



# *Entomofauna*

ZEITSCHRIFT FÜR ENTOMOLOGIE

---

Band 34, Heft 26: 349-356

ISSN 0250-4413

Ansfelden, 2. Januar 2013

---

**A new *Terthreutis* MEYRICK, 1918 species from Taiwan**

**(Lepidoptera, Tortricidae)**

**Contribution to the moths of Taiwan 5<sup>1</sup>**

**Ulf BUCHSBAUM & Mei-Yu CHEN**

## **Zusammenfassung**

Die neue Art *Terthreutis jingae* (Lepidoptera, Tortricidae) wird aus Taiwan beschrieben. Sie unterscheidet sich deutlich von den beiden aus Taiwan bekannten Arten und wurde in Meifeng (Central Taiwan, Natou Co.) gefangen. Die Unterscheidungsmerkmale zu den bekannten Arten werden genannt und beschrieben. Die neue Art unterscheidet sich durch die Flügelzeichnung und die Genitalmorphologie von den bekannten Arten.

---

<sup>1</sup> Contribution 4: BUCHSBAUM, U. & M. A. MILLER (2001): *Leucoblepsis taiwanensis* sp. n., a new species of Drepanidae from Taiwan (Insecta: Lepidoptera). — Formosan Entomologist **22** (2): 101 – 114.

## Summary

A new *Terthreutis jingae* (Lepidoptera, Tortricidae) from Taiwan is described. The new species is different from the other two known species from Taiwan and is described from Meifeng in Central Taiwan (Central Taiwan, Natou Co.). Differences to the known species are described. The new species is different from other species of this genus in the wing markings and the genitalia morphology.

Key words: Insecta, Lepidoptera, Tortricidae, *Terthreutis jiangae* sp. n., Taiwan, distribution

## Introduction

Since the Taiwan project (Project No.: ID D/0039914 PPP-Taiwan) started in the year 2001, the authors undertook intensive research work about the Lepidoptera fauna of Taiwan and specially of Meifeng (Nantou Co.) and vicinity in cooperation with the National Chung Hsing University Taichung and the Highland Experimental Farm Meifeng which is an Biological Field Station of the National Taiwan University in Taipei.

During this time, already many interesting and also new species could get recorded and described (e. g. BUCHSBAUM 2006, BUCHSBAUM & CHEN 2010, BUCHSBAUM & MILLER 2001, BUCHSBAUM et al. 2006, CHEN 2011, MEY & SPEIDEL 2003, MÜHLE 2003, SCHACHT et al. 2010, SPEIDEL & BEHOUNEK 2005).

Taiwan is an island with very high biodiversity because of the heterogenous landscape (YANG & SU, without year, LEE et al. 1994). The island Taiwan houses different habitats and biotops from sea level to high mountains, from rainforest in the southeast to the alpine zones above 3000 m NN in Central Taiwan on relatively small area. Furthermore, Taiwan is situated on the border of two zoogeographic regions, between the Palaearctis and the Orientalis (e. g. ILLIES 1971, REICHHOLF 2003, SCHINTLEMEISTER 2003, SEDLAG 1987).

Therefore, it is highly interesting for deeper investigations, especially in the Insect fauna.

## The genus *Terthreutis* MEYRICK, 1918

RAZOWSKI (2008) reviewed this genus and described some new species from Southeast Asia. Presently, 12 species are contained in this genus. The recently known distribution of the species in this genus is figured in a map (fig. x).

MEYRICK (1918) established this genus with the type species *T. spaerocosoma* MEYRICK, 1918 from India (Sikkim and Assam). From China, BAI (1992) described three species: *T. orbicularis* from Sichuan, *T. bipunctata* from Hainan and *T. series* also from Sichuan.

Until now, two species are known from Taiwan: *T. bulligera* MEYRICK, 1918 and *T. duosticta* WILEMAN & STRINGER, 1929. *T. bulligera* is originally described from "Bengal: Calcutta" (Northeast India). KAWABE et al. (1992) list this species in the

Taiwan check list of HEPPNER & INOUE (1992). It should be checked exactly, if the species from Taiwan is really conspecific with the Indian species.

