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***Camptoloma quimeiae* sp. n., a new Camptolominae species from Taiwan (Lepidoptera, Noctuidae)**

Ulf BUCHSBAUM & Mei-Yu CHEN

Abstract

The new species *Camptoloma quimeiae* sp. n. is described and compared with other similar species of this genus. It differs significantly in the markings from *Camptoloma carum* KISHIDA, 1984 and *C. interiorata* (WALKER, [1865]). The new species is recorded from two places in Taiwan. A checklist of all known species of the subfamily with their distribution is compiled. The following new combination is proposed: *Leucopardus bella* WANG & HUANG, 2005 comb. n.

Zusammenfassung

Die neue Art *Camptoloma quimeiae* sp. n. wird aus Taiwan beschrieben und mit ähnlichen Arten dieser Gattung verglichen. Sie unterscheidet sich deutlich durch ihre Zeichnung von *Camptoloma carum* KISHIDA, 1984 und *C. interiorata* (WALKER, [1865]). Die neue Art ist von zwei Stellen in Taiwan nachgewiesen worden. Eine Checklist aller Arten der Unterfamilie Camptolominae mit deren Verbreitung wird zusammengestellt.

Die folgende Neukombination wird vorgeschlagen: *Leucopardus bella* WANG & HUANG, 2005 comb. n.

Key words: Insecta, Lepidoptera, Noctuidae, Camptolominae, *Camptoloma quimeiae* sp. n., Taiwan, Checklist, distribution.

Introduction

In the frame of the DAAD project (Project No.: ID D/0039914, PPP-Taiwan) of the Zoologische Staatssammlung München (ZSM) and the National Hsing University Taichung (NCHU), several trips to Taiwan were undertaken for a survey of the Insect fauna. Many new species could be found in the last few years, even though the Insect fauna from Taiwan seemed to be well known (e. g. BUCHSBAUM & MILLER 2002, BUCHSBAUM et al. 2006, SPEIDEL & BEHOUNEK 2005).

Taiwan has a high number of endemic species (REICHHOLF 2003). YANG (2003) shows the high Insect diversity from Taiwan and also explains the research history. Further research about the Insect fauna of Taiwan confirms this phenomenon (SCHINTLMEISTER 2003, MEY & SPEIDEL 2003, MÜHLE 2003). It is also known from other animals (CHEN & BI 2007, LEE et al. 1994).

In the last years, several papers were published about the colourful moths of Camptolominae (KISHIDA 1984, 1996, ZOLOTUHIN & WITT 2000, WANG & HUANG 2005). Camptolominae are distributed only in East and Southeast Asia and are only rarely collected moths.

The genus *Camptoloma* FELDER, 1879

MELL (1943) erected the subfamily Camptolominae and placed it in the Noctuidae. INOUE & SUGI (1958 -1961) raised it to the rank of an own family and later INOUE et al. (1982) placed this as a subfamily to the Arctiidae.

HOLLOWAY (1988) referred the genus *Camptoloma* (Camptolominae) back to the Noctuidae. SPEIDEL et al. (1996) confirm this placement also and follow it. The systematic position of Camptolominae is still unclear, even though their relationship is clear after HOLLOWAY (1988 & 1998) and SPEIDEL et al. (1995): The vertical exit slit of the cocoon and the muscle configuration in the male genitalia show that the Camptolominae belong to the noline group of subfamilies of the Noctuidae or in the separate family Nolidae. There is still disagreement whether the "Nolidae s. l." should be placed as a separate family or within the Noctuidae. SPEIDEL (in litt.) suggests to place Camptolominae (with the rest of the 'Nolidae') preferably in Noctuidae giving the latter a wider sense. HOLLOWAY (1998) places the Camptolominae as a tribe of the Chloephorinae (as Camptolomini), because they have tymbal organs like the other chloephorins. We retain the traditional rank as a separate subfamily until a more definite systematic arrangement of the Noctuoidea can be established.

ZOLOTUHIN & WITT (2000) divided *Camptoloma* in two different genera and recently WANG & HUANG (2005) described two further species in the genus *Camptoloma* from Thailand.

Therefore the following checklist of Camptolominae can be compiled (Table 1).

<i>Camptoloma interiorata interiorata</i> (WALKER, [1865])	Japan, Northeast China, Russia Far East
<i>C. interiorata pallidum</i> MELL, 1943	China, Southeast Shensi
<i>C. binotatum</i> BUTLER, 1881	India, Nepal, Burma, Southern China
<i>C. carum</i> KISHIDA, 1984	Taiwan
<i>C. quimeiae</i> sp. n.	Taiwan
<i>C. vanata vanata</i> FANG, 1994	Southeast China, Vietnam
<i>C. vanata behouneki</i> ZOLOTUHIN & WITT, 2000	North Vietnam
<i>C. mangpua</i> ZOLOTUHIN & WITT, 2000	India, Darjeeling, Sikkim
<i>C. kishidai</i> WANG & HUANG, 2005	China, Guangdong
<i>Leucopardus tigrinus</i> HAMPSON, 1894	Northeast Himalayas, South China, Burma (Myanmar)
<i>L. mirabilis mirabilis</i> ROEPKE, 1943	Java (Indonesia)
<i>L. mirabilis nigrrior</i> HOLLOWAY, 1976	Malaysia (Peninsula and Borneo)
<i>L. semiflavum</i> (KISHIDA, 1996)	Thailand, Burma (Myanmar)
<i>L. bella</i> WANG & HUANG, 2005 comb. n.	China, Guangxi
<i>L. sylviae</i> ZOLOTUHIN & WITT, 2000	North Vietnam
<i>L. stueningi</i> ZOLOTUHIN, 2000	North Thailand

Table 1: Checklist and distribution of Camptolominae

Material, method, locality

The specimens of the new species were collected at light with a 250 W mixed mercury lamp, with a white screen. The weather was cloudy but warm, at afternoon was some rain. The collecting time was between 8:00 and 12:00 p. m.

