A Preliminary Annotated Checklist of the Indonesian Wild Silkmoths – Part IX. The genus *Loepa* MOORE, 1859 – Part 4, the *katinka*-subgroup of the *katinka*-group (Lepidoptera: Saturniidae: Saturniinae)

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Eine vorläufige kommentierte Scheckliste der indonesischen wilden Seidenspinner – Teil IX. Die Gattung *Loepa* MOORE, 1859 – Teil 4, die *katinka*-Untergruppe der *katinka*-Gruppe (Lepidoptera: Saturniidae: Saturniinae)

Zusammenfassung: Die Saturniiden der Unterfamilie Saturniinae BOISDUVAL, [1837] 1834 (Lepidoptera: Saturniidae) der indonesischen Fauna werden in diesen Beiträgen zur Kenntnis der wilden Seidenspinner des indonesischen Archipels in kommentierten Schecklisten vorgestellt. Der hier vorliegende Beitrag beschäftigt sich mit der Gattung Loepa MOORE, 1859, die in Indonesien auf den Grossen Sundainseln (Borneo, Sumatra, Java und Sulawesi sowie den angrenzenden kleineren Inseln) und auf der westlichsten der Kleinen Sundainseln (Bali) mit mehreren überwiegend endemisch vorkommenden Arten verbreitet ist. Wir setzen mit dieser Arbeit unsere Beitragsserie zur Kenntnis der indonesischen Saturniiden fort, Bisher erschienen sind die kommentierten Scheckliste Teil IX, Teile 1 bis 3 mit der Einleitung, der Systematic, den Artengruppen und Verbreitungskarten, sowie einer Zusammenstellung und Auswertung von Literatur über die Gattung Loepa. In diesem Heft erfolgt eine zusammenfassende Bearbeitung der Literatur zu den sieben indonesischen Taxa der katinka-Untergruppe der katinka-Gruppe (sensu Naumann 1995). Die vorliegende Scheckliste soll keine Gattungsrevision darstellen, sondern aufzeigen, was bisher bekannt ist und wo noch Forschungsbedarf besteht.

Introduction: The wild silkmoths of the subfamily Saturniinae BOISDUVAL, [1837] 1834 (Lepidoptera: Saturniidae) of the Indonesian fauna are discussed within annotated checklists in this contributions to knowledge the wild silkmoths of the Indonesian Archipelago. The present paper mainly deals with the taxa of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 of the Indonesian Archipelago. At the time being 57 taxa (incl. 2 nomina dubia) are recognized for the genus *Loepa*. Eleven names on species level are recognized for the Indonesian fauna of which are seven members of the *katinka*-subgroup, three are members of the *sikkima*-subgroup and one is a member of the so-called *incertae sedis*-group. With this contribution on the species of the *katinka*-subgroup we continue our series to knowledge the wild silkmoths are not yet completed we intend to publish our preliminary results to make these available for further studies.

megacore JORDAN, 1911 (Loepa)

- Original citation and spelling: "Loepa katinka megacore subsp. nov."
- **Original description:** Jordan, K. (1911): Descriptions of new Saturniidae. Novitates Zoologicae . A Journal of Zoology in Connection with the Tring Museum; Vol. XVIII., 1911: pp. 129-134.
- **Type locality:** [Indonesia], West Sumatra [West Sumatra Province], Padang Bowenlanden [Padang Highlands].
- **Etymology:** Not explicitly mentioned in the original decription by Jordan (1911). The name *megacore* might point to the comparatively large wing ocelli in the adults.
- **Type material:** The description based on "a long series" of syntypes. No holotype / lectotype has been designated by original designation. A long syntype series is preserved in the Tring Museum (pers. comm. U. Brosch (Hille / Germany)).
- Taxonomical notes: L. megacore JORDAN, 1911 was originally described as subspecies of L. katinka (WESTWOOD, 1847) (Saturnia). Roepke (1953: 228) raised the name to full species rank for the first time but used the name without explanation or reason also trinominal: L. megacore megacore JORDAN. L. megacore is considered being an endemic species on the island of Sumatra and a member of the katinkagroup (sensu Roepke 1953, sensu Naumann 1995). For a quite long time the name megacore was applied to all populations of large specimens of the genus Loepa MOORE, 1859 from Sumatra, Java, Borneo, and Peninsular Malaysia and also to allied populations north of the Isthmus of Kra and even Taiwan (e.g., Owada & Wang in Heppner & Inoue (1992), Peigler & Wang (1996)). At the time being the name is applicable to the Sumatran populations only. The species is replaced on the island of Java by the endemic L. cynopis NÄSSIG & SUHARDJONO, 1989, on the island of Bali by the closely related and also endemic L. baliensis PAUKSTADT & PAUKSTADT, 2010, in Peninsular Malaysia by the endemic L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011, and on the island of Borneo by the endemic L. martinii BRECHLIN & PAUKSTADT, 2011. All four species are members of the megacorecomplex (sensu Nässig, Lampe & Kager 1996) of the katinka-subgroup of the katinka-group (both sensu Naumann 1995).
- Geographical and altitudinal range: *Loepa megacore* JORDAN, 1911 is an endemic species on the island of Sumatra. No records of *Loepa* MOORE,

1859 are known to us for the islands off the western coast of Sumatra (Indian Ocean) and the Riau Archipelago. This species prefers mountain regions but was also found in the alluvial lowlands of Sumatra.

- **General notes:** The \mathcal{J} and \mathcal{Q} adults were not illustrated by Jordan (1911: 132) in the original description. Roepke (1953: pl. 6, fig. 2; line drawing) figured the \mathcal{J} genitalia structures of L. megacore megacore JORDAN [trinominal use] from Brastagi, Sumatra. Nässig, Lampe & Kager (1996a) figured the 3° and 9° adults of *L. megacore* in color (pp. 90-91, col.-pl. 9, figs. 50-51) and the \mathcal{J} genitalia structures (Sumatra) (phot. h.-t., b/w-pl. 5, fig. 19). Nässig, Lampe & Kager (1996: 137) noted that the senior author successfully used Vitis vinifera L. for the rearing of L. megacore [unspecified origin]. Nässig, Lampe & Kager (1996b: 136) confirmed (p. 138) that older larvae of L. megacore [unspecified origin but most likely material from Sumatra collected by Diehl] caused painful itching on the soft skin of the upper lip of the senior author. The authors remarked that L. megacore was reared in Germany using Parthenocissus sp. during summer and potted Vitaceae during winter as substitute foodplants. The preimaginals were described by Nässig, Lampe & Kager (1996b: pp. 112, 140) and illustrated in color (pp. 156-[157], col.-pl. 8, figs. 96-102 [eggs, 1st, 2nd, 4th, and 5th larval instar], and by Nässig, Lampe & Kager (1996a: 102-[103], col.-pl. 15, figs. 83-84 [pupa and cocoon])). Paukstadt, U. & Paukstadt, L. H. (2005: 84-85) illustrated the \mathcal{E} genitalia structures of L. megacore JORDAN. 1911 from N. Sumatra (p. 84 legend and p. 85 fig. 5). Paukstadt, U. & Paukstadt, L. H. (2006d) provided the circadian flight times, the altitudinal distribution, and biotop descriptions, a $\overline{\partial}$ adult of L. megacore was figured dorsally (p. 303, col.-pl. 1 fig. 4). The altitudinal distribution of L. megacore from Aceh was recorded by Paukstadt, U. & Paukstadt, L. H. (2007f) from 109 to 1,798 m and the circadian flight times of the 3° adults from 00:55 to 05:18 hours local time. Paukstadt, U. & Paukstadt, L. H. (2009b) recorded the circadian flight times from 0400 to 0500 hours local time. Paukstadt, U. & Paukstadt, L. H. (2009e) recorded the complete observation data of L. megacore for Aceh (p. 355) on the annual frequency (diagram 60), the altitudinal distribution (diagram 61), the circadian flight times (diagram 62), and the geographical distribution (map 20). Meister (2011: 155) recorded Cissus antarctica, Crataegus monogyna, Parthenociccus and Vitis vinifera as natural and/or substitute foodplants for L. megacore JORDAN, 1911.
- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).

- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa megacore* JORDAN, 1911 are unknown from literature. There is no information on sericulture available.
- Further readings on *megacore* (in chronological order):
- Snellen van Vollenhoven (1862: 14) recorded *Saturnia Katinka* WESTW.[OOD] [sensu Snellen van Vollenhoven 1862] from [Dutch] East Indies: Java and Sumatra [*L. katinka* (WESTWOOD, 1847) (*Saturnia*) is replaced in the Indonesian Archipelago by a number of distinct and mostly endemic Indonesian species of the genus *Loepa* MOORE, 1859].

Remarks: The record for Sumatra may be referable to *L. javanica* MELL, 1939 or *L. megacore* JORDAN, 1911 rather than *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 or *L. diehli* BRECHLIN, 2010.

- Snelleman in Snellen, P. C. T. in Veth (1892: 7) recorded "de groote fraai gele" [= "the large pretty yellow"] Antheraea Katinka [sensu Snelleman 1881] for Silago, Central Sumatra [the record for Sumatra may be referable to L. megacore JORDAN, 1911 rather than L. javanica MELL, 1939, L. sumatrana Nässig, LAMPE & KAGER, 1989 or L. diehli BRECHLIN, 2010].
- Snellen, P. C. T. in Veth (1892: 40) recorded a singleton of Antheraea Katinka WESTWOOD [sensu Snellen 1892] (Cab. Orient. Entom., p. 25, pl. 12, f. 2) from middle Sumatra, Alahan Pandjang. The author remarked that the specimen is different from Javanese specimens in Leiden Museum ("Verschilt van Javaansche exemplaren ob het Leidsch Museum door dat de eerste dwarslijn der voorvleugels niet roodachtig beschaduwd is") [concluded from description the record is referable to L. megacore JORDAN, 1911].

Remarks: Alahan Panjang is located in the Kerinci Sablat National Park near Solok in the Province West Sumatra. Due to the description of the coloration of the basal line we assume that *L. megacore* JORDAN, 1911 has been before Snellen (1881).

Jordan (1911: 129-134) described a new subspecies from the Padang Bovenlanden [Padang Highlands], West Sumatra [today West Sumatra Province] after a long series: *Loepa katinka megacore* JORDAN, 1911 [sensu Jordan 1911]. There is no figure present but the description is unmistakable.

Remarks: At the time being *L. megacore* JORDAN, 1911 is recognized as an endemic species from the island of Sumatra.

- Cockerell *in* Packard (1914: 163) added some information on the genus *Loepa* MOORE, 1859 [error in first (original) description of *Loepa* MOORE, 1859]. The [aberration] ab. *sikkima* MOORE with a remark that Jordan regards *L. sikkima* as a valid species and the subsp. *megacore* JORDAN (Sumatra) were mentioned in subordination of *L. katinka* (WESTWOOD).
- Seitz *in* Seitz (ed.) (1928: 505-506) listed four species of the genus *Loepa* MOORE (pp. 505-506). Those were *L. katinka* WESTWOOD, *S.* [sic!] *megacore* JORDAN, *L. newara* MOORE [misinterpretation], and *L. anthera* JORDAN. The only taxon mentioned from of the Indonesian Archipelago has been *S.* [abbreviation for *?Saturnia*, concluded from text most probably a lapsus] *megacore* JORDAN, which was recorded for the Padang Highlands, Sumatra.

Remarks: The illustrated \mathcal{S} adult is with certainty a species of the *miranda*-subgroup of the *miranda*-group but not at all *L. katinka* sensu stricto.

Bouvier (1928: 122, 132) recorded *L. katinka megacore* JORDAN / *L. katinka* var. *megacore* JORDAN [sensu Bouvier 1928] from the North Korintji Valley, SW Sumatra.

Remarks: The records of *L. katinka* from Sumatra may be based either on the true *L. javanica* MELL, 1939 and/or *L. megacore* JORDAN, 1911. There is also the possibility that one of both records was based on *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989.

Eecke van (1929: [137]-138) recorded *L. katinka* (WESTWOOD, 1848) [sensu van Eecke 1929; error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Sumatra [the record from Sumatra may be referable to *L. javanica* MELL, 1939]. Van Eecke remarked (p. 138) that Jordan (1911: 132) described the Sumatranian form of *katinka* under the name of *L. megacore*, while Bouvier (1928: 132) placed *megacore* JORDAN as variation of *katinka*. A short description of the larvae of *L. katinka* [sensu van Eecke 1929] cannot be assigned to any species of this genus because the origin of the specimens was not mentioned.

Remarks: The records of *L. katinka* (WESTWOOD, 1847) (*Saturnia*) from the mainland of Southeast Asia, Sumatra, Java, and Sulawesi need to be assigned to several mostly endemic distinct species.

- Schüssler *in* Strand (1933: 90-94) listed *L. megacore* JORDAN, 1911 in full species rank for the Padang Highlands, Sumatra.
- Bouvier (1936: 231-235) recognized only three species in the genus *Loepa* MOORE, 1858 [error in publication date of *Loepa* MOORE, 1859]. Other names were assigned as subspecies to *L. katinka*. *L. katinka sikkima* MOORE [sensu Bouvier 1936] was recorded for Sumatra [the record from Sumatra may be referable to *L. javanica* MELL, 1939 or *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1939 rather than *L. diehli* BRECHLIN, 2010]. A ♂ adult of *L. katinka sikkima* MOORE [sensu Bouvier 1939] from Sumatra was illustrated (pl. VI, fig. 7 [p. unnumbered] with legend p. 352) [the illustration may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than any other Sumatra species of this genus]. The following taxa were also listed as subspecies of *katinka*: *katinka*, *sikkima* MOORE, *megacore* JORDAN, *damartis* JORDAN, and *miranda* (pp. 233-234). The ♂ genitalia structures were partly figured of *L. katinka* [unspecified] (p. 232, fig. 67) and *L. katinka sikkima* [sensu Bouvier 1928]. We cannot assign the figures to any of above mentioned species with certainty.

Remarks: The records of *L. katinka sikkima* MOORE from Java, Sumatra, and Sulawesi actually based on at least five distinct species as interpreted at the time being. The illustration by Bouvier (1936: pl. VI, fig. 7) under the name of *L. katinka sikkima* from Sumatra fits to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 but not at all to *L. javanica* MELL, 1939. Roepke (1953) remarked that Bouvier (1936: 232, fig. 67) illustrated the \Diamond genitalia structures of *L. megacore* which we cannot confirm. The figures 67 B and 67 B' may be referable to *L. javanica* MELL, 1939 but cannot be confirmed with certainty.

- Bryk (1944: 8-9) recorded *L. katinka* [sensu Bryk 1944] from Sumatra [the record from Sumatra may be referable to *L. megacore* JORDAN, 1911].
- Roepke (1952: 21) remarked that it would be difficult to designate the mountain species from Java [unnamed, today recognized as *L. cynopis* NÄSSIG &

SUHARDJONO, 1989] by a correct name, as it may be a subspecies of one of the species described from India or from other Eastern localities, the types of which are in the British Museum.

Remarks: Roepke (1952: 21) most likely referred also to *L. megacore* JORDAN, 1911 of which the type is in the Natural History Museum (London, Great Britain).

