

## The genus *Merragata* BUCHANAN-WHITE, 1877 (Gerromorpha: Hebridae) in Thailand, with notes on the Oriental taxa

by Herbert Zettel

**Abstract:** The genus *Merragata* is recorded from Thailand for the first time. The species is provisionally named *Merragata pallescens* (DISTANT, 1909). Notes on the taxonomy of the Oriental forms and on the habitat of a Thai population are given.

### Introduction

*Merragata pallescens* (DISTANT, 1909) from India is the only species of the genus, which is so far described from the Oriental Realm. LUNDBLAD (1933) added the variation *whitei* based on the different colouration of a single female from Java, Indonesia. Newly collected material from Thailand is externally similar to this variation and is discussed in the present study.

### *Merragata pallescens* (DISTANT, 1909)

**Material examined** (all specimens macropterous): **holotype** (female, glued on card): "Type", "Type", "Merragata\ pallescens\ Dist.", "Distant Coll.\ 1911-383", "Tank, Museum\ compound\ Calcutta\ 7. IV.-[19?]10." [wrongly attached label?] (The Natural History Museum, London); **further material**: 1 male (slide mounted by Lundblad; see LUNDBLAD 1933: fig. 82) "Paratype [no type!]\ Merragata\ pallescens Dist.\ ♂\ Museum\ compound. Calcutta. 1910." (The Natural History Museum, London); 1 female "Thailand: Loei\ Wang Saphung, Mae Nam\ Loei, 8.III.1994\ leg.W.D.Shepard (1030)"; 1 male, 1 female "Thailand: Sakhon Nakhon\ 11km NE Ban Kham Poem\ Huai Ya, 5.III.1994\ leg. W.D. Shepard (1027)"; 42 ex. (males and females) "Thailand: Sakhon Nakhon Prov.\ Sakhon Nakhon, Constructed\ Wetland, 23.11.1995\ leg. H. Zettel" (in Natural History Museum Vienna, Coll. W.D. Shepard, and Khon Kaen University); 3 males, 1 female, same locality data, leg. N. Nieser (N 9526) (Coll. Nieser, Tiel).

**Notes on the type material of *M. pallescens*:** DISTANT (1909) described the species from a single specimen from "East Bengal; Rajshai (Annandale)" One year later the same author (DISTANT 1910) stated to "have only seen a single specimen" LUNDBLAD (1933) writes that the type is a female, and that there is a second specimen, a male, in the British Museum with the label "Tank, Museum compound, Calcutta, 8.[!; printing error?] IV.-10."; he has studied both specimens, and used the male for slide mounting and illustrations (LUNDBLAD 1933: fig. 82 A-I). Lundblad, as usual, did not use the original labels for the slide, but wrote the text (as cited above) in black ink on the slide.

The author agrees with LUNDBLAD (1933), that the female in the Natural History Museum, London, is the holotype of *M. pallescens*, although the labels now contradict this fact. It is assumed that the locality label of the male was later, after slide mounting, wrongly attached to the female type, either by Lundblad or by a curator after return of the material to the British Museum. This is confirmed by the facts that 1) in contrast to other specimens from the Distant collection, the locality label is pinned below the Distant Collection label; 2) there are two type labels on the pin on which the type is mounted.

**Notes on *M. pallescens* var. *whitei* LUNDBLAD, 1933:** LUNDBLAD (1933) described the variation from two females from eastern Java (not examined). LUNDBLAD (1933) mentions the blackish brown body colouration as the only difference to the type. One female is depicted by LUNDBLAD (1933: tab. X). LUNDBLAD (1933: p. 277) clearly expresses his intention not to describe a subspecific taxon, but merely a variation: "... trotzdem ziehe ich es vor, sie als bloÙe Varietät zu dieser [of *M. pallescens*] zu stellen, da es nicht ratsam erscheint, in der Familie *Hebriidae* neue Arten nach weiblichen Exemplaren aufzustellen." Therefore, according to the ICZN, the name *pallescens* LUNDBLAD, 1933, is not available as a taxon of the species group.

**Description of the holotype of *M. pallescens*:** size: length 1.68 mm; pronotal width 0.79 mm; head width 0.38 mm; length of second antennal segment 0.10 mm; length of metatibia 0.76 mm; body small and stout, densely pubescent.

Colour: pale yellowish brown; antenna and legs yellow, except antennal segment 4 brown; hemelytron whitish except veins yellow. The whole specimen gives a faded impression; the author is not sure if this is the original colour of the species.

Structures: head slightly elongate, 1.15 times longer than width across eyes; distance of eyes 0.68 times head width; buccula elongate, low, posteriorly forming a right angle; relative lengths of antennal segments 1 - 4: 1.15 1 0.9 1.3; segment 4 widest; pronotum about as long as head, 1.9 times wider than long, with lateral margin deeply concave; metanotal elevation short, subtriangular, with apex minutely incised; hemelytron with one closed cell; veins very thick, densely covered with long erect whitish hairs; abdomen distinctly widened in middle of length, and nearly as wide as the pronotum (0.95).

**Male of *M. pallescens* from Calcutta, India:** The specimen has been well illustrated by LUNDBLAD (1933: fig. 82 A-I). It apparently belongs to the same species as the holotype. In male genitalia no distinct differences were found between this specimen and males from Thailand. The abdomen is slightly wider than the pronotum, which may be artificial after slide preparation (but see the note below).

**Specimens from Thailand:** Material from Thailand agrees in colour with var. *whitei* from Java. No variation in colour of the numerous specimens was observed. Male genitalia are nearly identical with those of the male of *M. pallescens* from Calcutta.

Externally there are, except colour, two differences found between the *M. pallescens* type and specimens from Thailand. In the type the head is shorter, about 1.1 times longer than wide, but in Thai specimens more elongate, 1.25 times longer than wide. In the type (and in the male from Calcutta) the abdomen is very wide, nearly as wide as (or wider than) the pronotum, and its sides are distinctly convex in anterior half; but in Thai specimens (and in the female from Java; see LUNDBLAD 1933: tab. X) the sides of the abdomen are subparallel in the anterior half, and the abdomen is distinctly narrower than the pronotum (0.9 times as wide).

The specimens collected by the author occurred in large numbers at the edge of a constructed wetland, partly on and between water plants. *Merragata* differs strongly from other Thai Hebridae in its predominately pleustonic habit.

### Conclusions

The genus *Merragata* consists of very small species, which are poor in external diagnostic characters. The phylogenetic position of the genus has been discussed by ANDERSEN (1981, 1982). Only a few species are described, mainly from the New World, and only one species and one variation from the Oriental Realm so far. Due to the life habit on open stagnant waters with water plants, dispersion by flight or phoresy (of eggs) by water birds or human activities is quite possible, and subsequently a wide distribution of *Merragata* species is likely.

The minute male genitalia, particularly the parameres, exhibit (by means of microscopic examination) no clear differences between the Indian male of *M. pallescens* and the studied material from Thailand. The stability of external characters (colour, proportions, etc.) should be tested in more material from the type area of *M. pallescens* in India. If more material from different areas becomes available, male genitalia should be studied by SEM-studies, which have proved to be successful in furnishing characters for species identification in small Hebridae, e.g. in *Hebrus* species. If the above mentioned differences (colour, proportions) prove to be stable, the Thai (and Indonesian) material should be provided with a new name (after check of the world species). Based on the present material and knowledge, no taxonomic changes are proposed, and the material from Thailand is provisionally identified as *M. pallescens*.

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