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## ***Mangea dabanga* nov.sp., a new notodontid from Taiwan (Lepidoptera: Notodontidae)**

**Contribution to the moths of Taiwan 8<sup>1</sup>**

**ULF BUCHSBAUM, ALEXANDER SCHINTLMEISTER & MEI-YU CHEN**

### **Abstract**

*Mangea dabanga* nov.sp. is described from Taiwan. The holotype was found during the day, resting on a leaf of an unidentified bush. The new species is very similar to *B. gemina* KISHIDA & KOBAYASHI, 2004, also endemic in Taiwan.

### **Zusammenfassung**

*Mangea dabanga* nov.sp. aus Taiwan wird beschrieben. Die Art wurde am Tage sitzend auf einem Blatt eines unidentifizierten Busches am Waldrand gefunden. Die Art ist nahe verwandt mit *B. gemina* KISHIDA & KOBAYASHI, 2004), welche auch endemisch in Taiwan ist.

Key words: Lepidoptera, Notodontidae *Mangea dabanga* nov.sp. distribution, Taiwan.

### **Introduction**

Taiwan is a small island east of mainland China, south of Japan. More than 2/3 of Taiwan are mountainous and higher than 1,500 m, with the highest summits up to 3,952 m above sea level. Taiwan is one of the biodiversity hotspots in the world with numerous endemic species and also an area on the priority list of ecoregions for global conservation (OLSON & DINERSTEIN (2002), KIER et al. (2009), BROOKS et al. (2002), MITTERMEIER et al. 1998, MYERS et al. (2000), WONDROFF (2010) and SODHI et al. (2004)).

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<sup>1</sup> Contribution to the moths of Taiwan 7: BUCHSBAUM, U., L.-P. HSU, D.-J. CHEN & J. R. GREHAN (2017): A new *Endoclita* (C. & R. FELDER, 1874) from the High Mountains of Taiwan with notes about its evolutionary origins. – European Entomologist (under press).

The study of the moth fauna of Taiwan started with a DAAD sponsored project in 2001 (Project No.: IC D/0039914, PPP-Taiwan) together with the National Chung Hsing University Taichung (CHU), and the National Museum of Natural Science Taichung. Subsequently further cooperation projects (e.g. with the Highland Experimental Farm Meifeng) were undertaken.

From these projects and additional trips to Taiwan some results about the Taiwanese moth fauna were already published, e.g. BUCHSBAUM et al. 2006, BUCHSBAUM & MILLER 2002, BUCHSBAUM & CHEN 2013, CHEN et al. 2013, SCHACHT et al. 2010.

136 Notodontidae species are currently known from Taiwan (HEPPNER & INOUE 1992, SCHINTLMEISTER 2003, 2008, 2013, SCHINTLMEISTER & LOURENS 2010, WU 2015, WU et al. 2013, WU et al. 2015).

### **The genus *Mangea* KISHIDA & KOBAYASHI, 2004**

All of them are similar by external appearance and by genitalia morphology. A fifth species of this group was discovered in Taiwan recently, and is described below.

#### ***Mangea dabanga* nov.sp.** (Figs. 1 – 4)

**H o l o t y p e :** ♂, South Taiwan, Chiay County, Alishan region, Dabang, 23°25'41 N / 120°44'26 E, 1320 m NN, 24. Dezember 2015, leg. Mei-Yu Chen & Ulf Buchsbaum.

Male genitalia mounted.

Holotype: now in Zoologische Staatssammlung München, later to be deposited in the National Museum of Nature Science (NMNS) Taichung, Taiwan.

No paratypes.

**E t y m o l o g y :** The new species is named after the type locality, the small village Dabang where the indigenous Tsou tribe lives.

**D e s c r i p t i o n a n d d i f f e r e n t i a l d i a g n o s i s :** Forewing length ♂ (measured from base to apex of right forewing): 22 mm. Antennae pale brown and strong bipectinated until the tip. Forewings, thorax and abdomen are pale yellowish grey. Apex of forewing is slightly falcate. Costa and margin of forewings are concave; tornus rounded. Postmedian and submarginal fasciae are marked as rows of blackish brown dots. Discal spot is not visible. In the median area a prominent central blackish blotch occur. Apical area display an indistinct larger brown shadow. Veins  $M_1$  and  $M_2$  are fuscous brown tinged in the postmedian area. Hindwings are pale yellowish grey without any markings.