WILEMAN & STRINGER (1929) described *T. duostica* from Taiwan from Kanshirei and place it near *T. sphaerocosoma* MEYRYCK, 1918. The locality in Taiwan is the southwest part in lower altitude and surrounded by lowland temperate rainforest (Fig. xx).

### Methods and Locality

During the 10<sup>th</sup> anniversary Taiwan trip, the authors collected at the same place as in the first time, ten years before. The collection was done with a 250 W mercury light and started at about 7 pm until the morning about 6 am. The locality is surrounded by natural mountain forest and is identical to most agricultural and open areas in the island with dry meadows (Fig. 7 – 8). The altitude is about 2200 m NN in the centre of Taiwan (Fig. 5 - 6).

The weather was dry and warm some days before our visit and misty and cloudy with a little rain at the collection day, but not cold, about 15°C in the night. A few days before, a Taifune arrived in Taiwan.

The material was collected at the sheet in the night and killed in cyanid poison glasses, sorted out in the next morning and arranged in paper tubes with cotton for the transport.

#### *Terthreutis jiangae* sp. n. (Fig. 1 – 2)

Holotype ♂, May 11, 2011, Central Taiwan, near Puli, Nantou Co., Meifeng, ca. 2100 m NN, 24°05'19N/121°10'26E. In Coll. Zoologische Staatssammlung Munich (ZSM). Paratype ♀, same data than Holotype. In Coll. ZSM.

#### Description and differential diagnosis

♂ wingspan: 25 mm, Forewing length: 12 mm.

♀ wingspan: 25 mm, Forewing length: 13 mm.

Body greyish brown. Labial palpi black. Head greyish white. Forewings coloured in different shades of brown. Apex with an ochreous brown mark which is more or less round. In the other two species from Taiwan, *T. bulligera* and *T. duosticta*, this mark is concave. Subapically, proximally to the ochreous mark, a dark brown round dot with narrow irregular pale border. Hindwings greyish yellow, without any markings. In the other species from Taiwan, the hindwings have darker marked veins at the basal angle. Termen at outer margin yellow, brown, mixed with black. In *T. duosticta*, dark brown dots only at the end of the veins.

Male genitalia (Fig. 3): Valva slender, corona rounded, weakly sclerotized, sacculus hairy. Uncus long, slender. Aedeagus thin, short, sclerotized, without cornuti. Different from *T. duosticta* in valva, uncus and aedeagus structure.

Female genitalia (Fig. 4): Ductus bursae short, thin. Corpus bursae rounded, sclerotized, without signum. Papillae anales reniform with long hairs. Both apophyses posteriores and apophyses anteriores thin, long.

Distribution: The new species is only known from the type locality until now, in the high mountain above 2000 m in Cental Taiwan, Nantou Co., Meifeng (Fig.: 6 - 8).

Etymology: The new species *T. jiangae* is named after the authors close friend Xiu-Zhen Jiang, also called “Everest girl”. She joined our excursions many times and drived us around Taiwan to the best collecting sites and also to the best restaurants with the best Taiwanese food. She climbed the Everest (Chongmolungma) two times as the first Taiwanese women and also climbed the seven highest summits around the world and was the first Taiwanese women who has done this successfully.

## Discussion

Species of the genus *Terthreutis* are known from tropical southeast Asian places (North Thailand), also from the Palaerctic region (North Yunnan) and from the high mountains of Assam, Sikkim, Nepal and Bhutan (RAZOWSKI 2008).

The authors can compile the complete checklist of *Terthreutis* species from Taiwan; it includes now 3 species:

At same time and place as the new species, *T. duosticta* WILEMAN & STRINGER 1929 was also collected in one male specimen.

The genus *Terthreutis* is now known from Taiwan with three species:

*Terthreutis* MEYRICK, 1918

*T. bulligera* MEYRICK, 1918

*T. duosticta* WILEMAN & STRINGER, 1929

*T. jiangae* BUCHSBAUM & CHEN sp. n. (here described)

## Acknowledgements

Heartful thanks to the Taiwanese colleagues, especieillay in Meifeng, for their great help and support in the collection activities of the authors and their kindness and friendship all over in the long research period of the Lepidoptera fauna at their place.