Roepke (1953: 227-230) remarked that *diversiocellata* rather may be allied with *megacore* JORDAN. *Loepa megacore megacore* JORDAN [sensu Roepke 1953] was recorded from Sumatra and Java [the record from Java is referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989]. The following species, subspecies and forms were figured (pl. 6): \mathcal{J} *L. megacore* JORDAN [sensu Roepke 1953] from West Java [the record from West Java is referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989], Fig. 4. \mathcal{Q} *L. katinka* subsp. ? [unnamed, sensu Roepke 1953] from Pangkalanbrandan, East Coast of Sumatra [the record may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than *L. javanica* MELL, 1939; see "Remarks" below]. Roepke (1956. 3) remarked that Bouvier (1936: 232, fig. 67) illustrated the \mathcal{J} genitalia structures of *L. megacore* which we cannot confirm. The figures 67 B and 67 B' may be referable to *L. javanica* MELL, 1939 but cannot be confirmed with certainty. The \mathcal{J} genitalia structures of *L. megacore* megacore JORDAN [trinominal use] from Brastagi, Sumatra [North Sumatra Province, approximately 1,320 m above sea level] were figured (fig. 2).

Remarks: The term East Coast of Sumatra was usually used by Dutch entomologists for the region east of Medan in the North Sumatra Province. Pangkalanbrandan is a port town between Medan and Langsa.

- Mell (1958: 194) placed *L. megacore* as geographical form (in the sense of subspecies) to *L. katinka* [misinterpretation].
- Holloway (1976: 85) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Holloway 1976] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Sumatra [see "Remarks" below regarding the range of *L. katinka* sensu stricto].
 Remarks: With exception of the records from India all further records were probably based on misinterpretations also because previous authors mentioned some endemic species of the *katinka*-group (sensu Naumann 1995) as subspecies of *L. katinka* (WESTWOOD, 1847) (*Saturnia*). *Loepa katinka* (WESTWOOD, 1847) (*Saturnia*) is an Indian / Himalayan species which is replaced for example by *L. megacore* JORDAN, 1911 in Sumatra.
- Arora & Gupta (1979: 35-38) recorded the only Indian species *L. katinka* (WESTWOOD, 1848) [sensu Arora & Gupta 1979] [error of publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] also for Sumatra [the record for Sumatra may be referable to *L. javanica* MELL, 1939 or *L. megacore* JORDAN, 1911].
 Remarks: *L. katinka* (WESTWOOD, 1847) (*Saturnia*) is replaced on the island of Sumatra by *L. megacore* JORDAN, 1911 and *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989. We assume that Arora & Gupta (1979) confused *L. katinka* (WESTWOOD, 1847 (*Saturnia*) and *L. sikkima* MOORE, 1866 ("1865").
- Allen (1981: 103, 113-114, pl. 7) recorded two species of the genus *Loepa* MOORE, 1848 [error in publication date of *Loepa* MOORE, 1859] for Brunei based on singletons. Those were *L. megacore* JORDAN, 1909 [sensu Allen 1981] [error in publication date of *L. megacore* JORDAN, 1911] [the record for Brunei may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010] and *L. sikkima* MOORE,

1858 [sensu Allen 1981] [error in publication date of *L. sikkima* MOORE, 1866 ("1865")] [the record for Brunei, if not based on a misinterpretation, may be referable to *L. siamensis malayensis* BRECHLIN, 2010]. $\stackrel{\circ}{\supset} L.$ megacore [sic!] from Brunei was figured (pl. 7).

Remarks: *L. megacore* JORDAN, 1911 is endemic to Sumatra and replaced by *L. martinii* BRECHLIN & PAUKSTADT, 2010 in Borneo.

- Gardiner (1982: 49) recorded *L. anthera* JORDAN, *L. damartis* JORDAN, *L. megacore* JORDAN [unspecified], and *L. oberthüri* LEECH [incorrect subsequent spelling of *L. oberthuri* (LEECH, 1890) (*Saturnia*)].
- Holloway *in* Barlow (1982: 192) Note 18, recorded three distinct taxa for Malaysia which were the Oriental *L. katinka* WESTWOOD [the record for Malaysia may be referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], *L. sikkima* MOORE [sensu Holloway 1982] [the record may be referable to *L. siamensis malayensis* BRECHLIN, 2010], and *L. megacore* JORDAN [sensu Holloway 1982] [the record for Malaysia may be referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], too], which has been described from Sumatra. Holloway *in* Barlow (1982: 192) remarked that *L. megacore* has been recorded by Holloway (1976) for Borneo under the name of *L. katinka* (sensu Holloway 1976).

Remarks: The Malaysian *L. lampei* is replaced on the island of Sumatra by *L. megacore* JORDAN, 1911.

Lampe (1984: 8) recorded *L. megacore* JORDAN, 1911 [sensu Lampe 1984] from the Genting Highlands, West Malaysia [the record from the Malay Peninsula is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011]. \Im and \Im adults were illustrated in color (col.-pl. 3, figs. 4 and 5).

Remarks: *L. megacore* JORDAN, 1911 was originally described from Sumatra. The populations from West Malaysia were later found being distinct from those of Sumatra and therefore described in honor of R. E. J. Lampe (Nürnberg, Germany) as a new species: *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (*Loepa*). Lampe (2010: 290, 291) illustrated the preimaginals of *L. megacore* (Sumatra) and *L. megacore* (West Malaysia) [sensu Lampe 1984; the record from West Malaysia is referable to *L. lampei* PAUKSTADT, PAUKSTADT, 2011] which are considerably distinct in their larval morphologies.

- Lampe (1985: 8) recorded *L. megacore* JORDAN, 1911 [sensu Lampe 1984] from the Genting Highlands, West Malaysia [the record from the Malay Peninsula is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011]. $\overset{\circ}{\supset}$ and $\overset{\circ}{\ominus}$ adults were illustrated in color (col.-pl. 3, figs. 4 and 5). **Remarks:** See under "Lampe (1984) Remarks".
- Holloway (1987: 106-108) noted that most host records for this genus are from Vitidaceae, but Dilleniaceae, Saxifragaceae, and Rutaceae are also utilised [unspecified sources]. The adult and the larva were described briefly. Sundanian small specimens of *Loepa* were referred to *L. sikkima* [sensu Holloway 1987] (as subspecies). He noted (p. 106) that a Sumatran insect [unspecified] may be related or conspecific *L. katinka* [sensu Holloway 1987; the record from Sumatra may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989]. Two Bornean species

were illustrated under the names of *L. megacore* JORDAN, 1911 [sensu Holloway 1987; the records from Borneo are referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010] (col.-pl. 7, fig. 10 [the figured 3° adult is referable to *L. megacore* sensu lato rather than to *L. martinii* BRECHLIN & PAUKSTADT, 2010]) together with the 3° genitalia structures (*megacore* from Sumatra: fig. 137 and *sikkima* [sensu Holloway 1987] from Brunei, Borneo: fig. 136). The following 3° genitalia structures were figured for comparisons: *L. megacore* (Sumatra: fig. 137). Holloway remarked (p. 107) that *L. katinka* (sensu Holloway 1976: 85) actually is *Loepa megacore* JORDAN, 1911 [sensu Holloway 1987; the record from Borneo may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010]. Holloway recorded two species for Sundaland including Borneo (p. 106). Those were *Loepa sikkima* MOORE, 1865 (*Antheraea*) [sensu Holloway 1987] [lapsus in combination with *Antheraea* HÜBNER, 1819 ("1816") and error in publication date of *L. sikkima* MOORE, 1866 ("1865")] and *Loepa megacore* JORDAN, 1911 [sensu Holloway 1987].

Remark: The record of *L. megacore* JORDAN, 1911 [sensu Holloway 1987] for Sundaland may be referable to several distinct mostly endemic species of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995), e.g., *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 (Bali), *L. cynopis* NÄSSIG & SUHARDJONO, 1989 (Java), *L. megacore* JORDAN, 1911 (Sumatra), *L. minahassae* MELL, 1939 (North Sulawesi), *L. finnackermanni* BRECHLIN, 2010 (South Sulawesi), *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo), *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Peninsular Malaysia), and *L. palawana* NÄSSIG & TREADAWAY, 1997 (Palawan, Philippines).

- Nässig & Treadaway (1988: 159-176) compared L. mindanaensis with L. megacore JORDAN, 1911 [sensu lato; unspecified origin]. L. mindanaensis was reported being certainly closely related with L. megacore [sensu Nässig & Treadaway 1988] via the fringe of islands between southwestern Mindanao and northeastern Borneo via the Sula Archipelago [the record from Borneo is referable to L. martinii BRECHLIN & PAUKSTADT, 2010] [no specimens of this genus from the Sula Archipelago are known in collections so far]. The authors remarked that both Philippine species belong to the species-group comprising L. megacore JORDAN, 1911 and L. katinka WESTWOOD, 1848 [not code-conform citation and error in publication date of L. katinka (WESTWOOD, 1847) (Saturnia)], and some more species [unspecified]. L. megacore [sensu Nässig & Treadaway (1988)] was recorded for northern Sundaland [Sundaland: Bali, Java, Sumatra, Borneo, Palawan, the Malay Peninsula, and the smaller islands in between, cf. Nässig, Lampe & Kager (1996a: 10) [the record from the Malay Peninsula south of the Isthmus of Kra is referable to L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], Sumatra, Borneo [the record from Borneo is referable to L. martinii BRECHLIN & PAUKSTADT, 2010]).
- Nässig & Suhardjono (1989: 205) reported L. cynopis being closely related with the North Sundanian L. megacore JORDAN, 1911 [sensu Nässig & Suhardjono 1989; this record is referable to a number of distinct and endemic species of the megacore-complex: L. megacore JORDAN, 1911 (Sumatra), L. martinii BRECHLIN & PAUKSTADT, 2010 (Borneo), and L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay Peninsula)]. The following adults were figured in phot. h.-t. (p. 207): d L. megacore from West Malaysia (fig. 1) [the record and the figured specimens from West Malaysia is referable to L. lampei PAUKSTADT,

PAUKSTADT & BRECHLIN, 2011], \mathcal{Q} L. megacore from North Sumatra (fig. 3). The following \mathcal{E} genitalia structures were figured in phot. h.-t. (p. 208) with aedeagus separate: L. megacore [unspecified origin] (figs, 7A, B). Under the subheader "Diagnosis and discussion" the authors reported L. megacore [sensu Nässig & Suhardjono 1989] being known from Sundaland except Java (i.e., Sumatra, Malaya [the record from Malaya is referable to L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], Borneo [the record from Borneo is referable to L. martinii BRECHLIN & PAUKSTADT, 2010]) and possibly north to Thailand [the possible record from Thailand may be referable to L. diffundata NAUMANN, NÄSSIG & LÖFFLER, 2008]. The authors reported all records of katinka from the Greater Sunda Islands being misidentified and either L. megacore [sensu Nässig & Suhardjono 1989; the record may be referable to L. megacore JORDAN, 1911 from Sumatra and L. martinii BRECHLIN & PAUKSTADT, 2010 from Borneo], L. sikkima javanica [sensu Nässig & Suhardjono 1989; the record may be referable to L. javanica MELL, 1939 from Sumatra and L. havatiae PAUKSTADT & BRECHLIN, 2011 from Java], L. cynopis, or another new taxon endemic of Sumatra [unnamed; = this species was later described as L. sumatrana NÄSSIG, LAMPE & KAGER, 1989]. Nässig & Suhardiono mentioned that Holloway (1987) figured the Bornean species L. megacore [sic!].

Pinratana & Lampe (1990: 21-24) figured the mature larva of *L. megacore* from Sumatra in color (pl. 5, fig. 9). The authors reported *L. diversiocellata* [misinterpretation], *L. megacore*, and *L. cynopsis* NässIG & SUHARDJONS [incorrect subsequent spellings of author and *L. cynopis* NässIG & SUHARDJONO, 1989] form a group of closely related large species living in Asia between India and Java (p. 22) [today we know that there are a few more species of the *megacore*-complex in this region mainly endemic to isolated islands and the Malay Peninsula].

Remarks: Loepa diversiocellata BRYK, 1944 is recognized being a junior subjective synonym of *L. katinka* (WESTWOOD, 1847) (*Saturnia*).

Stone (1991: 28) recorded *Cissus* and *Leea* as foodplants for *katinka* (WESTWOOD) ssp. [sensu Stone 1991] based on Bouvier (1936) [see "Remarks" below].
Remarks: Because Bouvier (1936: 233) recorded *katinka sikkima* MOORE from Java, Sumatra, and Sulawesi and *katinka megacore* JORDAN from Sumatra the records of foodplants actually based on several distinct species of the genus *Loepa* MOORE, 1859, including *L. megacore* JORDAN, 1911 (Sumatra).

- Owada & Wang in Heppner & Inoue (1992: 156) recorded L. megacore JORDAN, 1911 for Sumatra and katinka. – auct. (not WESTWOOD, 1848) [error in publication date of L. katinka (WESTWOOD, 1847) (Saturnia)] was placed in subordination [in the sense of L. katinka s. l. from Sumatra?] to L. megacore. L. megacore formosensis MELL, 1938 [misinterpretation; error in publication date of L. formosensis MELL, 1939] was recorded for Taiwan and L. megacore formosibia BRYK, 1944 [misinterpretation] was listed in subordination [as junior subjective synonym] of L. formosensis.
- Oberprieler & Nässig (1994: 276) noted that the preimaginals of seven species of approximately 18 species in the genus *Loepa* are known so far. The authors remarked that all known larvae of the genus *Loepa* are camouflaging due to the

brown ground coloration and bright yellowish or greenish lateral patches, as well due to an asymmetrical resting position (p. 286). The 4th instar larva of *Loepa megacore* [sensu lato, unspecified origin] was figured in color (p. 300, col.-pl. 3, fig. 17).

Remarks: Based on the illustration by Oberprieler & Nässig (1994: 300, fig. 17) and illustrations of *L. megacore* JORDAN, 1911 (Sumatra) and *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 under the name of *L. megacore* (Malay Peninsula) by Lampe (2010: 290-291) we are able to assign the figure by Oberprieler & Nässig to the true *L. megacore* (Sumatra) with certainty.

- Naumann (1995: 81-82) classified the species in the genus *Loepa*: 1. *oberthueri*group [incorrect subsequent spelling of *L. oberthuri* (LEECH, 1890) (*Saturnia*)], 2. *miranda*-group, 3a. *katinka*-subgroup of the *katinka*-group which included *L. megacore* JORDAN, 1911, and 3b. *sikkima*-subgroup of the *katinka*-group.
- Peigler & Wang (1996: unnumbered, 121-126) cited *Loepa formosensis* MELL, 1938 [error in publication date of *L. formosensis* MELL, 1939] from Taiwan as subspecies of *Loepa megacore* JORDAN, 1911: *Loepa megacore formosensis* MELL, 1938 [sic!] [misinterpretation]. ♂ and ♀ adults of [*Loepa megacore*] *megacore* [misinterpretation] from Indonesia [unspecified origin] were illustrated in color for comparison.

Remarks: Concluded from text the citation of subsp. *megacore* is applicable to the populations from Sumatra that means to true *L. megacore* JORDAN, 1911.

Nässig, Lampe & Kager (1996a: 5, 6, 21, 64-69) recorded three species for Sumatra. Those were *L. sikkima* MOORE, 1865 [sensu Nässig, Lampe & Kager 1996; the record from Sumatra is referable to *L. javanica* MELL, 1939; error in publication date of *L. sikkima* MOORE, 1866 ("1865")], *L. megacore* JORDAN, 1911 [sensu Nässig, Lampe & Kager 1996] from Sundaland (excluding Java and Palawan) [*L. megacore* is replaced by *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 in the Malay Peninsula and by *L. martinii* BRECHLIN & PAUKSTADT, 2010 in Borneo which are both parts of Sundaland; *L. megacore / L. cynopis* NÄSSIG & SUHARDJONO, 1989 is replaced by *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 in Bali], and *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 a Sumatran endemic. \mathcal{J} and \mathcal{Q} adults of *L. megacore* (pp. 90-91, col.-pl. 9, figs. 50-51) were figured in color.

Remarks: *L. megacore* JORDAN, 1911 is considered to be an endemic species on the island of Sumatra only.

