

## The systematic position of the genera *Bucaea* WALKER, 1866 and *Tamilarctia* DUBATOLOV & KISHIDA, 2005

(Lepidoptera, Arctiidae)

by

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received 15.II.2007

**Abstract:** Based on the body and  $\sigma$  genitalia structure, the South Hindustan genera *Bucaea* WALKER, 1866 (type species *Savara simplex* WALKER, [1865]) and *Tamilarctia* DUBATOLOV & KISHIDA, 2005 (type species *Tamilarctia* DUBATOLOV & KISHIDA, 2005) are recognized to be congeneric, so, the latter is a junior synonym of the former. The most important common characters are: presence of a hypertrophied tympanum, absence of the second pair of spurs on the hind tibiae, flat valvae with a jagged distal edge, and presence of several groups of strong cornuti on the vesica.

**Zusammenfassung:** Aufgrund von Körper- und den  $\sigma$ -Genitalstrukturen wird festgestellt, daß die beiden im Süden von Hindustan beheimateten Gattungen *Bucaea* WALKER, 1866 (Typusart: *Savara simplex* WALKER, [1865]) und *Tamilarctia* DUBATOLOV & KISHIDA, 2005 (Typusart: *Phragmatobia fumipennis* HAMPSON, 1891) kongenerisch sind. Somit ist *Tamilarctia* DUBATOLOV & KISHIDA, 2005 **syn. nov.** ein Juniorsynonym zu *Bucaea* WALKER, 1866.

The genus *Bucaea* WALKER, 1866 was established as a replacement name for the generic name of the South Hindustan tiger moth *Savara simplex* WALKER, [1865] 1864 (WATSON et al., 1980). Although KIRBY (1892), COTES & SWINHOE (1894) accepted the generic status of this species, HAMPSON (1894, 1901) downgraded it firstly into *Cretonotos* HÜBNER, [1819] 1816 and later into a complicated genus *Maenas* HÜBNER, [1819] 1816, which involved 17 species from the Africa, America and South-Eastern Asia. The latter point of view was accepted in following catalogues and guides, like STRAND (1919) and ROTHSCHILD (1914).

However, during the XX century, species of the genus *Maenas* sensu HAMPSON (1901) were classified within several unrelated genera: *Lemyra* WALKER 1856 (THOMAS, 1990) from South-East Asia and Sundaland, *Paralacydes* AURIVILLIUS, 1900 (= *Maenas* HBN.) (GOODGER & WATSON, 1995) from the Afrotropics, and *Paracles* WALKER, 1855 (GOODGER & WATSON, 1986) from the Neotropics; other species were restored in originally placed genera. *Phragmatobia fumipennis* HAMPSON, 1891, which HAMPSON (1901) also placed in *Maenas* HBN., was separated into a distinct monotypic genus *Tamilarctia* DUBATOLOV & KISHIDA, 2005, based on  $\sigma$  genitalia, which are dissimilar to any other tiger moth genus with known  $\sigma$  genitalia structure. Unfortunately, during the work on *T. fumipennis* (Hmps.), the authors had not a possibility to study *Bucaea* Wlk., the single Hindustan genus with unknown genitalia.

In 2006, due to the courtesy of Mr. M. HONEY from the British Museum (Natural History), Dr. P. USTJUZHANIN and Mr. V. KOVTUNOVICH, I have obtained the possibility to study the type

species of *Bucaea* Wlk., *B. simplex* (Wlk.), and it became clear that it is nearly identical with *Tamilarctia* DUBATOLOV & KISHIDA. The type species of these two genera, *B. simplex* (Wlk.) and *T. fumipennis* (Hmps.), respectively, have common critical characters: a hypertrophied tympanum in large pressed bulbs (figs. 1-2), presence of a small apical spine on the fore tibiae, absence of the second pair of spurs on the hind tibiae, absence of any wing pattern, but the most important is a very similar ♂ genitalia structure (figs. 3-6): a broad triangular and dorsally swollen uncus, flat valvae with an irregularly jagged distal edge, large and strong cornuti on the vesica grouped in several patches. Taking into account such common characters, it should be established that they are congeneric.