The female is unknown.

Male genitalia are characterized by a long and slightly notched at the tip. Socii are slender and curved outwards with pointed tip. Valva elongated and narrow with pointed apex. Saccular process long, curved and pointed at the tip. Phallus slightly curved with a small projection at the tip. Everted endophallus does not show any sclerotized structures. 8<sup>th</sup> sternite have a large triangular notch at the posterior margin. Both lobes display dense

setae along the margin. 8<sup>th</sup> tergite have also two pointed ends with many dense setae. Both lobes are not straight, but are curved outwards.

The new species is similar to *M. gemina* but is 1 mm larger in forewing length, paler and not reddish or orange tinged forewing color. *M. gemina* displays a well developed marginal fascia and basal and postbasal fasciae marked by fuscous dots, which are not visible in *M. dabanga*. A diagnostic character of *M. gemina* is a second fuscous dorsal patch, which is not present in *M. dabanga*. Male genitalia of *M. dabanga* are distinct by long uncus. Socci and valvae are slenderer and longer than in *M. gemina*. 8<sup>th</sup> sternite display a much deeper notch and both lobes are straight and not concave shaped as in *M. gemina*.

**Material, Methods and Locality:** One male was collected in Alishan Co., South Taiwan, near Dabang village by day. The specimen rested on a leaf from a small bush (Figs 1 – 3).

Alishan Region is a favourite and well known tourist area in the south of Taiwan. The place is surrounded by natural forest and tea gardens. Mountains surrounding that area are between 1,200 m to 2,000 m high. At the time of collecting the weather was warm with temperature by day about 25°C, partly cloudy and at night about 15°C and full moon.

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### References

- BROOKS T.M., MITTERMEIER R.A. , MITTERMEIER C.G., FONSECA G.A.B. DA, RYLANDS A.B., KONSTANT W.R., FLICK P., PILGRIM J., OLDFIELD S., MAGIN G. & C. HILTON-TAYLORS (2002): Habitat Loss and Extinction in the Hotspots of Biodiversity. – *Conservation Biology* **16** (4): 909-923.
- BUCHSBAUM U. & M.-Y. CHEN (2013): A new *Terthreutis* MEYRICK, 1918 species from Taiwan (Lepidoptera, Tortricidae). – *Entomofauna, Ansfelden* **24** (26): 349-356.
- BUCHSBAUM U. & M. A. MILLER (2002): *Leucoblepsis taiwanensis* sp.n., a new Drepanidae from Taiwan (Insecta: Lepidoptera). – *Formosan Entomologist* **22** (1): 101-114.
- BUCHSBAUM U., CHEN M.-Y. & V.V. ZOLOTUHIN (2006): *Thyris alex* nov.sp. – a new Thyrididae species from Taiwan and new record of this genus and the subfamily for Taiwan with notes to the biology, distribution and DNA analyses and notes on a system of the genus (Insecta: Lepidoptera). – *Journal of the Zoological Society Wallacea* **2**: 54-62.
- CHEN M.-Y., SPEIDEL W., BUCHSBAUM U. & G. BEHOUNEK (2013): A new *Amphipyra* OCHSENHEIMER, 1816 species from Taiwan (R.O.C.), with description of larvae, pupa and the biology (Lepidoptera, Noctuidae). – *Nachrichten des entomologischen Vereins Apollo N. F., Frankfurt am Main* **33** (4): 169-176.
- FU C.-M., RONKAY L. & H.-H. LIN (Eds.) (2013): Moths of Hehuanshan mountains. – *Endemic Species Research Institute, Nantou*. 557 pp, 45 pls.

