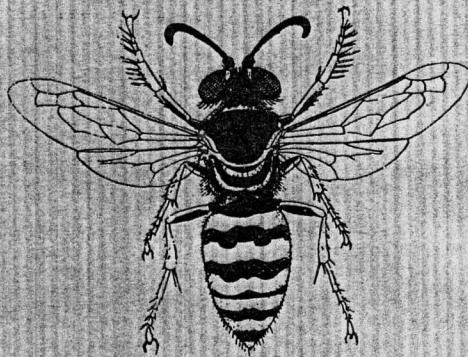


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**M I S H I M A**

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CHRYSOLARRA SPP. CAMERON, 1901, ARE PRESUMABLY SSP. BINGHAMI OF  
LIRIS (LEPTOLARRA) DEPLANATUS (KOHLE, 1883),  
WITH ONE OTHER SYNONYM (HYMENOPTERA, SPIECIDAE)

By K. TSUNEKI

During the course of my research to find out the Japanese species that corresponds to Chrysolarra japonica Cameron, 1901, I happened to take notice that the three other species of the genus that were described at the same time with japonica, namely, appendiculata from Assam, aureosericea from Assam and pruinosa from Borneo, were possibly the same species with japonica, only showing the intraspecific variation.

According to the description of Chrysolarra Cameron, 1901, there is no doubt that it falls within the category of Liris (Leptolarra) of the present day taxonomy, as it is assigned to by Bohart and Menke, 1976. Cameron separated it from Notogonia by the difference of the pygidial hair in the female, but it is erroneous, because the similar character is frequently observed in many species of Notogonia.

Among the Japanese species of the subgenus Leptolarra that which agrees fairly well in characters with the description of Chrysolarra japonica Cameron is Liris (Leptolarra) deplanata binghami Tsuneki, 1967 alone. It differs from japonica only in the relative length of the abscissae of the radial vein of the fore wing and as to this there is a doubt about the Cameron's explanation. Certainly the Cameron's description of this character on his first 3 species is quite strange. In regard to appendiculata, aureosericea and japonica he says respectively "the first cubital cellule at the top (= abs. 1 of radius) is one third the length of the second (= abs. 2)", "the first is half the length of the second above" and "the first cubital cellule at the top is not quite half the length of the second". Such a length relation of abscissae 1 and 2 of the radial vein is never met with in any species of Liris (s. l.). Abs. 1 is always much longer than abs. 2. As to the fourth species, pruinosa, however, he describes that the third cubital cellule above twice the length of the second. This species is presumed to be described separately and added later to the first three, because in the diagnosis of the genus he says that in the three known species ... , and in this case he calls the Nos. of abscissae correctly. Judging from the fact it is considered that the first and the second cubital cellule of his first three species should be read as the second and the third cubital cellule respectively. If so, some of the specimens of L. deplanatus binghami are completely consistent with the description of not only japonica, but of other three species also, because the venation is considerably variable within this species.

Cameron emphasizes as generic the character of the recurrent veins 1 and 2 of fore wing, namely, the two veins are united with each other at their tops either at or below radius, in the latter case cubital cell 2 becomes appendiculate at the top. He separates the species according to the difference where they are united with each other, namely whether they are appendiculated or not. The character is also observed upon L. d. binghami and, moreover, considerably varied among the specimens, as given in Table 1, showing that the Cameron's treatment of the species is completely nonsense.

The Table is made with a part of my specimens collected in Formosa and the Ryukyus. It shows that abs. 1 of radius is always several times longer than 2 and abs. 3 is always longer than 2, but the length ratio between them is markedly variable (as far as treated by Cameron). As to abscissae of cubitus of cubital cell 2 it shows that recurrent veins are sometimes united at the cubitus and sometimes become appendiculated and in ♂ the two recurrent veins are sometimes not united.