*Bucaea* WALKER, 1866

List Spec. lepid. Ins. Colln Br. Mus. **35**: 1983, replaced name for *Savara* WALKER, [1865].

= *Savara* WALKER, [1865] 1864; List Spec. lepid. Ins. Colln Br. Mus. **31**: 320, nec WALKER, 1862, J. Proc. Linn. Soc. (Zool.) 6: 184 (Noctuidae). Type species: *Savara simplex* WALKER, [1865] 1864, by monotypy.

= *Tamilarctia* DUBATOLOV & KISHIDA, 2005 **syn. nov.**; *Tinea* **18** (4) 307-308.

Type species: *Phragmatobia fumipennis* HAMPSON, 1891.

*Bucaea simplex* (WALKER, [1865] 1864) (colour plate 10A, fig. 3)

*Savara simplex* WALKER, [1865] 1864; List Spec. lepid. Ins. Colln Br. Mus. **31**: 320 (*Savara*).

Ttype locality: "Hindustan".

**Material**: 2 ♂♂, syntypes (designated here), [Hindustan] (BMNH), 1 ♂, S. India, T. R. Bell (BMNH).

**Distribution**: India: Maharashtra: Bombay vic., Karnataka: North Canara (Hampson, 1894, 1901).

**Description**: ♂ wing and body colouration (except for a dorsal row of black spots on abdomen) yellow, forewing darker and brighter than hind one; abdomen with a dorsal row of black spots. In female, according to the description by Hampson (1901), hindwings also yellowish-white, lighter than fore one.

♂ **genitalia** (figs. 3-4): valvae broad, less than twice longer than their width; aedeagus short, not more than 3 times longer than its width, cornuti are not so numerous in patches as in the next species.

*Bucaea fumipennis* (HAMPSON, 1891) **comb. nov.** (colour plate 10A, fig. 1-2)

*Phragmatobia*? *fumipennis* HAMPSON, 1891; Ill. Het. Br. Mus. **8**: 54, t. CXL, f. 24.

Type locality: "the Nilgiri District of Southern India".

**Material**: 1 ♂, 1 ♀, India, [Tamil Nadu], Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.).

**Distribution**: South India, Tamil Nadu: west slopes of the Nilgiri Hills (Hampson, 1901).

**Description**: ♂ wing grey, body covered with grey and yellow hairs, abdomen with a dorsal row of black spots. ♀ fore wing and body (except for abdominal dorsal row of black spots) dark yellow, while hindwing yellowish-grey.

♂ **genitalia** (figs. 5-6): valvae elongate, more than twice longer than their width, aedeagus long, 6 times longer than its width, cornuti are more numerous in patches than in the previous species.

**Acknowledgements**: The author is very grateful to Mr. M. HONEY (BMNH, London, UK) for the loan of *Bucaea simplex* (Wlk.) for investigation, including the type specimens, to Mr. V. KOVTUNOVICH

(Moscow, Russia) and Dr. P. USSTJUZHANIN (Novosibirsk, Russia) for preparing the photos of *B. simplex* (Wlk.) types in the BMNH and transferring material to Novosibirsk, to Mr. Y. KISHIDA (Tokyo, Japan) giving on loan a pair of *B. fumipennis* (Hmps.) for investigations, to Dr. O. E. KOSTERIN (Novosibirsk, Russia) for checking the English in the manuscript.

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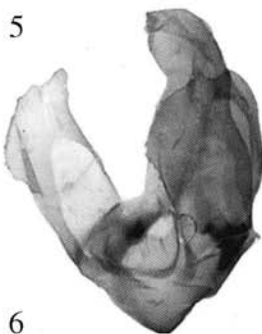
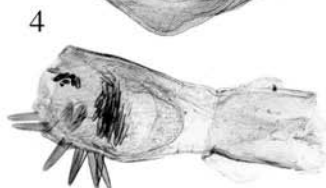
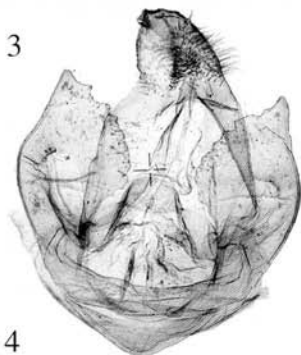


Fig. 1: ♂ tympanum, *Bucaea simplex* (WALKER, [1865]), S[outh] India, T. R. Bell (BMNH).