- Nässig, Lampe & Kager (1996b: 136-139) briefly described the preimaginals of *L. megacore* JORDAN, 1911 from Sumatra and provided color figures (legend p. 156; illustrations p. 157, col.-pl. 8): eggs (fig. 102, 1st to 5th (final) instar larvae (figs. 96-101). The authors noted that standard food (in Germany) during summer was *Parthenocissus* sp., during winter other, potted Vitacea.
- Gupta (1997: 417) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Gupta 1997] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] for Indonesia [the record for Indonesia may be referable to a number of distinct and endemic species of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995); see "Remarks" below].

Remarks: At the time being the following taxa of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 are recognized for the Indonesian Archipelago: *L. megacore* JORDAN, 1911 (Sumatra), *L. minahassae* MELL, 1939 (N Sulawesi [type locality], ?Banggai Archipelago), *L. cynopis* NÄSSIG & SUHARDJONO, 1989 (Java), *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 (Sumatra), *L. finnackermanni* BRECHLIN, 2010 (S Sulawesi [type locality], ?Selayar Archipelago), *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo), and *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 (Bali).

Nässig & Treadaway (1997: 356-366) discussed the relationships between the Sundanian and the Philippine taxa of the *megacore*-group [non-uniform citation of the group, also megacore-complex or species-group around megacore]. The following members of the megacore-group were mentioned (p. 357): the Sundanian L. megacore JORDAN, 1911 [sensu Nässig & Treadaway 1997; this citation is referable to a group of biospecies: L. megacore (Sumatra), L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay Peninsula), L. martinii BRECHLIN & PAUKSTADT, 2010 (Borneo), and L. baliensis PAUKSTADT & PAUKSTADT, 2010 (Bali)], L. cynopis NÄSSIG & SUHARDJONO, 1989 from Java, L. nigropupillata NÄSSIG & TREADAWAY, 1988 from Luzon and Sibuyan, L. mindanaensis SCHÜSSLER, 1933 [sensu Nässig & Treadaway, 1997] from Mindanao [= L. mindanaensis SCHÜSSLER, 1933] and Leyte (first record) [the record from Leyte is referable to L. visayana BRECHLIN, 2000], L. palawana from Palawan, and L. diversiocellata BRYK, 1944 [misinterpretation] from the region north of the Malay Peninsula [the record may be referable to L. diffundata NAUMANN, NÄSSIG & LÖFFLER, 2008, L. diffunorientalis BRECHLIN, 2010, and L. diffunoccidentalis BRECHLIN, 2010]. The authors noted that there is some evidence for introgression on the Malay Peninsula between L. megacore [sensu Nässig & Treadaway 1997; the record from the Malay Peninsula is referable to L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011] and L. diversiocellata [misinterpretation] (p. 362). The authors remarked that L. mindanaensis, L. palawana, and L. megacore/cynopis [sensu Nässig & Treadaway 1997] probably have got the same ancestor. The authors remarked that it remains to be studied whether the different populations of the *megacore*-complex are distinct biospecies or subspecies or of some intermediate rank. The authors confirmed some evidence for introgression on the Malay Peninsula between L. megacore [sic!] and L. diversiocellata [sic!] [the populations from the Malay Peninsula were later described as the distinct species L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 due to morphology, zoogeography and DNA grouping (DNA analysis by BOLD)].

Remarks: The name *diversiocellata* BRYK, 1944 is recognized being a junior subjective synonym of *L. katinka* (WESTWOOD, 1847) (*Saturnia*).

d'Abrera (1998: 46-51) confirmed 18-22 species in the genus *Loepa* MOORE, 1860 [error in first (original) description and consequently error in publication date of *Loepa* MOORE, 1859]. The author recorded *L. megacore* JORDAN, 1911 [sensu d'Abrera 1998] from Peninsula Malaya [the record from the Malay Peninsula is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], Sumatra, and Borneo [the record from Borneo may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010]. A small ♂ syntype of *L. megacore* (Sumatra) was figured dorsally in color (p. 47). Nässig & Treadaway (1998: 389-398) briefly described and compared the preimaginals of *L. nigropupillata* with those of *L. megacore* JORDAN, 1911 [unspecified origin] and other species. The authors remarked that *L. nigropupillata* is the most colorful member of the *megacore*-subgroup. *L. mindanaensis* was compared with the North Sundanian *L. megacore* [part. misinterpretation; the populations of the *megacore*-complex (= *katinka*-subgroup) from North Sundaland belong to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay Peninsula), *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo), and *L. megacore* sensu stricto (Sumatra)].

Remarks: The grouping of species around *L. megacore* JORDAN, 1911 and *L. katinka* (WESTWOOD, 1847) (*Saturnia*) in above work has been carried out nonuniform, not following already tentative erected group-names / groupings in use (see Naumann 1995) and therefore may lead to confusion. The following group-names have been used in above work: *katinka/megacore-subgroup* of the *katinka-group* (p. 390), *megacore-subgroup* (p. 391, 393, 395), *megacore/katinka-group* (p. 398), as well as *sikkima-subgroup* (p. 390) and *sikkima-group* (p. 398).

- Brechlin, R. (2000: 165-170) compared the ♂ genitalia structures of *L. visayana* BRECHLIN, 2000 with those of *L. megacore* JORDAN, 1911 [West Malaysia] [sensu Brechlin 2000; the record from the Malay Peninsula is referable to the later described *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011] and other species.
- Paukstadt, U. & Paukstadt, L. H. (2004c: 111-188) recorded two species of the genus *Loepa* MOORE, 1859 from the Malay Peninsula in "An introduction to the wild silkmoths of the Oriental Region, with special reference to Peninsular Malaysia Part 1". Those were *L. sikkima* ATKINSON *in* Moore, 1866 ("1865") [sensu Paukstadt & Paukstadt 2004] [error in authorship of *L. sikkima* MOORE, 1866 ("1865"); the record from the Malay Peninsula is referable to *L. siamensis malayensis* BRECHLIN, 2010] and *L. megacore* JORDAN, 1911 [sensu Paukstadt & Paukstadt 2004] [the record from the Malay Peninsula is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011].
- Paukstadt, U. & Paukstadt, L. H. (2005: 51-124) illustrated *L. megacore* JORDAN, 1911 [sensu Paukstadt & Paukstadt 2005] from West Malaysia, Pahang Province, Kampung Raja, ca. 1,800 m (p. 84 legend and p. 85 col.-pl.) [the record and illustrations from Peninsular Malaysia are referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011]. The \mathcal{J} adult was figured dorsally (fig. 1) and ventrally (fig. 2) and the \mathcal{Q} adult was figured dorsally (fig. 3) and ventrally (fig. 4). The \mathcal{J} genitalia structures of *L. megacore* JORDAN, 1911 from N. Sumatra were figured in phot. h.-t. (p. 84 legend and p. 85 figs. 5 (*L. megacore*). The wing venation of *L. megacore* [unspecified origin, sensu Paukstadt & Paukstadt 2005] was illustrated in line drawings (monochrome) (p. 88 legend and p. 91 fig. 16 (*L. megacore*)).

Remarks: At the time being we cannot confirm the identity of the specimens / origin of the material in our collection of which the wing venation was taken.

Paukstadt, U. & Paukstadt, L. H. (2006c: 259-295) reported on an entomological expedition to Nanggroe Aceh Darussalam, Sumatra Island, Indonesia. *L. megacore* JORDAN, 1911 was collected at light.

- Paukstadt, U. & Paukstadt, L. H. (2006d: 296-316) provided preliminary results on their studies of the wild silkmoths of Nanggroe Aceh Darussalam, Sumatra, Indonesia. *L. megacore* JORDAN, 1911 was collected at light. The circadian flight times, the altitudinal distribution, and biotop descriptions were provided. The *∂* adults of *L. megacore* were figured in color dorsally (p. 303, col.-pl. 1 fig. 4).
- Paukstadt, U. & Paukstadt, L. H. (2007e: 260-277) reported on their 2nd entomological expedition to the Indonesian province of Nanggroe Aceh Darussalam, Sumatra Island. Three species of the genus *Loepa* MOORE, 1859 were collected at artificial light sources. Those were *L. megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2007; error in publication date of *L. javanica* MELL, 1939].
- Paukstadt, U. & Paukstadt, L. H. (2007f: 278-300) reported on further results of their studies of the wild silkmoths of Nanggroe Aceh Darussalam, Sumatra Island, Indonesia. Three species of the genus *Loepa* MOORE, 1859 were collected at artificial light sources and data obtained of the altitudinal distribution and the circadian flight times. Those were *L. megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2007; error in publication date of *L. javanica* MELL, 1939].
- Paukstadt, U. & Paukstadt, L. H. (2008) reported on their 3rd expedition to Nanggroe Aceh Darussalam, Sumatra. Three species of the genus *Loepa* MOORE, 1859 from Aceh, Sumatra were recorded: *L. megacore* JORDAN, 1911 from around 1,800 m altitude except a fresh ♂ adult which has been sympatric with *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2008; error in publication date of *javanica* Mell, 1939] from Lokop (alluvial lowlands, 109 m) and *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 from altitudes above 1,428 m.
- Paukstadt, U. & Paukstadt, L. H. (2009a: 3-44) reported on their 4th expedition to Nanggroe Aceh Darussalam, Sumatra Island, Indonesia. Two species of the genus *Loepa* MOORE, 1859 were collected in the Barisan Range. Those were *L. megacore* JORDAN, 1911 and *L. sumatrana* NASSIG, LAMPE & KAGER, 1989.
- Paukstadt, U. & Paukstadt, L. H. (2009b: 47-80) reported that *Loepa megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2009] [error in publication date of *javanica* MELL, 1939] were observed in Aceh, northern Sumatra. The altitudinal distributions (p. 58, table 1, p. 62, diagrams 14-16) and the circadian flight times (p. 73, diagrams 39-41) were recorded. *L. megacore* was observed from 109 to 1,798 m (in all altitudes). The circadian flight times were recorded for *L. megacore* being mainly from 0400 to 0500 hours local time.
- Paukstadt, U. & Paukstadt, L. H. (2009d: 95-148) reported on their 5th entomological expedition to Nanggroe Aceh Darussalam, Sumatra Island, Indonesia. Information on the species of the genus *Loepa* MOORE, 1859 from Aceh, northern Sumatra was provided. Three species were observed at light sources: *Loepa megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1939 [sensu Paukstadt & Paukstadt 2009].

- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus *Loepa* MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll. Museum Zoologicum Bogoriense (Cibinong) – Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae)". *Loepa megacore* JORDAN, 1911 from Sumatra was recorded for the collection. The contents of pin-labels was annotated and all pin-labels illustrated in color.
- Paukstadt, U. & Paukstadt, L. H. (2009e: 311-364) reported on "Final observations on the wild silkmoths of Nanggroe Aceh Darussalam, Sumatra, Indonesia (Lepidoptera: Saturniidae)" based on five expeditions carried out by the authors from between 2006 and 2009. L. megacore JORDAN, 1911 was observed in Aceh (66 observations) (p. 323). The altitudinal distribution of *Loepa* (p. 325, table 3) and biotop descriptions (p. 324, table 2) were provided for L. megacore. L. megacore was observed in disturbed primary lowland evergreen forest (109 m), lowland evergreen rainforest (139 m), primary lower montane rainforest (966 m, 1,428 m, 1,549 m, and 1,680 m), primary lower montane rainforest and tropical pine forest (1,458), primary lower montane rainforest with mist forest in higher altitudes (1,766 m), lower montane rainforest with arid areas and tropical pine forest (1,795 m), primary lower montane rainforest with mist forest in higher altitudes (1,978 m). L. megacore was considered being a species of the Barisan Range (p. 326). Table 4 (p. 327) shows the altitudinal distribution of Saturniidae from Sumatra. L. megacore was recorded from all altitudes from 109 to 1,978 m (record by Diehl from 50 m). The authors separated the Saturniidae of Aceh in four groups based on the altitudinal distribution (p. 328). L. megacore was placed in group 4, which contains species accepting a wide altitudinal range from the lowlands to the mountains (most probably polyphagous or "Kulturfolger" sensu Nässig, Lampe & Kager 1996a). The altitudinal distribution of Saturniidae in Aceh based on collections by Paukstadt & Paukstadt from between 2006 and 2009 was recorded in table 5 (p. 329). The suggested life-cycles of Loepa species were reported with a clear peak in II (p. 336). The complete observation data for Aceh of L. megacore were provided (p. 355) on the annual frequency (diagram 60), the altitudinal distribution (diagram 61), the circadian flight times (diagram 62), and the geographical distribution (map 20).
- Brechlin & Paukstadt (2010a: 18-21) described a new species of the *katinka*-group (sensu Naumann 1995) from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010.

Remarks: The contribution by Brechlin & Paukstadt (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and designations of lectotypes, if any, are considered invalid.

Brechlin & Paukstadt (2010b: 19-22) described a new species of the [*katinka*subgroup of the] *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010. The new species was compared with *L. megacore* MOORE, 1911 [lapsus, error in authorship of *L. megacore* JORDAN, 1911] [sensu Brechlin & Paukstadt 2010] from Sumatra and West Malaysia [the record from West Malaysia is referable to *L.* *lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011]. The following adult was figured dorsally in color (p. 21): *A L. megacore* (Sumatra) (fig. 3). The following *A* genitalia structures were figured in color for comparisons (aedeagus separate) (p. 22): *L. megacore* (Sumatra) (fig. 9) and *L. megacore* [sensu Brechlin & Paukstadt 2010] (West Malaysia) [the record from West Malaysia is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011] (fig. 10).

- Paukstadt, U. & Paukstadt, L. H. (2010a: 80-88) provided an overview on the saturniid moths of Sumatra with special reference to the Nanggroe Aceh Darussalam Province, Indonesia. Four species of the genus *Loepa* MOORE, 1859 were recorded for Sumatra. Those were *Loepa megacore* JORDAN, 1911, *L. javanica* MELL, 1939, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. diehli* BRECHLIN, 2010. The authors noted that *L. javanica* was recently elevated to full species rank by Brechlin (2010).
- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae (Lepidoptera) of the Indonesian Archipelago (Island of New Guinea excluded). The following taxa of the genus *Loepa* were listed for Indonesia (p. 172): *L. megacore* JORDAN, 1911(Sumatra), *L. javanica* MELL, 1939 (Sumatra), *L. [‡]tobana* TOXOPEUS [i.l.?] (manuscript name, identity uncertain, Sumatra), *L. minahassae* MELL, 1939 (northern Sulawesi), *L. katinka minahassae* ab. [*‡]vandenberghi* ROEPKE, 1953 (quadrinominal, infrasubspecific), *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 (Sumatra), *L. cynopis* NÄSSIG & SUHARDJONO, 1989 (Java), *Loepa* sp. nov. (Bali) [unnamed; the specimens from Bali were later described as *L. baliensis* PAUKSTADT & PAUKSTADT, 2010], *L. diehli* BRECHLIN, 2010 (Sumatra), *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo), *L. finnackermanni* BRECHLIN, 2010 (southern and southeastern Sulawesi), and *Loepa* sp. nov. (Java) [unnamed, the populations of the *sikkima*-subgroup of the *katinka*-group (sensu Naumann 1995) from Java were later described as *L. hayatiae* PAUKSTADT & BRECHLIN, 2011].
- Paukstadt, U. & Paukstadt, L. H. (2010c: 203-228) provided a brief overview on the *megacore*-complex (sensu Nässig, Lampe & Kager (1996) of the genus *Loepa* MOORE, 1856 from the Indonesian Archipelago ("Sundaland") and the Malay Peninsula. The following species were recorded: *L. megacore* JORDAN, 1911 from Sumatra and a closely related taxon from the Malay Peninsula (description in preparation [the populations from the Malay Peninsula were later described as *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011]).
- Lampe (2010: 290) illustrated the preimaginals (eggs, 1st, 2nd, 3rd, 4th, and 5th larval instar, cocoon and pupa) and the $\stackrel{\wedge}{\circ}$ adult of *Loepa megacore* JORDAN, 1911 from Sumatra, North Sumatra Province in color. He provided a rearing report (log) of this species (p. 359). In the same book Lampe (2010: 291) also provided illustrations of the complete preimaginals and the \bigcirc adult of *Loepa megacore* JORDAN, 1911 [sensu Lampe 2010] from [Peninsular] Malaysia, Cameron Highlands [the report and illustrations are referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011] and with a rearing report (p. 359).