Many thanks to Wolfgang SPEIDEL, Munich for the discussion about the manuscript and his comments, and also to Thomas WITT who always is deeply interested in the progress of our work on the Moths of Taiwan.

## References<sup>2</sup>

- BAI, J.-W. (1992): A study on Chinese *Terthreutis* MEYRICK (Lepidoptera: Tortricidae), with description of new species. — Acta Entomologica Sinica **35** (3): 339 – 345, 1 pl.
- BUCHSBAUM, U. (2006)\*: Ergebnisse entomologischer Reisen nach Taiwan. — Mitteilungen des Thüringer Entomologenverbandes e. V. **13** (1): 36 – 48.

---

<sup>2</sup> \* “Contributions to the moths of Taiwan” are marked with asterisk (\*)

- BUCHSBAUM, U. & M.-Y. CHEN (2010)\*: *Camptoloma quimeiae* sp. n., a new Camptolominae species from Taiwan (Lepidoptera, Noctuidae). — Entomofauna **31** (6): 49 – 56.
- BUCHSBAUM, U., M.-Y. CHEN & V. V. ZOLOTUHIN (2006)\*: *Thyris alex* sp. n. – a new Thyrididae species from Taiwan and new record of this genus and the subfamily for Taiwan, with notes to biology, distribution and DNA analyses and notes on a system of the genus (Insecta: Lepidoptera). — J. Zool. Soc. Wallacea 2: 54 – 62.
- BUCHSBAUM, U. & M. A. MILLER (2001)\*: *Leucoblepsis taiwanensis* sp. n., a new species of Drepanidae from Taiwan (Insecta: Lepidoptera). — Formosan Entomologist **22** (2): 101 – 114.
- CARADJA, A. & E. MEYRICK (1938): Materialien zu einer Mikrolepidopterenfauna des Yülingshanmassives (Provinz Yünnan). — Deutsche Entomologische Zeitschrift "Iris" **52**: 1 – 29.
- CHEN, K-m (2006): Einblick in die Scarabaeidaeine (Dung Beetles) Taiwans mit einem Abriss ihrer Forschungsgeschichte. — Mitteilungen des Thüringer Entomologenverbandes e. V. **13** (1): 64 – 71.
- CHEN, M.-Y. (2011)\*: Tracing Moths in the starry night. Handbook for moths observation in Mei-Feng. — Meifeng Highland Experimental Farm, National Taiwan University: 240 pp.
- CLARCK, J. F. G. (1958): Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick. Volume III. Tortricidae, Olethreutidae, Noctuidae. — British Museum (Natural History): 600 pp.
- DIAKONOFF, A. (1976): Tortricidae from Nepal, 2. — Zoologische Verhandelingen No. 144: 145 pp, 14, pls.
- KAWABE, A., F. KOMAI & J. RAZWOSKI (1992): Tortricidae. In HEPPNER, J. B. & H. INOUE (eds.) Lepidoptera of Taiwan, Volume 1, Part 2: Checklist. — Assoc. Tropical. Lepidoptera, pp. 103 – 109.
- LEE, P.-F., J.-E. SHEU & C.-C. CHEN (1994): Mapping Vertebrate Biodiversity in Taiwan. In: PENG C.-I. & C.-H. CHOU Biodiversity and Terrestrial Ecosystems. — Institute of Botany, Academia Sinica Monograph Series, Taipei, No. 14: 499 – 508.
- MEY, W. & W. SPEIDEL (2003): Lepidoptera diversity at high and low altitudes in Taiwan and Luzon – a comparison. — Journal of the Zoological Society Wallacea **1**: 29 – 42.
- MEYRICK, E. (1912 – 1937): Exotic Microlepidoptera (reprint 1969). **1 – 5**. — E. W. Classey Limited, Hampton, Middlesex (used was MEYRICK, 1918, volume **2**, pp. 170 – 171 and volume **3**, pp. 459 – 460, ).
- MÜHLE, H. (2003). Taiwanese buprestids (Coleoptera, Buprestidae). — Journal of the Zoological Society **1**: 43 – 48.
- RAZWOSKI, J. (1987): The Genera of Tortricidae (Lepidoptera). Part I: Palaearctic Chlidanotinae and Tortricinae. — Acta Zoologica Cracoviensia **30** (11): 141 – 355.
- RAZOWSKI, J. (2000): Tortricidae (Lepidoptera) collected in Taiwan, with description of one new genus and eight new species, and a comparison with some regional Faunas. — Zoological Studies **39** (4): 319 – 327.
- RAZWOSKI, J. (2008): On two South Asian genera *Ceramea* DIAKONOFF and *Terthreutis* MEYRICK (Lepidoptera: Tortricidae). — Polish Journal of Entomology **77**: 283 – 299.
- REICHHOLF, J. H. (2003): Melanesia Island Biogeography. From Alfred R. Wallace to Robert H. MacArthur and beyond: What makes "Wallacea" so unique?. — Journal of the Zoological Society **1**: 4 - 11.