The male of deplanatus is markedly different in appearance from the female, without such a gorgeous vestiture (Tsuneki, 1967 a and b, Bingham's ♂ in his 1897 book is completely erroneous).

Taking into account the variation in characters of Liris (Leptolarra) deplanatus (Kohl, 1883), the four species of Chrysolarra Cameron, 1901, are all identifiable with the black-legged form, namely ssp. binghami m. of this species.

On the other hand, in 1904 Cameron described the same species as above mentioned from Assam under the name, Tachytes(!) fulvopilosa.

The fact that this species is not Tachytes, but Liris s. l. is easily realized from his description "the lateral folds on the inner orbits are prominent" ! and from

Table 1. Measurements of abscissae of radius and of cubitus of cubital cell 2 in Liris (Leptolarra) deplanatus binghami Tsuneki

Abs. of radius (♀)					Abs. cubitus (♀)			Abs. of radius (♂)					Abs. cubitus (♂)		
1	2	3	4	5	1	2	3	1	2	3	4	5	1	2	3
18	10	11	26	5	6	A2	24	12	6	8	22	5	5	A3	20
22	8	11	26	5	8	A1	22	12	6	10	23	5	5	AO	17
19	6	13	27	5	8	A1	25	14	4	11	24	5	8	1	18
17	4	10	24	5	6	A1	20	13	5	8	23	5	4	1	18
19	9	11	28	5	7	AO	24	13	6	10	26	5	8	AO	19
18	6	12	27	5	8	A1	24	12	5	9	23	5	6	1	17
17	6	9	24	5	7	AO	21	13	8	9	25	5	5	1	20
18	6	10	28	5	6	AO	23	15	5	11	25	5	7	AO	20
17	7	11	25	5	7	AO	22	13	5	10	23	5	6	2	18
20	6	12	28	5	8	A1	23	13	6	9	26	5	8	AO	21
21	8	11	27	5	7	A2	25	14	7	10	23	5	8	A1	19
18	4	10	25	5	5	A1	23	13	6	9	23	5	7	AO	18
18	8	11	26	5	7	AO	23	13	6	10	25	5	7	A1	19
20	6	12	26	5	7	A2	24	14	5	9	24	5	5	AO	18

Remarks. Abscissae of radius are measured under the standard length of Abs.5=5, and Abscissae of cubitus are measured with the same scale. When Abs.2 of cubitus =0, that is to say, recurrent veins 1 and 2 are either united on the cubitus or below there and appendiculated, it is shown with A and the relative length of appendiculated part is attached to it, namely, AO shows that two recurrent veins are united on the cubitus and A2 means that appendiculated part has the relative length of 2.

the description (dense golden vestiture, united and shortly petiolated two recurrent veins etc.) it can easily be identified with L. deplanatus (possibly binghami).

W. J. Pulawski in his synonymical notes on Larrinae and Astatinae (1975) synonymized Tachytes andreniformis Cameron, 1902, nec Cameron, 1889, and Tachytes fulvoves-titus Cameron, 1904, with Tachytes (!) fulvopilosus Cameron, 1904, without changing the generic name.

It is quite a strange and an utterly unconsiderable fact that such an eminent expert of the Larrine wasps as Pulawski misidentifies Liris (Leptolarra) with Tachytes. Is Tachytes fulvo-pilosa Cameron, 1904, really a species of Tachytes?