Remarks: The populations of the *megacore*-complex (sensu Nässig, Lampe & Kager (1996) from the Malay Peninsula were later found being distinct and described as *lampei*

PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (*Loepa*). Comparisons of the preimaginals of *L. megacore* (Sumatra) and *L. lampei* (Malay Peninsula) in Lampe (2010) may confirm that the populations from Sumatra and Peninsular Malaysia being distinct.

Meister (2011: 154-155) recorded natural and substitute foodplants of 16 taxa and the foodplants for the remaining taxa of the genus *Loepa* MOORE, 1859 were reported to be unknown. The author unfortunately not separated substitute and natural foodplants which were originally recorded for the taxa of this genus. *Cissus antarctica, Crataegus monogyna, Parthenocissus* sp., and *Vitis vinifera* were mentioned as foodplants for *L. megacore* [unspecified origin] [sensu Meister 2011].

Remarks: The records cannot be assigned to L. megacore JORDAN, 1911 with certainty.

minahassae MELL, 1939 (Loepa)

Original citation and spelling: "Loepa k. [katinka] minahassae ssp. n."

- **Original description:** Mell, R. (1939): Beiträge zur Fauna sinica. XVIII. Noch unbeschriebene chinesische Lepidopteren (V). Deutsche Entomologische Zeitschrift Iris (Dresden), Bd. 52, 1938: pp. 135-152. The contents of Vol. 52, 1938 cleary confirms that the pages 99-192, 3 plates, and 3 text-figures were issued at the 1st of February, 1939.
- **Type locality:** [Indonesia, northern Sulawesi] Minahassa [the Minahasa Peninsula is one of the four principal peninsulas on the island of Sulawesi that stretches north from the central part of the island, before turning to the east].
- **Etymology:** The name *minahassae* is pointing to the type locality of the new species, Minahassa in northern Sulawesi.
- **Type material:** Concluded from text the descrition most probably based on a single ♀ adult, the ♀ holotype by monotypy is preserved in coll. ZMHU / Zoologisches Museum der Humboldt-Universität (Berlin, Germany), cf. Naumann (1995: 83).
- Taxonomical notes: Mell (1939: 150-152) described minahassae explicitly as subspecies of L. katinka (WESTWOOD, 1847) but generally cited all subspecies in this paper as forms (racial) of L. katinka or L. miranda. L. minahassae MELL, 1939 was elevated to full species rank by Nässig & Treadaway (1988: 159). Brechlin (2010a; b: 23-35) described the closely related L. finnackermanni BRECHLIN, 2010 from the South Sulawesi Province and the Southeast Sulawesi Province based on morphology and DNA analysis (of BOLD). The type locality of L. finnackermanni was fixed to the Southeast Sulawesi Province and of L. minahassae to Minahassa (northern Sulawesi). Roepke (1953: pl. 6, fig. 6) figured an aberration which he named L. katinka minahassae vandenberghi (new aberration). The name ‡vandenberghi is considered

being quadrinominal and therefore of infrasubspecific rank: *‡vandenberghi* ROEPKE, 1953.

- Geographical and altitudinal ranges: Roepke (1953) recorded L. katinka minahassae MELL, 1938 [sensu Roepke 1953; error in publication date of L. minahassae MELL, 1939] for North (and South?) Celebes [Sulawesi]. Scattered records of the genus Loepa MOORE, 1859 are from the islands of Tanahjampea (Selayar Archipelago, South Sulawesi Province) and Buton (Buton Archipelago, Southeast Sulawesi Province) which may be referable to *L. finnackermanni* BRECHLIN, 2010, and from Pulau Peleng (Banggai Archipelago, Central Sulawesi Province). At the time being the populations of the Central Sulawesi Province can neither be assigned to the southern species L. finnackermanni nor to the northern species L. minahassae with certainty. Naumann (1995) recorded L. minahassae MELL, 1938 [sensu Naumann 1995; error in publication date of L. minahassae MELL, 1939] from 30 to 1,800 m above sea level. This record based on specimens from southern and northern Sulawesi (L. finnackermanni and L. minahassae). The altitudinal distribution of true L. minahassae from the North Sulawesi Province was recorded from 400 to 1,700 m above sea level; cf. Naumann (1995: 85). The actual ranges of both species remain unknown.
- **General notes:** The first record of *Loepa* MOORE, 1859 from Sulawesi was published by van Eecke (1929: 137-138). Roepke (1953: pl. 6, fig. 5 and 6) figured *L. katinka minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939] from North Sulawesi. Figure 6 based on an aberration which he named *L. katinka minahassae vandenberghi* (new aberration). Naumann (1995) illustrated the Q holotype of *L. katinka minahassae* MELL, 1938 [sic!] from Minahasa (pp. 138-139, col.-pl. XV), North Sulawesi Province, and the d of *L. minahassae* [infrasubspecific variation ab. *‡vandenberghi* ROEPKE, 1953] from North Sulawesi in color. Nothing is known on the preimaginals of *L. minahassae* sensu stricto, the biology and ecology of this species remain unknown.
- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).
- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa minahassae* MELL, 1939 are unknown from literature. There is no information on sericulture available.

Further readings on *minahassae* (in chronological order):

Eecke van (1929: [137]-138) recorded the genus *Loepa* MOORE, 1859 from Celebes [Sulawesi] for the first time being. Van Eecke recorded *L. katinka* (WESTWOOD, 1848) [sensu van Eecke 1929; error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Celebes [Sulawesi] [the record from Sulawesi is referable to *L. minahassae* MELL, 1939 (northern Sulawesi) or *L. finnackermanni* BRECHLIN, 2010 (southern Sulawesi)].

Remarks: The records of *L. katinka* (WESTWOOD, 1847) (*Saturnia*) from the mainland of Southeast Asia, Sumatra, Java, and Sulawesi need to be assigned to several mostly endemic distinct species.

- Bouvier (1930: 92) recorded *L. katinka* WESTWOOD, 1843 [sensu Bouvier 1930] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] of the genus *Loepa* MOORE from N Celebes [N Sulawesi] ("two nice ♂ of the typical form") [the record from N Sulawesi is referable to *L. minahassae* MELL, 1939].
- Schüssler *in* Strand (1934: 599-601, 735) recorded *L. katinka* WESTWOOD [sensu Schüssler 1934] from North Celebes [North Sulawesi] [the record from North Sulawesi is referable to *L. minahassae* MELL, 1939].
- Bouvier (1936: 231-235) recorded *L. katinka sikkima* MOORE [sensu Bouvier 1936] for Celebes [Sulawesi] [the record from Sulawesi may be referable to *L. minahassae* MELL, 1939 rather than *L. finnackermanni* BRECHLIN, 2010 because at the time of publication specimens of this genus were known from northern Sulawesi only].
- Mell (1939: 150-152) described five new subspecies of *L. katinka* [sensu Mell 1939] of the genus *Loepa* MOORE. *L. katinka minahassae* MELL, 1939 from Minahassa [northern Sulawesi, Indonesia] was described in subspecific rank.
- Nieuwenhuis (1948: 145) recorded a *∂ Loepa katinka* WESTWOOD, 1848 [sensu Nieuwenhuis 1948] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Sambioet [Sambiut, Pulau Peleng] and a ♀ from Noelion [Nulion, Pulau Peleng], Banggai Archipelago [the record from the Banggai Archipelago may be referable to *L. finnackermanni* BRECHLIN, 2010 rather than *L. minahassae* MELL, 1939; see "Remarks" below]. The misinterpretation probably based on the paper by van Eecke (1930: 406).

Remarks: The ranges of *L. finnackermanni* BRECHLIN, 2010 which is a Southern Sulawesian species and *L. minahassae* MELL, 1939 which is a Northern Sulawesian species remain uncertain in Central Sulawesi including the Banggai Archipelago. We tentatively assign the populations of Pulau Peleng to the taxon which is distributed in the South and Southeast Sulawesi Provinces: *L. finnackermanni* BRECHLIN, 2010.

Roepke (1953: 227-230) mentioned that *L. katinka* [sensu Roepke 1953] has the widest distribution from India and South Asia [the record from South Asia may be referable to several distinct species but not to *L. katinka* (WESTWOOD, 1847) (*Saturnia*) sensu stricto]. In the Archipelago this species forms "weak" subspecies [sensu Roepke 1953], already described as *k.*[*atinka*] *javanica* MELL, 1938 [error in publication date of *L. javanica* MELL, 1939], *k. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939], and *mindanaënsis* SCHÜSSLER

[part., incorrect subsequent spelling of L. mindanaensis SCHUSSLER in Strand, 1933]. Roepke (p. 229) placed L. k. minahassae MELL from North Celebes [Sulawesi] and South? Celebes [South Sulawesi is occupied by L. finnackermanni BRECHLIN, 2010] into the katinka-group. The author recorded Loepa sikkima sikkima MOORE [sensu Roepke 1953] from North India, Sumatra [the record from Sumatra may be referable to L. javanica MELL, 1939], Java [the record from Java may be referable to L. hayatiae PAUKSTADT & BRECHLIN, 2011], Celebes [Sulawesi] [the record from Sulawesi may be referable to L. minahassae MELL, 1939 rather than L. finnackermanni BRECHLIN, 2010] (based on a record by Bouvier). Roepke described the new aberration Loepa katinka minahassae *‡vandenberghi* ROEPKE, 1953 [infrasubspecific] from North Celebes [North Sulawesi]. The following illustrations are present: Fig. 5. \mathcal{F} L. katinka minahassae MELL from North Sulawesi, and Fig. 6. \mathcal{F} L. katinka minahassae ‡vandenberghi ROEPKE, 1953 (listed as "new aberration") [the proposed name vandenberghi ROEPKE, 1953 is considered to be infrasubspecific: L. katinka minahassae *tyandenberghi* ROEPKE, 1953; the figured δ aberration is a true *L. minahassae* MELL, 1939] from North Sulawesi.

- Hoeven van der (1953: 314) [uncertain authorship] listed in the "Register" of the Tijdschrift voor Entomologie, Deel 96, Afl. 4, 1953, erroneously *L. minahassae* [vanderberghi [incorrect subsequent spelling of ‡vandenberghi ROEPKE, 1953] based on *L. minahassae* ‡vandenberghi ROEPKE, 1953 by Roepke (1953: 230). **Remarks:** We want to point out that the misspellings vanderberghi and oberthüri were published by the author of the Register (van der Hoeven?) but not by Roepke (1953).
- Mell (1958: 194) recorded *Loepa katinka* WESTWOOD [sensu Mell 1958] for Celebes [Sulawesi] [misinterpretation; the record for Sulawesi is referable to *L. minahassae* MELL, 1939].

Remarks: Mell (1939) originally described *minahassae* from northern Sulawesi as subspecies of *L. katinka* (WESTWOOD, 1847) (*Saturnia*).

Holloway (1976: 85) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Holloway 1976] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] also from Sulawesi [see "Remarks" below regarding the range of *L. katinka* sensu stricto].

Remarks: With exception of the records from India all further records were probably based on misinterpretations because previous authors mentioned some endemic species of the *katinka*-group (sensu Naumann 1995) as subspecies of *L. katinka* (WESTWOOD, 1847) (*Saturnia). Loepa katinka* (WESTWOOD, 1847) is an Indian / Himalayan species which is replaced for example by *L. minahassae* MELL, 1939 in northern Sulawesi and by *L. finnackermanni* BRECHLIN, 2010 in southern Sulawesi.

- Holloway (1987: 106-108) remarked that there can be distinct species in Sulawesi [this remark may be referable to *L. minahassae* MELL, 1939 (northern Sulawesi) and *L. finnackermanni* BRECHLIN, 2010 (southern Sulawesi)] and Luzon [the record from Luzon may be referable to *L. nigropupillata* NÄSSIG & TREADAWAY, 1988].
- Nässig & Treadaway (1988: 159-176) elevated *L. minahassae* MELL, 1939 to full species status.

- Paukstadt, U. & Paukstadt, L. H. (1991: 17-27) recorded *L. minahassae* MELL, 1939 [sensu Paukstadt & Paukstadt 1991] from S Sulawesi [the record for S Sulawesi may be referable to *L. finnackermanni* BRECHLIN, 2010]. ♂ and ♀ adults from the South Sulawesi Province, near Bantimurung were figured in phot. h.-t. dorsally (: 23, fig. 10 ♂ and fig. 11 ♀), the ♂ genitalia structures of *L. minahassae* [sensu Paukstadt & Paukstadt 1991] were illustrated in phot. h.-t. (: 25, fig. 16).
- Stone (1991: 28) recorded *Cissus* and *Leea* as foodplants for *katinka* (WESTWOOD) ssp. [sensu Stone 1991] based on Bouvier (1936) [this record may be referable to *L. katinka* (WESTWOOD, 1847) (*Saturnia*), *L. sikkima* MOORE, 1866 ("1865"), *L. hayatiae* PAUKSTADT & BRECHLIN, 2011, *L. javanica* MELL, 1939, *L. minahassae* MELL, 1939 and *L. finnackermanni* BRECHLIN, 2010, *L. megacore* JORDAN, 1911, *L. damartis* JORDAN *in* Seitz, 1911 and allied, and finally *L. miranda* MOORE, 1865 and allied].

Remarks: Because Bouvier (1936: 233) recorded *katinka sikkima* MOORE from Java, Sumatra, and Sulawesi and *katinka megacore* JORDAN from Sumatra the records of foodplants actually based on several species of the genus *Loepa* MOORE, 1859.