The collecting site in Lushan Hot Spring is in a narrow river valley with steep hills around (Figs 4 - 10). This locality is a well known place in Central Taiwan for a hot spring area and it is also known as an old good collecting site in the past. The surrounding landscape is a subtropical mountain forest.

One more specimen was collected at light in South Taiwan.

***Camptoloma quimeiae* sp. n. (Fig. 1 - 3)**

Material. Holotype: ♀; Central – Taiwan, Nantou County, 23. Mai 2005, Lushan Hot Spring, 24°01'27 N / 121°11'27 E., ca. 1100 m NN. Coll. Zoologische Staatssammlung München. Paratypes: 5 ♀, all same data, 4 in Coll. Zoologische Staatssammlung München, one later in Coll. National Museum of Natural Science Taichung (NMNS Taichung, Taiwan) (one paratype in Coll. Museum Witt, Munich); 1 ♂ Kaohsiung Co., Tengir Forest Res. Station, ca. 23°07'N / 120°47'E, 1600m, 6.-10. VII. 2000, leg. W. Schacht, Coll. G. Behounek

Description and differential diagnosis: Wingspan: 31-36 mm, Ø 32,6 mm; forewing length: 16-18 mm, Ø 17,0 mm.

Body and wings lemon yellow coloured. Forewing with three black stripes from the costa. One antemedian fascia, one postmedian fascia and one subterminal fascia. One more thin blackish stripe from base touching the antemedian fascia and forming a 45° angle with it. Also a small black reniform dot. *C. carum* KISHIDA, 1984 has only two black stripes from the costa (antemedian fascia and postmedian fascia), *C. interiorata* (WALKER, [1865]) has four of these black stripes. One terminal fascia. The angle of the basal stripe and the antemedian fascia is an acute one.

A red mark from tornus to basis along the inner margin and from tornus to 2/3 terminal margin. Terminal margin with a black dot at 2/3 and a black mark at tornus. Abdomen with red hairs around the last segments.

C. quimeiae with Ø 32,6 mm is smaller than *C. carum* with 35-40 mm.

Female genitalia: See fig. 2

Distribution: The new species *C. quimeiae* is only known from the type locality in Lushan Hot Spring in Central Taiwan (Nantou County) and from south Taiwan (Kaohsiung County).

Etymology: The species is dedicated to Quimei LUO, who enabled the authors the collection in "their" place, the Hotel in Lushan Hot Spring, which is a comfortable place for good collection on the rooftop. Furthermore, we thank for her kind help to collect in different places on her ground.

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Legend to the plate

- 1) *Camptoloma quimeiae* sp. n. ♀, Holotype, Coll. ZSM.
- 2) Female genitalia of *C. quimaiae* sp. n.
- 3) *C. quimeiae* Imago on the screen in Lushan Hot Spring.
- 4-7) Forest around the collecting site in Lushan Hot Spring.
- 8-9) Map of Taiwan with the collecting place.
- 10) Relief map with the collecting site.



1



2



3



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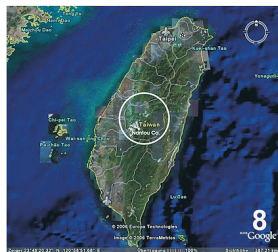
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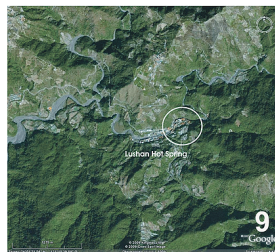
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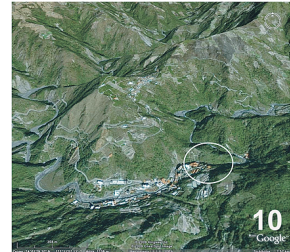
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Autiores addresses:

Ulf BUCHSBAUM
Zoologische Staatssammlung München
Münchhausenstraße 21
D-81247 München
Germany
E-mail: UlfBuchsbaum.Lepidoptera@zsm.mwn.de

Mei-Yu CHEN
Lustheimstraße 5
D-81247 München
Germany

Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:
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Fritz GUSENLEITNER, Lungitzerstr. 51, A-4222 St. Georgen/Gusen;
Wolfgang SCHACHT, Scherrerstraße 8, D-82296 Schöngeising;
Johannes SCHUBERTH, Mannertstraße 15, D-80997 München;
Wolfgang SPEIDEL, MWM, Tengstraße 33, D-80796 München;
Thomas WITT, Tengstraße 33, D-80796 München.

Adresse: Entomofauna, Redaktion und Schriftentausch c/o Museum Witt, Tengstr. 33, 80796 München,
Deutschland, E-Mail: thomas@witt-thomas.com; Entomofauna, Redaktion c/o Fritz Gusenleitner,
Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: f.gusenleitner@landesmuseum.at

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