Edwardsaedes* Belkin, 1962 was erected for *A. imprimens* which was the only species represented. In the adults of *A. bekkui*, the subspiracular area is without short fine setae (Fig. 1, A) which does not coincide with the characteristics for the subgenus *Edwardsaedes* given by Reinert(1976). However, the characteristics coincide with the same subgenus *Edwardsaedes* described by Tanaka *et al.*(1979).

In the larva, head hair 4-C is slightly cephalad of 6-C (far cephalad in Reinert, 1976; Belkin, 1962), head hair 5, 6-C are similar and the distance between 6, 7-C is at least two times or more than that between 5, 6-C(Fig. 1, C), terminal hair 3-X is single and much longer than 2-X(Fig. 1, D)(3-X is multiple and slightly longer in Reinert, 1976; Belkin, 1962).

The above larval characteristics are not consistent with those for the subgenus *Edwardsaedes*, but are consistent with those for subgenus *Aedimorphus* (Tanaka *et al.*, 1979). In the adult male and female, however, no significant differences were found in the structure of the genitalia from those for subgenus *Edwardsaedes*. The above diagnoses are just the same as those for Japanese *A. bekkui*. In Korea, *A. imprimens* has been reported by Reisen *et al.*(1971) using only adult females. There are no other reports, and no voucher specimens of this species in Korea. In view of current evidence, *A. imprimens* recorded by Reisen *et al.*(1971) may actually have been *A. bekkui* according to the procedures by Mogi(1977) in Japan.

### REFERENCES

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**Fig. 1.** *Aedes bekkui*: adult(A,B) and larva(C,D).  
A. Thorax, lateral aspect  
B. Abdomen, dorsal aspect  
C. Head, dorsal aspect  
D. Abdominal segment(VIII, X), lateral aspect

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＝국문요약＝

韓國産 모기科的 未記錄種 베꾸순모기 (*Aedes bekkui*):  
成蟲 및 幼蟲의 分類學的 特徵에 관하여

美 8 軍 18 醫務司令部 제 5 豫防醫務隊  
李冠雨 · R.S. Edgecomb · T.J. Zorka

韓國産 모기에 대한 調査研究事業의 일환으로 1987年 6月 京畿道 南陽州郡 光陵에 位置한 林業試驗場 一帶에서 野外採集을 實施한 결과 未記錄種 *Aedes bekkui*(베꾸순모기)를 採集하였기에 이를 보고한다.

成蟲의 特徵은 氣門下區(subspiracular area)에 작은 剛毛가 없는 점이고, 幼蟲의 特徵은 머리털 4-C와 6-C의 간격이 좁고 5, 6-C의 크기와 모양은 서로 대등하며 6, 7-C의 간격은 5, 6-C의 간격보다 2배이상 넓다는 점이다. 또 꼬리털 3-X는 單毛로 되어 있고 2-X보다 상당히 길다.

Tanaka의 檢索表에 따르면 *Aedes bekkui* 成蟲의 特徵은 亞屬 *Edwardsaedes*와 일치되지만 幼蟲은 亞屬 *Aedimorphus*에 일치된다. 이는 Belkin이 처음 亞屬 *Edwardsaedes*를 확립할 때 유일하게 *Aedes imprimens*를 單模式 標本種(monotypic species)으로 利用하여 그 特徵 열거에 있어 너무 단조로왔기 때문이며 또한 日本에서 *A. imprimens*가 *A. bekkui*로 判명되기가 雌蟲의 特徵만이 記錄되어 왔기 때문이다. 그러므로 과거 韓國에서 報告된 *A. imprimens*도 日本의 경우와 같이 *A. bekkui*의 誤識種이었을 것으로 생각된다.