- Naumann (1995: 81-82) classified the species in the genus Loepa: 3a. katinkasubgroup of the katinka-group (L. katinka, L. megacore JORDAN, 1911, L. mindanaensis SCHÜSSLER, 1933, L. formosensis MELL, 1938 [error in publication date of L. formosensis MELL, 1939], L. diversiocellata BRYK, 1944 [misinterpretation; this name is considered being a junior subjective synonym of L. katinka (WESTWOOD, 1847) (Saturnia)], L. cynopis NÄSSIG & SUHARDJONO, 1994, and L. sakaie INOUE, 1965). Naumann reported L. minahassae MELL, 1938 [error in publication date of L. minahassae MELL, 1939] belongs to the katinka-group.
- Nässig, Lampe & Kager (1996b: 137) remarked that Naumann (1995) figured a larva of *L. minahassae* [sensu Nässig, Lampe & Kager 1996] from Sulawesi [the illustration by Naumann (1995) may be referable to *L. finnackermanni* BRECHLIN, 2010]. The authors recorded *Tetracera scandens* (Dilleniaceae) as natural foodplant for *L. minahassae* [from the South Sulawesi Province] based on Naumann (1995) [the record is referable to *L. finnackermanni* BRECHLIN, 2010].
 Remarks: The larvae figured by Naumann (1995: 119, pl. V, fig. 2-3) clearly belong to the populations from southern Sulawesi, which were later found being distinct and described as *L. finnackermanni* BRECHLIN, 2010. The populations of the genus *Loepa* from northern Sulawesi belong to *L. minahassae* based on morphology and DNA analysis, cf. Brechlin (2010: 23-35).
- Paukstadt, L. H. & Paukstadt, U. (1996: 385-391) described and illustrated (phot. h.t.) the preimaginals and adults of *Loepa minahassae* MELL, 1938 [sensu Paukstadt & Paukstadt 1996] [error in publication date of *L. minahassae* MELL, 1939] from Puncak Palopo, South Sulawesi Province [the record from Puncak Palopo may be referable to *L. finnackermanni* BRECHLIN, 2010]. Figures: 1st instar – 5th instar (p. 387, figs. 1-4, p. 388, figs. 5-6, and p. 389, fig. 7), $\overset{\circ}{\supset}$ and $\overset{\circ}{\bigcirc}$ adults dorsally (p. 390, figs. 8-9). The authors remarked that *L. minahassae* ab. *vandenberghi* ROEPKE, 1953 is an infrasubspecific variation of *L. minahassae*.
- d'Abrera (1998: 46-51) confirmed 18-22 species in the genus *Loepa* MOORE, 1860 [error in first (original) description and consequently error in publication date of

Loepa MOORE, 1859]. The author recorded *L. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939] [sensu d'Abrera 1998] for Sulawesi. \Im and \Im adults from W. Celebes, Lindoe [the Lore Lindu National Park is a forested protected area in the province of Central Sulawesi, the area of the national park is 2,180 km² covering both lowland and montane forests (200 to 2,610 meters above sea level), cf. http://www.dephut.go.id] were figured in color dorsally (p. 49) [due to the origin the figured specimens may be referable to *L. finnackermanni* BRECHLIN, 2010 rather than *L. minahassae* MELL, 1939].

- Nässig & Treadaway (1998: 389-398) briefly described and compared the preimaginals of *L. nigropupillata* NässiG & TREADAWAY, 1988 with those of *L. megacore* JORDAN, 1911 [unspecified origin], *L. diversiocellata* BRYK, 1944 [misinterpretation; *L. diversiocellata* BRYK, 1944 is recognized as a junior subjective synonym of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)], *L. katinka* (WESTWOOD, 1848) (*Saturnia*) [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)], *L. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939] [based on the cited references the record is referable to *L. finnackermanni* BRECHLIN, 2010 rather than *L. minahassae* MELL, 1939], *L. sakaei* INOUE, 1965, and *L. formosensis* MELL, 1929 [error in publication date of *L. formosensis* MELL, 1939].
- Paukstadt, U. & Paukstadt, L. H. (2004c: 176) reported *L. minahassae* MELL, 1939 [sensu Paukstadt & Paukstadt 2004] from Sulawesi and that this species was reared and its life history was described by Paukstadt, L. H. & Paukstadt, U. (1996) [the report and the description of the life history is referable to *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi].
- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus *Loepa* MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll. Museum Zoologicum Bogoriense (Cibinong) Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae)". *L. minahassae* MELL, 1939 [sensu Paukstadt, Paukstadt, Suhardjono, Sutrisno & Aswari 2009] from southern Sulawesi [the record from southern Sulawesi is referable to *L. finnackermanni* BRECHLIN, 2010] was recorded for the collection. The contents of pin-labels was annotated. Pin-labels of all adults and cocoons of the genus *Loepa* MOORE, 1859 in coll. MZB / Museum Zoologicum Bogoriense were figured in color (p. 177, col.-pl. 3 and p. 179, col.-pl. 4).

Brechlin (2010a: 22-33) described nine new taxa of the *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 including two species from Indonesia.
Remarks: The contribution by Brechlin (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the taxonomical act regarding *L. javanica* MELL, 1939 was consequently invalid.

Brechlin (2010b: 23-35) described two new species from Indonesia. Those were *L. diehli* BRECHLIN, 2010 from Sumatra (Indonesia) and *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi (Indonesia). The following adults were

- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae (Lepidoptera) of the Indonesian Archipelago (Island of New Guinea excluded). The authors listed *L. minahassae* MELL, 1939 (northern Sulawesi), *L. katinka minahassae* ab. [‡]vandenberghi ROEPKE, 1953 (quadrinominal, infrasubspecific), and *L. finnackermanni* BRECHLIN, 2010 (southern and southeastern Sulawesi).
- Lampe (2010: 292) illustrated the preimaginals (1st, 2nd, 3rd, 4th, and 5th larval instar, cocoon and pupa dorsally and ventrolaterally) and the ♂ and ♀ adults of *Loepa minahassae* MELL, 1938 [sensu Lampe 2010] [error in publication date of *L. minahassae* MELL, 1939 (Vol. 52, 1938, pp. 99-192 was issued the 1st of February, 1939)] from Sulawesi in color. The author unfortunately not provides with the source of the life stock. In a rearing report (log) of this species (p. 359) he noted that the material is from Sulawesi, Telur Kupu Malam. "Telur Kupu Malam" is not the location but is Indonesian and means "eggs of moth" instead.

Remarks: Because life stock was usually obtained from \bigcirc which came to light in southern Sulawesi we assume that Lampe has received his life stock from the South Sulawesi Province (Palopo env.?) but we cannot confirm with certainty. The populations of the genus *Loepa* from southern Sulawesi were found being distinct from those of northern Sulawesi and therefore were described as *L finnackermanni* BRECHLIN, 2010.

Meister (2011: 155) recorded *Parthenociccus*, *Rhus*, *Salix caprea*, *Salix viminalis*, and *Tetracera scandens* as natural and/or substitute foodplants for *L. minahassae* MELL, 1939.

Remarks: The author unfortunately not provided with the sources of his records which therefore might be based either on true *L. minahassae* MELL, 1939 from northern Sulawesi and/or (partly?) on *L. finnackermanni* BRECHLIN, 2010 which has been described from southern Sulawesi. At least the record of the natural foodplant *Tetracera scandens* (Dilleniaceae) has to be attributed to *L. finnackermanni* from southern Sulawesi, cf. Naumann (1995: 86) and L. H. Paukstadt & U. Paukstadt (1996: 385).

Paukstadt, U. & Paukstadt, L. H. (2013: 49-51) reported on field observations on Loepa finnackermanni BRECHLIN, 2010 from South Sulawesi, Indonesia. Ampelocissus martini PLANCH. [A. L. P. P. de Candolle & A. C. de Candolle, Monogr. phan. 5: 373; 1887] (Vitaceae) was found being the host for L. finnackermanni. So far only Tetracera scandens (L.) MERR. (Dilleniaceae) has been recorded being the host for L. finnackermanni, cf. Naumann (1995). The authors remarked that the populations of the Oriental genus Loepa MOORE, 1859

from Sulawesi, Indonesia were reviewed by Brechlin (2010a, b). The name *L. finnackermanni* was applied to the populations from the Sulawesi Selatan (South Sulawesi) and the Sulawesi Tenggara (Southeast Sulawesi) provinces, while the name *L. minahassae* MELL, 1839 ("1838") [lapsus, error in publication date of *L. minahassae* MELL, 1939] was recognized for the populations from the remaining provinces of Sulawesi based on color and pattern morphology as well as the male genitalia structures.

Paukstadt, L. H. & Paukstadt, U. (2013: 75-93) reported on an entomological expedition to the Selayar Islands, Sulawesi, Indonesia which was carried out by the senior author. The genus *Loepa* MOORE, 1859 was not observed on Selayar Island by the authors during a 12 months study. The authors remarked that four species of wild silkmoths were recorded from the islands of Butung (Buton), Muna and Kabaena in the south of the Southeast Sulawesi Province, cf. Naumann (1995) and Holloway, Naumann & Nässig (1998). One of those has been *Loepa minahassae* MELL, 1939 (today the populations from the Provinces South and Southeast Sulawesi are referable to *Loepa finnackermanni* BRECHLIN, 2010). The authors remarked that *Loepa minahassae* MELL, 1939 (recte *Loepa finnackermanni* BRECHLIN, 2010) was recorded from Tanahjampea, cf. Naumann (1995), Naumann (2000) and Naumann & Peigler (2012).

Remarks: The records for Tanahjampea by Naumann (2000) most probably based on completely mislabeled specimens and therefore should be treated with caution. The record of *Loepa* sp. from Tanahjampea by Naumann (1995) based on museum material is reliabale.

Paukstadt, U. & Paukstadt, L. H. (2013: 271-288) noted that a further species has been recorded from the tiny island of Tanahjampea (also Jampea) further south off Selayar Island. This has been *Loepa minahassae* MELL, 1939, cf. Naumann (1995). The populations of the genus *Loepa* MOORE, 1859 from southern and southeastern Sulawesi were later assigned to *L. finnackermanni* BRECHLIN, 2010. So far only four species of the wild silkmoths are known for the Selayar Archipel with certainty, including *L. finnackermanni*.

cynopis Nässig & Suhardjono, 1989 (Loepa)

Original citation and spelling: "Loepa cynopis n. sp."

- **Original description:** Nässig, W. A. & Suhardjono, Y. R.: A new species of the genus *Loepa* (Saturniidae) from Java. Tinea, Vol. 12, Part 23, 25.V.1989: pp. 205-210; 7 [+2] figs. (phot. h.-t.)
- Type locality: [Indonesia] West Java, Mt. Gedeh, 1,400 m, Cibodas.
- **Etymology:** *L. cynopis* was described using an unpublished manuscript name of the late L. J. Toxopeus. The etymology of the name *cynopis* was not mentioned by the authors.
- **Type material:** The description based on the \Im holotype by original designation, 26 \Im and 12 \heartsuit paratypes. There was no \heartsuit allotype explicitly designated by the authors but a prospective \heartsuit allotype of Toxopeus was cited in the original description. \Im holotype and \heartsuit

allotype in coll. Museum Zoologicum Bogoriense (Bogor, Cibinong, West Java, Indonesia), cf. Paukstadt, Paukstadt & Suhardjono (2002: 58). Further paratypes were listed being preserved in the following collections: 16 3° and 5 9° in coll. MZB [Museum Zoologicum Bogoriense, Bogor, West Java; now Museum Zoologicum Bogoriense (Bogor, Cibinong, West Java; Indonesia)], 1 3° in coll. WAN/Frankfurt [Nässig *in* SMFL / Senckenberg Museum Frankfurt Lepidoptera (Frankfurt am Main, Germany)], 3 3° and 4 9° in coll. RMNH, Leiden [Rijksmuseum van Natuurlijke Histoire (Leiden, Netherlands); now Naturalis (Leiden, Netherlands)], 4 3° and 2 9° in coll. BMNH, London [British Museum of Natural History, London] [now Natural History Museum, London (London, Great Britain)], 1 3° in coll. ZSM, München [Zoologische Staatssammlungen des Bayrischen Staates (Munich, Germany)], and 1 3° in coll. NSMT, Tokyo [National Science Museum (Tokyo, Japan)].

- Taxonomical notes: The first record of this species [unnamed] was made by Roepke (1952: 21) but the (manuscript) name "cynopis" and handwritten type labels were already attached by Toxopeus to a series of specimens in Museum Zoologicum Bogoriense / MZB (Bogor, West Java) earlier than the record by Roepke. Roepke (1953: 228) erroneously noted that L. megacore megacore JORDAN, 1911 [trinominal use] is the same species as already recognized by the late Dr. Toxopeus from the mountains of Java. In the original description L. cynopis NÄSSIG & SUHARDJONO, 1989 was reported being an endemic species of Java Island. At the time of the description no specimens of the genus Loepa MOORE, 1859 were available from the island of Bali. Further DNA studies (by BOLD) revealed L. cynopis being replaced on the island of Bali (and eastern Java?) by the closely related L. baliensis PAUKSTADT & PAUKSTADT, 2010, by the endemic L. megacore JORDAN, 1911 on the island of Sumatra, by the endemic L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 in Peninsular Malaysia, and by the endemic L. martinii BRECHLIN & PAUKSTADT, 2010 on the island of Borneo.
- Geographical and altitudinal ranges: This species is widespread on the island of Java. Altitudinal records are from 250 to 1,700 m, cf. Nässig & Suhardjono (1989: 206, 209) and from 1,626 and 1,884 m, cf. Paukstadt, U. & Paukstadt, L. H. (2013b: 35, 37).
- **General notes:** The first record of this species [unnamed] was made by Roepke (1952: 21) but the (manuscript) name "cynopis" and handwritten type labels were already attached by Toxopeus to a series of specimens in Museum Zoologicum Bogoriense / MZB (Bogor, West Java) earlier than the record by Roepke. Later Roepke (1953: 228) noted that *L. megacore megacore* JORDAN, 1911 is the same species as already

recognized by the late Dr. Toxopeus from the mountains of Java [= *L. cynopis*]. Roepke (1953: pl. 6, fig. 3) illustrated a \Im adult of *L. cynopis* from Perbawatee, 1200 m, West Java under the name of *L. megacore*. This has been apparently the first illustration of *L. cynopis*. Nässig & Suhardjono (1989) figured in phot. h.-t. a \Im paratype in coll. RMNH [Naturalis (Leiden, Netherlands)] (p. 207, fig. 2) and a \Im paratype in coll. RMNH [Naturalis (Leiden, Netherlands)] (p. 207, fig. 4) of *L. cynopis* NÄSSIG & SUHARDJONO, 1989. The \Im genitalia structures of the holotype of *L. cynopis* were figured in phot. h.-t. (p. 208, figs. 6A and 6B [aedeagus]) in the same paper.

- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).
- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989 are unknown from literature. There is no information on sericulture available.

Further readings on cynopis (in chronological order):

- Walker (1855: 1250-1251) recorded *Antheræa Katinka* [sensu Walker 1855] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 rather than *L. cynopis* NÄSSIG & SUHARDJONO, 1989].
- Moore (1859: 260) recorded *Loepa katinka* (WESTWOOD, 1847) [sensu Moore 1859] from Java [the record from Java may be referable to *Loepa hayatiae* PAUKSTADT & BRECHLIN, 2011 rather than *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989]. Moore remarked that the larva and cocoon of *Loepa katinka* [sensu Moore 1859] were figured in Catal. Lep. Mus. India House, vol. ii, pl. 20, fig. 1, copied from the original drawing made by Dr. Horsfield in Java [the illustrations and the record from Java may be referable to *Loepa hayatiae* PAUKSTADT & BRECHLIN, 2011 rather than *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989]. Two natural foodplants were recorded for the Javanese populations of *Loepa*. Those were Galing (*Cissus* sp.) and Girang (*Leea* sp.).

Remarks: The record of Girang (*Leea* sp.) may be referable to *Leea aequata* LINN. or *Leea indica* MERR. (*L. sambucina* WILLD.) rather than *Leea angulata* KORTH., cf. Heyne (1950: 1011). All three species are from Java but only the first two species bear the vernacular name Girang. Nässig, Lampe & Kager (1996b: 136) noted that *Leea* is sometimes placed in a separate family, Leeaceae. No further information was given by the authors. Our investigations resulted in the following: Barthélemy Charles Joseph Dumortier (1829) described in 'Analyse des Familles de Plantes' (1829: 21, 27) the family Leeaceae, cf. http://www.biodiversitylibrary.org and http://www.tropicos.org. The family Leeaceae was lowered as subfamily Leeoideae of the family Vitaceae by Hermann Burmeister. The rank either as subfamily or family has been the subject of great controversy. Following APG III (Angiosperm Phylogeny Group Classification, III, cf. http://www.onlinelibrary.wiley.com) *Leea* is the only genus of the subfamily Leeoideae within the family Vitaceae.