- HEPPNER J.B. & H. INOUE (1992): Lepidoptera of Taiwan. Vol. 1, Part 2: Checklist. – Assoc. Trop. Lep., Gainesville, FL.: 276 pp.
- KIER G., KRAFT H., LEE T.M., JETZ W., IBISCH P.L., NOWICKI C., MUTKE J. & W. BARTHOLOTT (2009): A global assessment of endemism and species richness across island and mainland regions. – PNAS **106** (23): 9322-9327.
- KOBAYASHI H. & Y. KISHIDA (2004): A new genus and a species of Notodontidae (Lepidoptera) – Transactions of the lepidopterological Society of Japan **55**: 261-265.
- MITTERMEIER R.A., MYERS N., THOMSEN J.B., FONSECA G.A.B. DA & S. OLIVIERI (1998): Biodiversity Hotspots and Major Tropical Wilderness Areas: Approaches to Setting Conservation Priorities. – Conservation Biology **12** (3): 516-520.
- MYERS N., MITTERMEIER R.A., MITTERMEIER C.G., FONSECA G.A.B. DA & J. KENT (2000): Biodiversity hotspots for conservation priorities. – Nature **403**: 853-858.
- OLSON D.M. & E. DINERSTEIN (2002): The Global 200: Priority Ecoregions for Global Conservation. – Ann. Missouri Bot. Gard. **89**: 199-224.
- SCHACHT W., BUCHSBAUM U. & M.-Y. CHEN (2010): Räuberische Calliphoriden attackieren Termiten in Taiwan (Diptera: Calliphoridae/Isoptera: Termitidae). – Entomofauna **21** (4): 25-32.
- SCHINTLMEISTER A. (2003): The Zoogeography of Taiwan's Notodontidae (Lepidoptera). – Journal of the Zoological Society Wallacea **1**: 15-26.
- SCHINTLMEISTER A. (2008): Palaearctic Macrolepidoptera Volume 1: Notodontidae. – Apollo Books, Stenstrup. 482 pp, 40 pls.
- SCHINTLMEISTER A. (2013): World Catalogue of Insects. Volume 11: Notodontidae & Oenosandridae (Lepidoptera). – Brill, Leiden-Boston, 605 pp.
- SCHINTLMEISTER A. & J.H. LOURENS (2010): The Philippine Notodontidae (Lepidoptera). – Quadrifina **8**: 1-349.
- SCHINTLMEISTER A. & A. PINRATANA (2007): Moths of Thailand Volume 5: Notodontidae. – Brothers of St. Gabriel. 320 pp, 45 pls.
- SODHI N.S., KOH L.-P., BROOK B.W. & P.K.L. NG (2004): Southeast Asian biodiversity: an impending disaster. – TRENDS in Ecology and Evolution **19** (12): 654-660.
- WONDROFF D.S. (2010): Biogeography and conservation in Southeast Asia: how 2.7 million years of repeated environmental fluctuations affect today's patterns and the future of the remaining refugial-phase biodiversity. – Biodivers. Conserv. DOI 10.1007/s10531-010-9783-3. Published online: 03 February 2010.
- WU S. (2015): Elucidating taxonomic problems of the genus *Disparia* Nagano, 1916 of Taiwan and neighboring areas, with description of one new species (Lepidoptera, Notodontidae). – Zootaxa **3918** (2): 209-223.
- WU S., OWADA M. & C.-M. FU (2013): Rediscovery of two rare ptilodontines in Taiwan: *Himeropteryx yui* Okano, 1969 stat. nov. and *Ptilophora rufula* Kobayashi, 1994 (Lepidoptera, Notodontidae). – Zootaxa **3702** (2): 193-197.
- WU S., CHANG W.-C., WANG L.-H., HUANG C.-L. & Y.F. HSU (2015): Description of two new notodontid species from the relict *Fagus* forests in northeastern Taiwan (Lepidoptera, Notodontidae). – Zootaxa **4066** (3): 291-300.
- WU S. & C.G. LAI (2018): Description of a new *Dypna* species in Taiwan (Notodontidae: Spataliinae: Ceirini) with taxonomic notes on some broad sense *Bireta* species. – Tinea **24** (2): 109-113.