Fig. 2: ♂ tympanum, *Bucaea fumipennis* (HAMPSON, 1891), [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.).

Fig. 3-4: ♂ genitalia of *Bucaea simplex* (WALKER, [1865]), syntype, [Hindustan] (BMNH). 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.), general view (3) and aedeagus (4).

Fig. 5-6: ♂ genitalia of *Bucaea fumipennis* (HAMPSON, 1891), [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.), general view (5) and aedeagus (6).

#### Colour plate 10A (page 316)

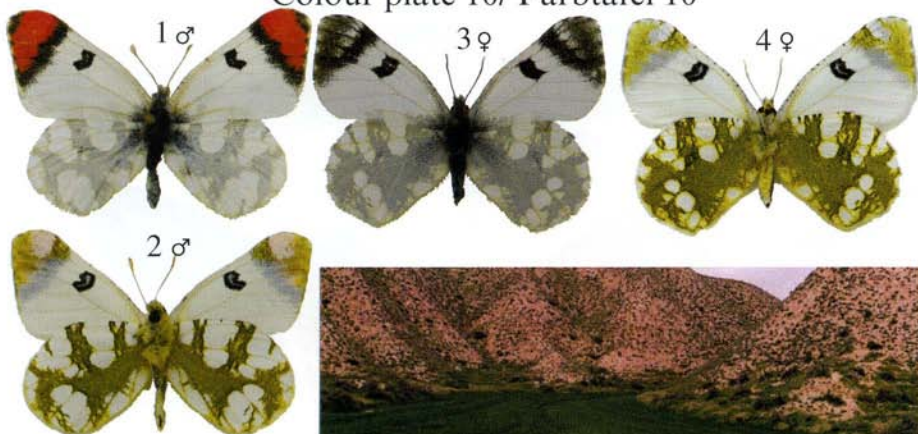
Fig. 1: *Bucaea simplex* (WALKER, [1865]), syntype ♂, [Hindustan] (BMNH).

Fig. 2: *Bucaea simplex* (WALKER, [1865]), ♂, S[outh] India, T. R. Bell (BMNH).

Fig. 3: *Bucaea fumipennis* (HAMPSON, 1891), ♂, [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.).

Fig. 4: *Bucaea fumipennis* (HAMPSON, 1891), ♀ [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.).

Colour plate 10/ Farbtafel 10



ALIREZA NADERI, A. & W. BACK:  
Nachweis von *Zegrus fausti*  
CHRISTOPH, 1876 in Nordost-  
Iran (Lepidoptera, Pieridae).  
- *Atalanta* 38 (1/2): 171-172.

Abb. 1-4: *Zegrus fausti* CHRIS-  
TOPH, 1876, Persien, Golestan, Kopet  
Dagh, nördl. von Kalaleh.

Abb. 5: Fundort von *Zegrus fausti*  
CHRISTOPH, 1876, Persien, Golestan,  
Kopet Dagh, nördl. von Kalaleh.

Colour plate 10A



DUBATOLOV, V. V.: The systematic position of the genera *Buccaea* WALKER, 1866 and *Tamilarctia* DUBATOLOV & KISHIDA, 2005 (Lepidoptera, Arctiidae). - *Atalanta* 38 (1/2): 213-216.

Fig. 1: *Buccaea simplex* (WALKER, [1865]), syntype ♂, [Hindostan] (BMNH). Fig. 2: *Buccaea simplex* (WALKER, [1865]), ♂, [South] India, T. R. Bell (BMNH). Fig. 3: *Buccaea fumipennis* (HAMPSON, 1891), ♂, [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.). Fig. 4: *Buccaea fumipennis* (HAMPSON, 1891), ♀ [South] India, Nilgiri Hills, Gudalur, 1200 m, X-XI 1977, T. HASEGAWA leg. (Y. KISHIDA coll.).