Moore *in* Horsfield & Moore (1860 ["1858-1859"]: 399) recorded *Loepa katinka* (WESTWOOD, 1847) [sensu Moore 1860] from Java [the record from Java may be

referabel to the lowland species *Loepa hayatiae* PAUKSTADT & BRECHLIN, 2011 or to the mountain species *Loepa cynopis* NäSSIG & SUHARDJONO, 1989]. Moore illustrated the larva and the cocoon (pl. XX, figs. 1, 1a) of *L. katinka* [sensu Moore 1860] copied from the original drawing made by Dr. Horsfield in Java [the record from Java may be referabel to *Loepa hayatiae* PAUKSTADT & BRECHLIN, 2011 or *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989]. The black and white drawing does not permit a precise identification because the preimaginals of both species remain partly unknown thus far. Two natural foodplants were recorded for Java. Those were Galing (*Cissus* sp.) and Girang (*Leea* sp.).

Snellen van Vollenhoven (1862: 14) recorded *Saturnia Katinka* WESTW.[OOD] [sensu Snellen van Vollenhoven 1862] from [Dutch] East Indies: Java and Sumatra [*L. katinka* (WESTWOOD, 1847) (*Saturnia*) is absent in the Indonesian Archipelago and this record therefore may be referable to a number of distinct and mostly endemic Indonesian species of the genus *Loepa* MOORE, 1859].

Remarks: Dutch East Indies is a former name (1798–1945) for Indonesia, also called the Netherlands East Indies, cf. Collins English Dictionary (2012). The record for Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NäSSIG & SUHARDJONO, 1989.

- Moore (1862a: 410-418) recorded *Loepa katinka* (WESTWOOD) [sensu Moore 1862] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NäSSIG & SUHARDJONO, 1989]. Moore reported the moth being abundant in Java during the months of December, January, and February [wet season / rainy season, monsoon] and that the larva feeds on the Galing (*Cissus* sp.?), and on the Girang (*Leea* sp.?) (p. 416).
- Moore (1862b: 320-321) recorded *Loepa katinka* (WESTWOOD, 1847) [sensu Moore 1859] from Java [the record from Java may be referable either to *Loepa hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989]. Two natural foodplants were recorded for Java. Those were Galing (*Cissus* sp.?) and Girang (*Leea* sp.?). Moore remarked that the caterpillar is abundant on the island of Java from December to February.
- Pagenstecher (1886: 132) recorded *Antherea* [sic!] *Kathinka* [sic!] [sensu Pagenstecher 1886] for Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NässIG & SUHARDJONO, 1989] based on (a paper by) Snellen.
- Cotes & Swinhoe (1887: 227) listed *Loepa katinka* (WESTWOOD, 1848) (*Saturnia*) [sensu Cotes & Swinhoe 1887] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG, SUHARDJONO, 1989].
- Kirby (1892: 762, Appendix 935) listed *L. Katinka* (WESTWOOD, 1848) (*Saturnia*) [sensu Kirby 1892] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].

Hampson *in* Blanford (1892: 25-26, 516, 517, 519, 523) recorded the genus *Loepa* MOORE, 1858 [error in first (original) description of *Loepa* MOORE, 1859] from Java. The author remarked that the pattern and color morphology is similar in *L. sikkima* MOORE and the Javanese form [unnamed, the citation may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 of the *sikkima*-subgroup rather than *L. cynopis* NÄSSIG & SUHARDJONO, 1989 of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995)]. *L. katinka* WESTWOOD [sensu Hampson 1893] was recorded from Java [the record from Java may be referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989 or *L. hayatiae* PAUKSTADT & BRECHLIN, 2011].

Remarks: The distribution of *L. katinka* sensu stricto is restricted to northern India / parts of the Himalaya. In Java *L. katinka* and *L. sikkima* are replaced by other species.

- Snellen, P. C. T. *in* Veth (ed.) (1892: 40) recorded *Antheraea Katinka* WESTWOOD [sensu Snellen 1881] from Sumatra [Alahan Panjang, West Sumatra Province] [based on the attached description the record for the West Sumatra Province may be rather referable to *L. megacore* JORDAN, 1911]. The author remarked that the specimen is distinct from Javanese specimens [this statement may be referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989] in the Leiden Museum because the "eerste dwarslijn der voorfleugels" (= basal line) is not reddish shaded.
- Swinhoe (1892: 247) listed *Loepa katinka* WESTWOOD, 1848 [sensu Swinhoe 1892] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].
- Silbermann (1897: 302, 327) recorded *Loepa Katinka* (WESTWOOD) [sensu Silbermann 1897] from Niederländisch-Indies [Dutch East-Indiës, today Indonesia] [unspecified; the record for Indonesia may be referable to a number of distinct and mostly endemic species of the genus *Loepa* MOORE, 1859].
- Leech (1898: 267) recorded *L. katinka* [sensu Leech 1898] for Java (Hampson) [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NässIG & SUHARDJONO, 1989].
- Levrat? (1901: [133]-148) recorded Loepa Katinka WESTWOOD [sensu Levrat 1901] from Java [the record from Java may be referable to L. hayatiae PAUKSTADT & BRECHLIN, 2011 or L. cynopis NÄSSIG & SUHARDJONO, 1989].
 Remarks: The authorship might be D. Levrat or J. Testenoire rather than Sonthonnax but is not explicitly mentioned in Vol. X of the "Rapport Présenté A La Chambre De Commerce De Lyon Par La Commission Administrative".
- Sonthonnax, L. (1904: 86-88) recorded *L. Katinka* [sensu Sonthonnax 1904] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NässIG & SUHARDJONO, 1989].
 Remarks: The publications Sonthonnax, L. (1904: 86-88) and Sonthonnax (1904: 14-17 [extract]) are identical but with different paginations.
- Sonthonnax (1904: 14-17 [extract]) recorded *L. Katinka* [sensu Sonthonnax 1904] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].

Packard (1914: 163) listed only one species of the genus *Loepa* MOORE: *Loepa katinka* (WESTWOOD). The venations of fore wing and hind wing of ♂ *Loepa katinka* [sensu Packard 1914] from Java [despite of a missing scale bar the drawings may be not referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989 due to the shape of forewing and therefore probably based on true *L. katinka*] were figured (line drawings, p. 353, pl. XXXVIII, fig. 6 [fore wing and hindwing), with the appropriate legend (p. 352). Remarks: Packard (1914) definitively recorded *L. katinka* (WESTWOOD) [sensu Packard 1914] from Java [the record may be referable either to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO. 1989] but his illustrations most probably not

2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989] but his illustrations most probably not based on any Javanese species of the genus *Loepa* MOORE, 1859.

Cockerell *in* Packard (1914: 163) recorded *Cissus* and *Leea* as food plants for *Loepa katinka* [sensu Cockerell 1914, due to the cited foodplants the record may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Java].

Remarks: The foodplants *Cissus* sp. and *Leea* sp. for the Javanese populations of the genus *Loepa* MOORE, 1859 were first mentioned by Moore (1859), Moore *in* Horsfield & Moore (1860 ["1858-1859"]), and Moore (1862).

Roepke (1918: 184-188) described and figured the preimaginals of *L. katinka* WESTWOOD [sensu Roepke 1918] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 rather than *L. cynopis* NÄSSIG & SUHARDJONO, 1989]. The author recorded this species from Buitenzorg [Bogor, West Java], Semarang and Kendal [both Central Java, coastal regions] [all records may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 due to the reported lowland distribution] and a specimen from Tosari, 1,750 m [East Java, Mt. Bromo env.] [this single record may be referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989 due to the relatively high altitudinal distribution].

Remarks: The illustrations by Roepke (1918) are imprecise and do not allow an identification on species-level with certainty. Due to the mentioned altitudinal distribution the recorded rearing may be rather referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011.

- Eecke van (1929: [137]-138) recorded the genus *Loepa* MOORE, 1859 [concluded from text error in first (original) description of *Loepa* MOORE, 1859] from Java. Van Eecke recorded *L. katinka* (WESTWOOD, 1848) [sensu van Eecke 1929; error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [the record from Java may be referable to *L. cynopis* NäSSIG & SUHARDJONO, 1989 or *L. hayatiae* PAUKSTADT & BRECHLIN, 2011]. A short description of the larvae of *L. katinka* [sensu van Eecke 1929] cannot be assigned to any particular species of this genus because the origin of the specimens was not mentioned.
- Bouvier & Riel (1931) listed *Loepa katinka* WESTWOOD [sensu Bouvier & Riel 1931] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].
- Schüssler in Strand (1933: 93) recorded Loëpa [incorrect subsequent spelling of Loepa MOORE, 1859] katinka WESTWOOD, 1848 [error in publication date of L. katinka (WESTWOOD, 1847) (Saturnia)] from Java based on literature [the record may be referable to L. hayatiae PAUKSTADT & BRECHLIN, 2011 or L. cynopis NÄSSIG & SUHARDJONO, 1989].

Aue (1933: 1-180) recorded *Cissus* and *Leea*, after Prof. Seitz probably also vine [*Vitis* sp.] as foodplants for *L. katinka*, and *Cissus* and *Leea* for *L. sikkima* [the records of *Cissus* and *Leea* may be referable to Javanese species of the genus *Loepa* MOORE, 1859, either *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* Nässig & SUHARDJONO, 1989].

Remarks: The citations of the foodplants *Cissus* and *Leea* probably were copied from the original description by Moore (1859) or later authors and therefore may be referable to a Javanese taxon of the genus *Loepa* MOORE, 1859: *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989.

Bouvier (1936: 231-235) recorded *L. katinka sikkima* MOORE [sensu Bouvier 1936] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG, LAMPE & KAGER, 1989]. The figured ♂ genitalia structures of *L. katinka* [unspecified] (p. 232, fig. 67), and *L. katinka sikkima* [sensu Bouvier 1928] do not allow an assignment to one of the above species with certainty.

Remarks: The records of *L. katinka sikkima* MOORE from Java, Sumatra, and Sulawesi actually based on at least five distinct species as interpreted at the time being.

Bryk (1944: 8-9) remarked that *L. katinka* (WESTWOOD) ssp. *diversiocellata* BRYK, 1944 [misinterpretation] from Kambaiti, Myanmar (2,000 m) is close to the noname form [unspecified] [of *L. katinka*] from Java [this remark may be referable to *L. cynopis* NässIG & SUHARDJONO, 1989, but see "Remarks" below]. Bryk (1944: 9) recorded *L. katinka* [sensu Bryk 1944] from Java [the record from Java may be referable to *L. cynopis* NässIG & SUHARDJONO, 1989].

Remarks: Due to the length of forewings of only 47 mm which was recorded for the 3° and 2° adults of *diversiocellata* BRYK, 1944 we assume that the statement by Bryk (1944) regarding the no-name form of Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 rather than to *L. cynopis* NÄSSIG & SUHARDJONO, 1989 which is much bigger.

- Nieuwenhuis (1948: 145) uncritically provided references on *L. katinka* [sensu lato], e.g., Hampson (1893: 25) with records from British India and Java [records from Java may be referable to a few distinct species of the *katinka*-group (sensu Naumann 1995) but not to *L. katinka* sensu stricto].
- Roepke (1952: 21) recorded *Loepa katinka* MOORE [lapsus, error in authorship of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from the lowlands and lower mountains of the island of Java [sensu Roepke 1952; the record from the lowlands of Java is referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011]. A second distinct and larger taxon [unnamed] was recorded from 1,700 m altitude from the island of Java [unnamed; the record from the highlands of Java may be referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989].
- Roepke (1953: 227-230) recorded *L. katinka javanica* MELL [sensu Roepke 1953] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011]. *Loepa sikkima sikkima* MOORE [sensu Roepke 1953] from Java [misinterpretation, the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011] was mentioned (based on a record by Bouvier). *Loepa megacore megacore* JORDAN [sensu Roepke 1953] from Sumatra and Java [the record from Java is referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989] was

listed. The following taxa were figured (pl. 6): Fig. 3. \circ *L. megacore* JORDAN [sensu Roepke 1953] from West Java [the record from West Java is referable to *L. cynopis* NÄSSIG & SUHARDJONO, 1989].

- Holloway (1976: 85) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Holloway 1976] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [see "Remarks" below regarding the range of *L. katinka* sensu stricto].
 Remarks: The record from Java was probably based on a misinterpretation also because previous authors erroneously mentioned some endemic species of the *katinka*-group (sensu Naumann 1995) as subspecies of *L. katinka* (WESTWOOD, 1847) (*Saturnia*). *Loepa katinka* (WESTWOOD, 1847) is an Indian / Himalayan species which is replaced by *L. cynopis* NäSSIG & SUHARDJONO, 1989 in Java.
- Arora & Gupta (1979: 35-38) recorded *L. katinka* (WESTWOOD, 1848) [sensu Arora & Gupta 1979] [error of publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Java [the record from Java may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].
- Nässig & Suhardjono (1989: 205) described Loepa cynopis NÄSSIG & SUHARDJONO, 1989. L. cynopis was reported being a mainly mountainous species endemic of Java and closely related with the North Sundanian L. megacore JORDAN, 1911 [sensu Nässig & Suhardjono 1989; this record is referable to a number of distinct and endemic species of the megacore-complex: L. megacore JORDAN, 1911 (Sumatra), L. martinii BRECHLIN & PAUKSTADT, 2010 (Borneo), and L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay Peninsula)]. The following adults were figured in phot. h.-t. (p. 207): \bigcirc paratype of L. cynopis (fig. 2) and \bigcirc paratype L. cynopis (fig. 4). The following δ genitalia structures were figured in phot. h.-t. (p. 208) with aedeagus separate: L. cynopis holotype (figs. 6A, B). The authors remarked that L. cynopis resembles the continental Asian L. katinka (WESTWOOD, 1848) [error in publication date of L. katinka (WESTWOOD, 1847)] (Saturnia)] and has so far not been found on the South East Asian islands. The authors recorded two species of the genus *Loepa* from Java. Those were *L. cynopis* and L. sikkima javanica [sensu Nässig & Suhardjono 1989; the record from Java is referable to L. havatiae PAUKSTADT & BRECHLIN, 2011].
- Pinratana & Lampe (1990: 21-24, fig. [unnumbered]) reported *L. diversiocellata* [misinterpretation], *L. megacore*, and *L. cynopsis* NÄSSIG & SUHARDJONS [incorrect subsequent spellings of author and *L. cynopis* NÄSSIG & SUHARDJONO, 1989] form a group of closely related large species living in Asia between India and Java (p. 22) [today we know that there are a few more species of the *megacore*-complex in this region mainly endemic to isolated islands and the Malay Peninsula].

Remarks: *Loepa diversiocellata* BRYK, 1944 is recognized being a junior subjective synonym of *L. katinka* (WESTWOOD, 1847) (*Saturnia*).

Stone (1991: 28) recorded *Cissus* and *Leea* as foodplants for *katinka* (WESTWOOD) ssp. [sensu Stone 1991] based on Bouvier (1936) [this records may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NÄSSIG & SUHARDJONO, 1989].