According to the original description of this species, however, there is little doubt as to that it is a female specimen of Liris (Leptolarra) deplanatus (Kohl). Pulawski does not give any comment on the syntype specimens of Tachytes fulvo-pilosa, only giving to have observed the "holotype"! But, according to my experience of reexamination of the type series of the specimens of Trypoxylon spp. preserved in the British Museum (Natural History) and the Oxford University Museum, the specimen that is attached with the type label in those days is not always the "holotype". It seems to me highly probable that there are some syntype specimens of Tachytes fulvo-pilosa Cameron (each bearing a type label?) including more than one, apparently similar, species (at least L. deplanata and Tachytes fulvopilosus: Pulawski) and that the specimen which was examined by Pulawski was not the one that was used by Cameron at the moment of his description of T. fulvo-pilosa. The former is T. fulvopilosus sens. Pulawski and the latter (= true holotype) is possibly L. deplanata binghami. This presumption is supported by the following fact: According to the comment given by Pulawski about the holotype (!?) of fulvopilosus it shows at least two differences in characters from the described specimen of this species (apart from the generic difference above mentioned): (1) Gastral vestiture: in his holotype! "the gaster is black, without golden or silvery fasciae", while in the original description "the basal three abdominal segments are covered with depressed golden pubescence" and (2) colour of legs: in his holotype "the femora largely and tibiae totally red", while in the Cameron's explanation "legs densely covered with golden pile ... , the calcaria black; tibial and tarsal spines bright rufous", that the rufous spines are particularly mentioned seems to

show that the tibiae and tarsi are black under the golden pile, and the black spurs also support this presumption. Furthermore, the fact that *T. andreniformis* Cameron, 1902 (♀), nec 1889, and *T. fulvovestitus* Cameron, 1904 (♂) that were identified by Pulawski with *T. fulvopilosa* have the recurrent veins of fore wing markedly different from the description of *fulvopilosa* seems to favour the above presumption.

As above explained the so-called holotype of *Tachytes fulvopilosus*: Pulawski is not the true holotype of *Tachytes fulvo-pilosa* Cameron, 1904, and as the latter is considered to be in reality *Liris deplanatus binghami*, the name, *Tachytes fulvopilosus* is to be suppressed as a synonym of *Liris deplanatus* (Kohl, 1883). As a result, the name of the species that was called by Pulawski *Tachytes fulvopilosus* should be replaced with *Tachytes fulvovestitus* Cameron, 1904, and *T. andreniformis* Cameron, 1902, nec 1889, comes to be a synonym of this species.

*Liris* (*Leptolarra*) *deplanatus* (Kohl, 1883)

*Notogonia deplanata* Kohl, Verh. zool.-bot. Ges. Wien, 33: 358, 1883 (♀, Ceylon, tibiae and tarsi red).

*Notogonia deplanata*: Bingham, Faun. Brit. Ind., Hym., I: 203, 1897 (♀, nec ♂, Sikkim, Tenasserim, tibiae and tarsi red).

*Notogonia deplanata* Var.: Bingham, Ibid., p. 203, 1897 (♀, tibiae and tarsi black).

*Chrysolarra appendiculata* Cameron, Ann. Mag. Nat. Hist., (7) 8: 118, 1901 (♀, Assam, tibiae and tarsi black, with spines rufous).

*Chrysolarra aureosericea* Cameron, Ibid., p. 119, 1901 (♀, Assam, ditto).

*Chrysolarra japonica* Cameron, Ibid., p. 120, 1901 (♀, Japan, ditto).

*Chrysolarra pruinosa* Cameron, Ibid., p. 121, 1901 (♀, Borneo, Mt. Matang, ditto).

*Tachytes fulvopilosa* Cameron, Ibid., (7) 13: 297, 1904 (nec :Pulawski, 1975, p. 316) (♀, Assam, tibiae and tarsi black).

*Liris* (*Notogonidea*) *deplanata*: Tsuneki, Kontyu, 32: 219, 1964 (♀, Formosa and Ryukyus).

*Liris* (*Notogonidea*) *deplanata binghami* Tsuneki, Etizenia, 18: 1, 1967 (♀ ♂, ditto, tibiae and tarsi black).

*Liris* (*Dociliris*) *deplanata binghami*: Tsuneki, Ibid., 20: 27, 1967 (ditto).

*Liris* (*Dociliris*) *deplanata deplanata*: Tsuneki, Steenstrupia, 4: 60, 1976 (♀, Palawan, tibiae and tarsi red).

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