

**Occurrence of *Uranotaenia (Pseudoficalbia) hirsutifemora* Peters
(Diptera: Culicidae) in Thailand, with notes
on the larval stage and species affinity ¹**

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ABSTRACT. *Uranotaenia (Pseudoficalbia) hirsutifemora* Peters is reported from Thailand for the first time. Characters are given for the identification of the larval stage which has not been described. The species is transferred from the *recondita* to the *bicolor* series.

A collection containing a single specimen of *Uranotaenia (Pseudoficalbia) hirsutifemora* Peters was made on 18 December 1985 along a stream margin near the village of Ban Phluang, Amphoe Makaam, Chanthaburi Province, Thailand. The collection (number 147) also contained specimens of *Uranotaenia (Uranotaenia) annandalei* Barraud, *Ur. (Ura.) campestris* Leicester, *Ur. (Ura.) longirostris* Leicester, *Culex (Eumelanomyia) foliatus* Brug, a member of the *Cx. (Lophoceraomyia) fraudatrix* group, *Cx. (Lop.) mammilifer* (Leicester), a species of *Hodgesia* and *Anopheles (Cel.) maculatus* Theobald. The specimen was reared and easily identified as *hirsutifemora* using Peyton's (1977) adult and pupal keys to species of the subgenus *Pseudoficalbia* in Southeast Asia. The larva of *hirsutifemora* has not been described.

A review of collection records in the Department of Medical Entomology, AFRIMS, revealed that *hirsutifemora* was previously collected in Thailand, but never reported. The earlier collection (number 07999) was made on 13 September 1978 in a seepage hole in evergreen forest at Ban Chong Mu 3, Amphoe Pathiu, Chumphorn Province. This collection contains three specimens of *hirsutifemora*, a male with associated larval and pupal exuviae and a male and female each with associated pupal exuviae. It also contains specimens of *Ur. (Pfc.) bicolor* Leicester, *Ur. (Ura.)* sp. near *alboannulata* (Theobald), *Ur. (Ura.) campestris*, *Ur. (Ura.) testacea* Theobald(?), *Cx. (Lutzia) fuscans* Wiedemann, *An. (Cel.) dirus* Peyton and Harrison and *An. (Cel.) maculatus*.

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As a result of these discoveries, two fourth-instar larvae collected in Thailand, but previously unidentifiable as *hirsutifemora* because they were not associated with reared material, were located in the Museum of Natural History, Smithsonian Institution. These specimens were collected (collection numbers 02493 and 02498) on 20 and 21 December 1967 in a pool inside a large swamp at Ban Salak Phet, Trat Province. One larva was collected in association with *Ur. (Ura.) bimaculiala* Leicester and *An. (Cel.) jeyporiensis* James. The other was collected with specimens of *Ur. (Ura.) bimaculiala*, *Ur. (Ura.) longirostris* Leicester, *Cx. (Lop.) variatus* (Leicester), *An. (Ano.) crawfordi* Reid, *An. (Ano.) lesteri* Baisas and Hu, *An. (Ano.) whartoni* Reid and *An. (Ano.) roperi* Reid. *Uranotaenia hirsutifemora* was previously reported from Australia (Queensland), Indonesia (Sumatra), Kampuchea, Malaysia (Sabah), Papua New Guinea, and Singapore (Peyton, 1977).

The larva of *hirsutifemora* traces without difficulty to couplet 34 in Peyton's (1977) key to the larvae of *Pseudoficalbia* in Southeast Asia. The couplet separates *gouldi* Peyton and Klein from *abstrusa* Peyton. *Uranotaenia hirsutifemora* resembles *gouldi* in development of the median labral plate, seta 1-C, and seta 7-M. It resembles *abstrusa* in the form of seta 6-C and 1-S. It differs from these species in the character of seta 7-C and the spiracular filament. Seta 7-C is 3- or 4-branched in *hirsutifemora* (one specimen from Trat Province has 4 branches on one side, the others are triple on both sides). According to Peyton (1977) this seta has 5-8 branches in *gouldi* and 6-10 branches in *abstrusa*. The spiracular filament in *hirsutifemora* is a rather stout distally thickened process with a slender apical spicule. Three specimens have an additional subapical spicule on one side (one of the pair of structures). The filament is a simple slender tapered process in both *gouldi* and *abstrusa*. Seta 1-X may also be useful in distinguishing these species. This seta has 3-10 simple branches in *hirsutifemora*. It is double and barbed in *gouldi* and *abstrusa* (Peyton, 1977).

The larvae of *hirsutifemora* and *gouldi* are very similar. Some additional characters which distinguish these species include the following: antenna dark in *hirsutifemora*, pale in *gouldi*; comb scales progressively shorter ventrally in *hirsutifemora*, of uniform size in *gouldi*; branches of seta 3-VIII more densely aciculate, especially apically, in *hirsutifemora*, tips of branches distinctly acuminate in *gouldi*; seta 1-S similarly developed but some branches uniquely flattened and blade-like in *hirsutifemora*.

Peyton (1977) placed *hirsutifemora* in the *recondita* series, primarily because the male genitalia suggested a closer relationship to members of this series than to members of the other series, but noted several morphological traits in the adult and pupal stages which were not typical of this group. The adult and pupal stages key out with members of the *bicolor* series in Peyton's keys. We have already noted that the larva keys to the couplet which separates *gouldi* and *abstrusa*, both members of the *bicolor* series. In fact, the larva of *hirsutifemora* resembles all other members of the *bicolor* series in the character of seta 1-C, the development of the comb plate and comb scales, and the separation of seta 4- and 5-VIII. Based on these similarities, we consider *hirsutifemora* to be a member of the *bicolor* series.

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