- Naumann (1995: 81-82) arranged the katinka-subgroup of the katinka-group: L. katinka, L. megacore JORDAN, 1911, L. mindanaensis SCHÜSSLER, 1933, L. formosensis MELL, 1938 [error in publication date of L. formosensis MELL, 1939], L. diversiocellata BRYK, 1944 [misinterpretation; this name is considered being a junior subjective synonym of L. katinka (WESTWOOD, 1847) (Saturnia)], L. cynopis NÄSSIG & SUHARDJONO, 1994, and L. sakaie INOUE, 1965.
- Nässig & Treadaway (1997: 356-366) listed *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Java as a member of the *megacore*-group [*megacore*-complex].
- d'Abrera (1998: 46-51) recorded the foodplants *Cissus* and *Leea* (Vitaceae) [the records may be referable to *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 or *L. cynopis* NässIG & SUHARDJONO, 1989]. *L. cynopis* NässIG & SUHARDJONO, 1989 was recorded from Java and ?Bali [the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010]. \Im and \Im L. cynopis (type specimens) from East Java were figured in color dorsally (p. 47). The author erroneously noted that *L. cynopis* replaces *L. sumatrana* on Java [correct as *L. cynopis* replaces *L. megacore* on Java].
- Nässig & Treadaway (1998: 393-398) compared *Loepa palawana* Nässig & TREADAWAY, 1997 with *L. cynopis* Nässig & SUHARDJONO, 1989 and found both being quite similar externally.
- Brechlin, R. (2000: 165-170) described *L. visayana* BRECHLIN, 2000 from Leyte and Panay, Philippines. The ♂ genitalia structures were also compared with those of *L. megacore* JORDAN, 1911 [West Malaysia] [sensu Brechlin 2000; the record from the Malay Peninsula is referable to *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011] and *L. cynopis* NÄSSIG & SUHARDJONO, 1989.
- Paukstadt, U. & Paukstadt, L. H. (2001: 50-52) listed Loepa sikkima javanica MELL, 1938 [sensu Paukstadt & Paukstadt 2001; the record from Java is referable to L. hayatiae PAUKSTADT & BRECHLIN, 2011; error in publication date of L. sikkima javanica MELL, 1939] and L. cynopis NässiG & SUHARDJONO, 1989 for the Mt. Halimun National Park, West Java.
- Paukstadt, Paukstadt & Suhardjono (2002: 52-61) presented a "Catalogue of the Holotype and Allotype Specimens of the Family Saturniidae BOISDUVAL, [1837] 1834 Preserved in Museum Zoologicum Bogoriense, Cibinong, Indonesia (Lepidoptera)". The authors listed the \mathcal{F} holotype (coll.-no. MZB.LEPI. 456) and the \mathcal{Q} allotype (coll.-no. MZB.LEPI. 457) of *L. cynopis* NÄSSIG & SUHARDJONO, 1989 in coll. MZB/Cibinong (p. 58). A \mathcal{Q} specimen from Sumatra, Seriboe, Dolok, S. O. K. with the manuscript name *Loepa* ‡tobana TOXOPEUS is labelled "Parallotype" in coll. MZB/Cibinong (coll.-no. MZB.LEPI. 478). No description of *L.* ‡tobana TOXOPEUS was found thus far.

Remarks: The name *Loepa ‡tobana* TOXOPEUS may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than any other species of this genus from Sumatra.

Paukstadt, U. & Paukstadt, L. H. (2003: 23-39) illustrated the tibial spurs of *Loepa cynopis* NässiG & SUHARDJONO, 1989 [sensu Paukstadt & Paukstadt 2003] from Bali [the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010] (drawing, fig. 9f).

- Paukstadt, U. & Paukstadt, L. H. (2004b) reported that the yellow-greenish triangular lateral patches at mature larvae of the genus *Loepa* MOORE, 1859 [unspecified] obviously perform camouflage purposes.
- Paukstadt, U. & Paukstadt, L. H. (2004c: 111-188) reported *L. megacore* [sensu Paukstadt & Paukstadt 2004] being closely related with *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Java and Bali [sensu Paukstadt & Paukstadt 2004; the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010].
- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus Loepa MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll. Museum Zoologicum Bogoriense (Cibinong) - Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae)". Loepa cynopis NÄSSIG & SUHARDJONO, 1989 from Java and Bali [sensu Paukstadt, Paukstadt, Suhardjono, Sutrisno & Aswari 2009; the record from Bali is referable to L. baliensis PAUKSTADT & PAUKSTADT, 2010] were recorded for the MZB collection. The "List of reared specimens preserved in the collection of the Museum Zoologicum Bogoriense (Cibinong)" (p. 158) contains Loepa cynopis from West Java. Altitudinal records (minimum, maximum, and average) for the genus Loepa were recorded in table 1 (p. 159): for L. cynopis from Java (average 1,425 m) and L. cynopis from Bali (average 1,228 m) [= L. baliensis]. The collecting years of Loepa species (p. 160) and collecting months (p. 161) were recorded followed by a list of collecting sites which were found being recorded on pin-labels (p. 162). The annotated pin-labels of L. cynopis from Java (pp. 175-176) and of *L. cynopis* from Bali (pp. 176-177) [= *L. baliensis*] were recorded. Pin-labels of all specimens in coll. MZB / Museum Zoologicum Bogoriense were figured in color (p. 177, col.-pl. 3 and p. 179, col.-pl. 4).
- Brechlin & Paukstadt (2010a: 18-21) described a new species of the *katinka*-group (sensu Naumann 1995) from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010.

Remarks: The contribution by Brechlin & Kitching (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and designations the lectotypes, if any, are considered invalid.

Brechlin & Paukstadt (2010b: 19-22) described a new species of the [*katinka*-subgroup] of the *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010. The new species was compared with *L. cynopis* NÄSSIG & SUHARDJONO, 1989 [sensu Brechlin & Paukstadt 2010] from Java and Bali [the record from Bali is referable to the later described *L. baliensis* PAUKSTADT & PAUKSTADT 2010], and *L. palawana* NÄSSIG & TREADAWAY, 1997. The following adults were figured dorsally in color (p. 21): ♂ *L. cynopis* (Java) (fig. 4). The following ♂ genitalia structures were figured in color for comparisons (aedeagus separate) (p. 22): *L. cynopis* [sensu Brechlin & Paukstadt 2010] (Bali) [the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT 2010].

- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) recorded *L. cynopis* NÄSSIG & SUHARDJONO, 1989 (Java) and *Loepa* sp. nov. (Bali) [unnamed, the description was annouced].
- Paukstadt, U. & Paukstadt, L. H. (2010c: 203-228) provided a brief overview on the megacore-complex (sensu Nässig, Lampe & Kager 1996) of the genus Loepa MOORE, 1856 from the Indonesian Archipelago and the Malay Peninsula. L. cynopis NässiG & SUHARDJONO, 1989 was recorded from Java

Meister (2011: 154) confirmed that the foodplants for *L. cynopis* NÄSSIG & SUHARDJONO, 1989 remain unknown. **Remarks:** This statement might be available for the true *L. cynopis* NÄSSIG & SUHARDJONO, 1989 (Java) and the later described *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 (Bali).

Paukstadt, U. & Paukstadt, L. H. (2013: 29-40) reported on an entomological expedition to the Papandayan volcano, West Java, Indonesia. *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989 (*Loepa*) was recorded (p. 35) for the Papandayan region from 1,626 m and 1,884 m. No further information on the genus *Loepa* MOORE, 1859 was provided.

sumatrana NÄSSIG, LAMPE & KAGER, 1989 (Loepa)

Original citation and spelling: "Loepa sumatrana nov. spec."

- **Original description:** Nässig, W. A., Lampe, R. E. J. & Kager, S. (1989): A new species of *Loepa* from Sumatra (Lepidoptera, Saturniidae). – Heterocera Sumatrana (Göttingen), 2 (7): pp. 145-152; 2 col.-figs., 2 b/w drawings, 2 phot. h.-t.
- **Type locality:** Indonesia, North Sumatra [North Sumatra Province], Brastagi, ca. 1500 m.
- **Etymology:** Not explicitly noted by the authors but the name *sumatrana* is pointing to the range of this endemic species, the island of Sumatra.
- Type material: The descrition based on the ♂ holotype by original designation in coll. coll. BMNH / Natural History Museum (London, Great Britain) and 50 ♂ paratypes. The paratypes were recorded being preserved in coll. Nässig / WAN [now *in* SMFL / Senckenberg Museum Frankfurt Lepidoptera (Frankfurt am Main)], coll. Lampe (Nürnberg, Germany) [now probably in Zoologische Staatssammlungen des Bayrischen Staates / ZSM (Munich, Germany)], coll. Kager (Nürnberg, Germany) [now probably in Zoologische Staatssammlungen des Bayrischen Staates / ZSM (Munich, Germany)], coll. Kobes (Göttingen, Germany), coll. Paukstadt & Paukstadt (Wilhelmshaven, Germany), coll. Lemaire *in* MNHN / Muséum national d'Histoire naturelle (Paris, France), and coll. BMNH / Natural History Museum (London, Great Britain).

- Taxonomical notes: L. sumatrana NÄSSIG, LAMPE & KAGER, 1989 is an endemic species of the island of Sumatra. Closely related species might be the Continental Asian L. katinka (WESTWOOD, 1847) (Saturnia), the endemic Sumatran L. megacore JORDAN, 1911, the endemic Javanese L. cynopis NÄSSIG & SUHARDJONO, 1989, and the Malay L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011. Nässig, Lampe & Kager (1989: 148, 150-151) presented two hypotheses on the systematic position of L. sumatrana within the genus Loepa. L. sumatrana is recognized as a species of the katinka-subgroup of the katinka-group (sensu Naumann 1995).
- Geographical and altitudinal ranges: L. sumatrana NÄSSIG, LAMPE & KAGER, 1989 is endemic to the island of Sumatra. The authors of L. sumatrana confirmed that most specimens were collected in the mountains at 1000 m above sea level or above. Paukstadt & Paukstadt (2009c: 357) recorded this species from Aceh, Sumatra from altitudes between 1,428 and 1,978 m, with a strong peak around 1,800 m. The above figures were based on observations by the authors of 35 ♂ specimens, which came to light.
- **General notes:** Bouvier (1936: pl. VI, fig. 7 $\stackrel{\frown}{\bigcirc}$) has been likely the first who illustrated the \Im adult of *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 under the name of L. katinka sikkima MOORE, 1865 [sensu Bouvier 1936]. The unknown \bigcirc of *L. sumatrana* was most probably illustrated by Roepke (1953: pl. 6, fig. 4) under the name of L. katinka subsp. but Nässig, Lampe & Kager (1989) stated that the \mathcal{Q} being unknown. In the original description of L. sumatrana the \mathcal{F} holotype was illustrated in color dorsally (p. 147, fig. 2 [abdomen missing]). The genitalia structures of a δ paratype were illustrated in phot. h.-t. in the original description (p. 150, fig. 5 [tegumen and aedeagus separate]). Nässig, Lampe & Kager (1996: Cover Illustration) figured a 3° adult of L. sumatrana NÄSSIG, LAMPE & KAGER, 1996 in color. Nässig, Lampe & Kager (1996a) figured the *A* adult of *L*. sumatrana (pp. 90-91, col.-pl. 9, fig. 47). External differences in habitus between L. sikkima javanica [= L. javanica] and L. sumatrana (both from Sumatra) were provided in table 1 and by drawings (p. 107), the 3° genitalia structures of L. sumatrana (Sumatra) were presented (p. 108, phot. h.-t., b/w-pl. 5, fig. 16 [aedeagus separate]). Paukstadt, U. & Paukstadt, L. H. (2007e: 267, 273) reported *A* adults of *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 being on their wings in the early evening from between about 19:30 and 20:00 hours local time. Paukstadt, U. & Paukstadt, L. H. (2007f) recorded L. sumatrana for the Nanggroe Aceh Darussalam Province (Aceh) for the first time. This has been actually no new record because this species has been already recorded by Paukstadt, U. & Paukstadt, L.

H. (2007e). The same authors figured a 3° adult of *L. sumatrana* (p. 288, col.-pl. 1, fig. 4). The altitudinal distribution for L. sumatrana was recorded in table 1 (p. 289) from 1,428 to 1,798 m and this species reported being on his wings between 19:20 and 20:18 hours local time (p. 296, diagram 9). Paukstadt & Paukstadt (2009c: 357) finally recorded this species from Aceh, Sumatra from altitudes between 1,428 and 1.978 m, with a clear peak at approximately 1,800 m. The circadian flight times were reported in the early evening around 1900-2000 hours local time. The annual frequency with two strong peaks in late February and May/Jun and with scattered records in July and September, may suggest a mostly bivoltine life cycle. All data based on an interrupted three-year observation periode by the authors in Aceh. Nässig, Lampe & Kager (1989: 148) stated that the \bigcirc of *L. sumatrana* remain unknown. Paukstadt, Paukstadt & Suhardjono (2002: 61) recorded a pin label / manuscript name (L. $\pm tobana$ TOXOPEUS [*i.l.*]) of a \bigcirc adult of the genus Loepa from northern Sumatra which is preserved in coll. MZB / Museum Zoologicum Bogoriense (Bogor, Cibinong, West Java, Indonesia). Due to the habitus of the specimen it may be referable to the hithero unknown \mathcal{Q} adult of *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than to any other species of this genus known from Sumatra. Thus far the preimaginals of L. sumatrana remain unknown and a confirmation on the appropriate \mathcal{Q} adult requested.

- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).
- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa sumatrana* NÄSSIG, LAMPE & KAGER, 1989 are unknown from literature. There is no information on sericulture available.
- Further readings on *sumatrana* (in chronological order):
- Snellen van Vollenhoven (1862: 14) recorded *Saturnia Katinka* WESTW.[OOD] [sensu Snellen van Vollenhoven 1862] from Sumatra [*L. katinka* (WESTWOOD, 1847) (*Saturnia*) is absent in the Indonesian Archipelago, this record may be referable to a number of distinct species of the genus *Loepa* MOORE, 1859].

Remarks: The record for Sumatra may be referable to *L. javanica* MELL, 1939 or *L. megacore* JORDAN, 1911 rather than *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 or *L. diehli* BRECHLIN, 2010.

- Pagenstecher (1886: 132) recorded *Antherea* [sic!] *Kathinka* [sic!] [sensu Pagenstecher 1886] for Sumatra [the record from Sumatra may be referable to *L. javanica* MELL, 1939, *L. megacore* JORDAN, 1911 or *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than *L. diehli* BRECHLIN, 2010].
- Snellen, P. C. T. *in* Veth (ed.) (1892: 40) recorded *Antheraea Katinka* WESTWOOD [sensu Snellen 1881] from Alahan pandjang, Sumatra [Alahan Panjang, West

Sumatra Province] [based on the attached description the record for the West Sumatra Province may be referable to *L. megacore* JORDAN, 1911 rather than *L. javanica* MELL, 1939, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 or *L. diehli* BRECHLIN, 2010].

Bouvier (1928: 122, 132) recorded *L. katinka* WESTWOOD [sensu Bouvier 1928] from the North Korintji Valley, SW Sumatra [today North Kerinci Valley, West Sumatra Province], 5,000 feet [ca. 1,500 m], the Mt. Korintji [Mt. Kerinci (ca. 3,805 m)], 7,300 feet [ca. 2,200 m] [the record may be referable to *L. javanica* MELL, 1939] [see "Remarks" below].

Remarks: The records of *L. katinka* from Sumatra may be referable on the true *L. javanica* MELL, 1939 and/or *L. megacore* JORDAN, 1911. There is also the possibility that a record was based on the common *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989.

- Bouvier (1936: 231-235) recorded *L. katinka sikkima* MOORE [sensu Bouvier 1936] for Sumatra [the record from Sumatra may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than *L. javanica* MELL, 1939 or *L. diehli* BRECHLIN, 2010] and *L. katinka megacore* JORDAN for Sumatra. A ♂ adult of *L. katinka sikkima* MOORE from Sumatra [sensu Bouvier 1936; the illustrated specimen is referable most probably to *L. sumatrana* due to external morphology (shape of forewings)] was illustrated pl. VI, fig. 7 [p. unnumbered] with legend (p. 352). **Remarks:** The illustration by Bouvier (1936: pl. VI, fig. 7) under the name of *L. katinka sikkima* from Sumatra fits to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 but not at all to
- L. javanica MELL, 1939.
 Roepke (1953: 227-230) (pl. 6, fig. 4) illustrated a ♀ L. katinka subsp. [unnamed subspecies] from Pangkalan Brandan, East Coast of Sumatra [Pangkalanbrandan,

North Sumatra Province, street Medan - Langsa]. **Remarks:** Roepke (1953: 228) likely referred to the later described *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 when he reported on specimens in the Natural History Museum (London, Great Britain) which are almost similar to the Indian *L. sikkima*. We believe that the finure of *L. katinka* subsp. might fits to the still unknown \circ of *L. sumatrana* due to the

the figure of *L. katinka* subsp. might fits to the still unknown \bigcirc of *L. sumatrana* due to the falcate forewings and large ocelli, despite the probably low altitude the specimen has been collected.