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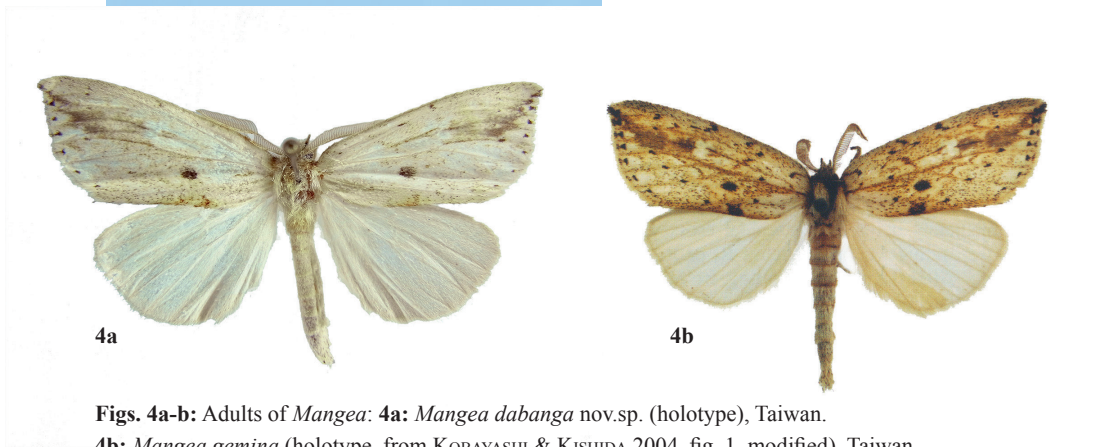
**Figures**



**Figs. 1 & 2:** Type locality at Dabang village, where the holotype of *Mangea dabanga* was discovered.



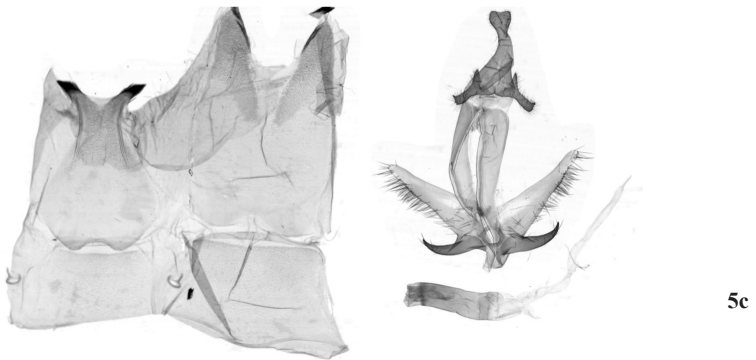
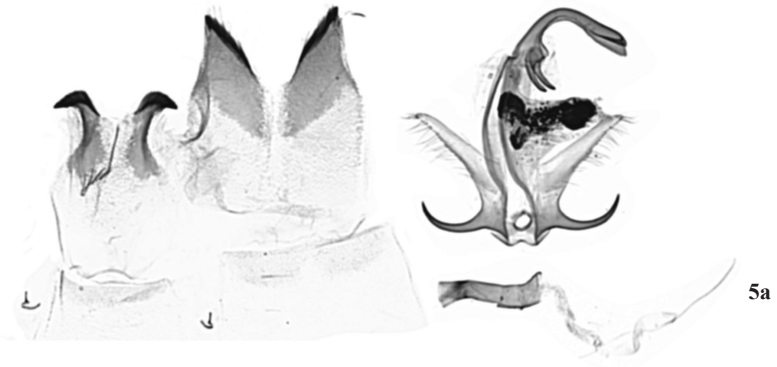
**Fig. 3:** Map of Taiwan.  
Type locality of *Mangea dabanga* is marked red.



4a

4b

**Figs. 4a-b:** Adults of *Mangea*: **4a:** *Mangea dabanga* nov.sp. (holotype), Taiwan.  
**4b:** *Mangea gemina* (holotype, from KOBAYASHI & KISHIDA 2004, fig. 1, modified), Taiwan



**Figs. 5a-c:** Male genitalia of *Mangea*: **5a:** *Mangea dabanga* nov.sp. (holotype), Taiwan; **5b:** *Mangea gemina* (holotype, from Kobayashi and Kishida 2004, fig. 4, modified), Taiwan; **5c:** *Mangea sinensis* KIRIAKOFF, 1962, China, Sichuan.



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