- SCHACHT, W., U. BUCHSBAUM & M.-Y. CHEN (2010): Räuberische Calliphoriden attackieren Termiten in Taiwan (Diptera: Calliphoridae /Isoptera: Termitidae). — *Entomofauna* **31** (4): 25 – 32.
- SCHINTLMEISTER, A. (2003): The Zoogeography of Taiwan's Notodontidae (Lepidoptera). — *Journal of the Zoological Society* **1**: 15 - 26
- SPEIDEL, W. & G. BEHOUNEK (2005): The genus *Wittstrotia* gen. N. (Lepidoptera, Noctuidae, Eustrotiinae). — *Entomofauna* **26** (23): 393 – 408.
- WILEMAN, A. E. & H. STRINGER (1929): Seven new species of Tortricina from Formosa and the Philippine Islands. — *The Entomologist*, London **62**: 65 – 68.
- YANG, S.-S. & J.-C. SU (without year) Biodiversity Issue in Taiwan. [www.codata.org/codata02/05bio/ShangShyngYang.pdf](http://www.codata.org/codata02/05bio/ShangShyngYang.pdf) (last access: February 26, 2012)

Addresses of the authors

Ulf BUCHSBAUM & Mei-Yu CHEN

Zoologische Staatssammlung München

Münchhausenstraße 21

D – 81247 München

E-Mail: [UlfBuchsbaum.Lepidoptera@zsm.mwn.de](mailto:UlfBuchsbaum.Lepidoptera@zsm.mwn.de)

and: [chen@zsm.mwn.de](mailto:chen@zsm.mwn.de)



---

Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:

Maximilian SCHWARZ, Konsulent f. Wissenschaft der Oberösterreichischen Landesregierung, Eibenweg 6, A-4052 Ansfelden, E-Mail: [maximilian.schwarz@liwest.at](mailto:maximilian.schwarz@liwest.at).

Redaktion: Erich DILLER, ZSM, Münchhausenstraße 21, D-81247 München;  
Roland GERSTMEIER, Lehrstuhl f. Tierökologie, H.-C.-v.-Carlowitz-Pl. 2, D-85350 Freising;  
Fritz GUSENLEITNER, Lungitzerstr. 51, A-4222 St. Georgen/Gusen;  
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](mailto:thomas@witt-thomas.com); Entomofauna, Redaktion c/o Fritz Gusenleitner, Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: [f.gusenleitner@landesmuseum.at](mailto:f.gusenleitner@landesmuseum.at)



# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Entomofauna](#)

Jahr/Year: 2013

Band/Volume: [0034](#)

Autor(en)/Author(s): Buchsbaum Ulf, Chen Mei-Yu

Artikel/Article: [A new \*Terthreutis\* MEYRICK, 1918 species from Taiwan \(Lepidoptera, Tortricidae\) Contribution to the moths of Taiwan 51 349-356](#)