Arora & Gupta (1979: 35-38) recorded L. katinka (WESTWOOD, 1848) [error in publication date of L. katinka (WESTWOOD, 1847) (Saturnia)] from Indonesia (Sumatra) [sensu Arora & Gupta 1979 / misidentification; the record for Sumatra may be referable to L. megacore JORDAN, 1911, L. sumatrana NÄSSIG, LAMPE & KAGER, 1989 or L. javanica MELL, 1939].

Remarks: *L. katinka* (WESTWOOD, 1847) (*Saturnia*) is replaced on the island of Sumatra by the following species of the *katinka*-group (sensu Naumann 1995): *L. megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, *L. javanica* MELL, 1939, and *L. diehli* BRECHLIN, 2010.

Holloway (1987: 106-108) noted that most host records for this genus are from Vitidaceae, but Dilleniaceae, Saxifragaceae, and Rutaceae are also utilised [unspecified sources]. He noted (p. 106) that a Sumatran insect [unspecified] may be related or conspecific *L. katinka* [sensu Holloway 1987; the record from Sumatra may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989].

- Nässig & Suhardjono (1989: 205) reported that all records of *katinka* from the Greater Sunda Islands based on misidentified taxa and are either *L. megacore* [sensu Nässig & Suhardjono 1989; the record may be referable to *L. megacore* JORDAN, 1911 from Sumatra and *L. martinii* BRECHLIN & PAUKSTADT, 2010 from Borneo], *L. sikkima javanica* [sensu Nässig & Suhardjono 1989; the record may be referable to *L. javanica* MELL, 1939 from Sumatra and *L. hayatiae* PAUKSTADT & BRECHLIN, 2011 from Java], *L. cynopis*, or another new taxon endemic of Sumatra [unnamed; = this species was later described as *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989].
- Nässig, Lampe & Kager (1989: 145, footnote²) recorded a species endemic to Sumatra (*L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989).
- Naumann (1995: 83-87) provided a valuable contribution on *L. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939]. A citation by Naumann (1995: 83) in subordination of *L. minahassae* is considered needed omitted: "*Loepa katinka sikkima* MOORE, 1865: Bouvier 1936: 233, pl. VI, fig. 7 (♂) (falsche Herkunftsangabe) [= false indication of origin]".

Remarks: Concluded from the habitus of the illustrated specimen the origin of the specimen (Sumatra) was correctly cited by Bouvier but most probably not its name. The figured specimen is referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 but not at all to *L. minahassae* MELL, 1939 [sensu lato] as mentioned by Naumann (1995: 83).

Nässig, Lampe & Kager (1996: Cover Illustration) illustrated a ♂ adult of *L.* sumatrana NÄSSIG, LAMPE & KAGER, 1996 in color. **Remarks:** The true authorship of the cover illustration was not noted in this volume and cannot be concluded from text because the cover illustration was omited in the appropriate text parts. Therefore we tentatively assign the cover illustration to the authors of two of the three contributions in this volume: Nässig, Lampe & Kager (1996a, b).

Nässig, Lampe & Kager (1996a: 10, 11, 13, 21, 65-66, 90-91, 107-108) noted *L.* sumatrana NÄSSIG, LAMPE & KAGER, 1989 being a Sumatran endemic (p. 10). The \Im adult of *L. sumatrana* was illustrated in color (pp. 90-91, col.-pl. 9, fig. 47). External differences in habitus between *L. sikkima javanica* [sensu Nässig, Lampe & Kager 1996] and *L. sumatrana* (both from Sumatra) were provided in Table 1 and by drawings (p. 107, fig. 15), the \Im genitalia structures of *L. sumatrana* (phot. h.-t., b/w-pl. 5, fig. 16), *L. sikkima javanica* (Sumatra, phot. h.-t., b/w-pl. 5, fig. 18) [sensu Nässig, Lampe & Kager, 1996], and *L. megacore* (Sumatra, phot. h.-t., b/w-pl. 5, fig. 19) were illustrated for comparisons. The authors remarked that this species seems to have clearer preference for mountainous areas (p. 13). Altitudinal records were from ca. 1,000 m to ca. 2,400 m (p. 67). The authors assumed that *L.* sumatrana possibly reached Sumatra via a possible Tertiary land bridge along the Andaman and Nicobar Islands (p. 11). The authors noted that the $\widehat{\mathbf{Q}}$ adult, the biology, and the preimaginals of *L. sumatrana* remain unknown.

Remarks: The Southeast Asian taxa of the genus *Loepa* MOORE, 1859 are considered to be distinct on species level from *L. sikkima* MOORE, 1866 ("1865"). The Sumatran populations therefore are referable to *Loepa javanica* MELL, 1939. Roepke (1853: pl. 6, fig. 4) illustrated a \bigcirc *L. katinka* subsp. [unnamed subspecies] from Pangkalan Brandan, East Coast of Sumatra [Pangkalanbrandan, North Sumatra Province, street Medan - Langsa] which may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1996.

- Nässig, Lampe & Kager (1996b: 139) remarked that they have never reared this species and no \bigcirc is known of *L. sumatrana* NäSSIG, LAMPE & KAGER, 1989. **Remarks:** Probably two \bigcirc adults of *L. sumatrana* are known from museum collections and illustrations. Those are 1. "*L.* ‡*tobana* Toxopeus [*i.l.*]" a record by Paukstadt, Paukstadt & Suhardjono (2002: 61) of a pin label / manuscript name of a specimen with uncertain identity, but due to the habitus the specimen may be referable to the hithero unknown \bigcirc adult of *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 and 2. "*L. katinka* subsp." a record and illustration of a \bigcirc of most probably *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 by Roepke (1953: pl. 6, fig. 4).
- d'Abrera (1998: 46-51) recorded *L. sumatrana* Nässig, LAMPE & KAGER, 1989 from Sumatra. The \Im holotype was figured in color dorsally (p. 47) and the \Im reported being yet unknown.
- Nässig & Treadaway (1998: 389-398) recorded a smaller [unnamed] taxon from Palawan which is smaller than *L. palawana* and the genitalia structures are similar those in the *sikkima*-group [correct as *sikkima*-subgroup] but the authors assumed a closer relationship to the *megacore/katinka*-group [= *katinka*-subgroup], e.g., to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989.
- Paukstadt, Paukstadt & Suhardjono (2002: 52-61) presented a "Catalogue of the Holotype and Allotype Specimens of the Family Saturniidae BOISDUVAL, [1837] 1834 Preserved in Museum Zoologicum Bogoriense, Cibinong, Indonesia (Lepidoptera)". A ♀ specimen from Sumatra, Seriboe, Dolok, S. O. K. with the manuscript name *Loepa* ‡*tobana* TOXOPEUS was labelled "Parallotype" in coll. MZB/Cibinong (coll.-no. MZB.LEPI. 478). The authors remarked that no description of *L*. ‡*tobana* by Toxopeus was found thus far.

Remarks: Due to the wings shapes of this \bigcirc singelton the manuscript name *Loepa ‡tobana* TOXOPEUS may be referable to *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 rather than any other species of this genus from Sumatra.

- Paukstadt, U. & Paukstadt, L. H. (2006c: 259-295) reported on an entomological expedition to the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia. Two species of the genus *Loepa* MOORE, 1859 were collected at light. Those were *L. megacore* JORDAN, 1911 and *L. sikkima javanica* MELL, 1938 [misidentification, = *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989; error in publication date of *javanica* MELL, 1939].
- Paukstadt, U. & Paukstadt, L. H. (2006d: 296-316) provided preliminary results on their studies of the wild silkmoths of the Nanggroe Aceh Darussalam Province, Sumatra, Indonesia. Two species of the genus *Loepa* MOORE, 1859 were collected at light. Those were *L. megacore* JORDAN, 1911 (n = 2) and *L. sikkima javanica* MELL, 1938 (n = 1) [misidentification, = *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989; error in publication date of *javanica* MELL, 1939]. The circadian flight times of *L. sikkima javanica* [= *L. sumatrana*] was recorded from 19:20 hours local time (p. 311, table 3 and p. 314, diagram 10) and the altitudinal distribution from 1,789 m (p. 309, table 1). A biotop description was provided (p. 306). The 3 adult of *L. sikkima javanica* [= *L. sumatrana*] from Aceh was illustrated in color dorsally (p. 303, fig. 5; legend p. 302).

- Paukstadt, U. (2007) mentioned in a Corrigenda and addendum for Paukstadt, U. & Paukstadt, L. H. (2006a) Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 4 (6); pp. 259-295, that "Loepa sikkima javanica MELL, 1938" (misinterpretation) [sensu Paukstadt 2007] [error in publication date of L. javanica MELL, 1939] to be replaced: Loepa sumatrana NÄSSIG, LAMPE & KAGER, 1989 (pp. 281, 288); for Paukstadt, U. & Paukstadt, L. H. (2006b): Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 4 (6): pp. 296-316, to be added : Loepa sumatrana NÄSSIG, LAMPE & KAGER, 1989 (p. 298); to be added: Loepa sumatrana NÄSSIG, LAMPE & KAGER, 1989 p. 300); "5) L. sikkima javanica" (misinterpretation) [sic!] to be replaced: 5) L. sumatrana (p. 302) (legend to color plate 1); "Loepa sikkima javanica" (misinterpretation) [sic!] to be replaced: Loepa sumatrana (p. 306); "Loepa sikkima javanica" (misinterpretation) [sic!] to be replaced: Loepa sumatrana (p. 309 table 1); "Sikkima" (lapsus calami) to be corrected: sikkima (p. 309 table 2); "Loepa sikkima javanica" (misinterpretation) [sic] to be replaced: Loepa sumatrana (p. 311 table 3); "Loepa sikkima javanica" (misinterpretation) [sic!] to be replaced: Loepa sumatrana (p. 314 diagram 10); "Loepa sikkima javanica MELL, 1938 [sic!], col.-fig. 5" to be replaced: Loepa sumatrana Nässig, LAMPE & KAGER. 1989, col.-fig. 5 (p. 315 preliminary checklist)
- Paukstadt, U. & Paukstadt, L. H. (2007e: 260-277) provided a travel report on the 2nd entomological expedition of the authors to the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia. Three species of the genus *Loepa* MOORE, 1859 were collected at artificial light sources. Those were *L. megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2007; error in publication date of *L. javanica* MELL, 1939]. The authors reported *L. sumatrana* being on the wings in the early evening from between 19:30 and 20:00 hous local time (p. 267, 273).
- Paukstadt, U. & Paukstadt, L. H. (2007f: 278-300) reported on further results on their studies of the wild silkmoths of the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia. Three species of the genus *Loepa* MOORE, 1859 were collected. Those were *L. megacore* JORDAN, 1911, *L. sumatrana* NäSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2007; error in publication date of *L. javanica* MELL, 1939]. *L. sumatrana* NäSSIG, LAMPE & KAGER, 1989 was recorded for Aceh for the first time. A ♂ adult of *L. sumatrana* was illustrated in color (p. 288, col.-pl. 1, fig. 4). The altitudinal distribution for *L. sumatrana* was provided in table 1 (p. 289) (from 1,428 to 1,798 m). *L. sumatrana* was reported being on the wings between 19:20 and 20:18 hours local time (p. 296, diagram 9).
- Paukstadt, U. & Paukstadt, L. H. (2008) recorded in a report on their 3rd entomological expedition to the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia the following three species of the genus *Loepa* MOORE, 1859 from Aceh, Sumatra: *L. megacore* JORDAN, 1911 from around 1,800 m altitude except a fresh ♂ adult which is sympatric with *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2008; error in publication date of *L. javanica* MELL, 1939] from Lokop (alluvial lowlands, 109 m above sea level) and *L. sumatrana*

NÄSSIG, LAMPE & KAGER, 1989 which is the most common of this three species from altitudes higher than 1,428 m above sea level.

- Paukstadt, U. & Paukstadt, L. H. (2009a: 3-44) reported on their 4th entomological expedition to the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia. Only two species of the genus *Loepa* MOORE, 1859 were reported collected in the Barisan Range of Aceh. Those were *L. megacore* JORDAN, 1911 and *L. sumatrana* NässiG, LAMPE & KAGER, 1989.
- Paukstadt, U. & Paukstadt, L. H. (2009b: 47-80) reported on new results of field studies on the wild silkmoths of the Barisan Range of Sumatra, Indonesia. Table 1 (p. 58) listed the following species of the genus *Loepa* MOORE, 1859 and their altitudinal distributions in Aceh, Sumatra with remarks: *Loepa megacore* JORDAN, 1911, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. sikkima javanica* MELL, 1938 [sensu Paukstadt & Paukstadt 2009; error in publication date of *L. javanica* MELL, 1939]. The altitudinal distribution of *L. sumatrana* was recorded between 1,428 and 1,798 m (highlands) in table 1 (p. 58) and diagram 15 (p. 62). The approaching times at light were figured in diagram 41 based on the number of 33 ♂ adults.
- Paukstadt, U. & Paukstadt, L. H. (2009c: 81-92) reported on observations on the brahmid moths of Nanggroe Aceh Darussalam, Sumatra, Indonesia and remarked that *Loepa sumatrana* NÄSSIG, LAMPE & KAGER, 1989 (Lepidoptera: Saturniidae) and *Brahmaea hearseyi* WHITE, 1862 ("1861") of the subgenus *Brahmophthalma* MELL *in* Seitz, 1928 approached at light sources in Aceh, northern Sumatra allways in the early evening (p. 88).
- Paukstadt, U. & Paukstadt, L. H. (2009d: 95-148) reported on their 5th entomological expedition to the Nanggroe Aceh Darussalam Province, Sumatra Island, Indonesia. Some information on the species of the genus *Loepa* MOORE, 1859 from Aceh, northern Sumatra was provided. The authors noted that *Loepa megacore* JORDAN, 1911 was the most common Saturniid moth at a particular collecting site in the Barisan Range in the early morning. Table 4 (p. 132) recorded the species which were collected and the number of specimens which were observed in five districts of Aceh. The average number of specimens observed each night was shown in (*Italic*). *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 was only observed in Beutong at 1,392 m, 1,549 m, and 1,978 m above sea level (8 ♂ / 1.6 [average of 1.6 specimens each collecting night]).
- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus *Loepa* MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll. Museum Zoologicum Bogoriense (Cibinong) Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae). *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 from Sumatra was recorded for the museum collection. Altitudinal records (minimum, maximum, and average) for the genus *Loepa* were recorded in table 1 (p. 159): for *L. sumatrana* from Sumatra an average altitudinal distribution of 1,776 m above sea level was reported. The collecting years of *Loepa* species (p. 160) and collecting months (p. 161) were recorded followed by a list of collecting sites which were found being recorded at pin-labels (p. 162). The annotated contents of pin-labels of *L. sumatrana* from

Sumatra (p. 182) was listed. Pin-labels of all specimens in coll. MZB / Museum Zoologicum Bogoriense (Bogor, Cibinong, Indonesia) were figured in color (p. 177, col.-pl. 3 and p. 179, col.-pl. 4).

- Paukstadt, U. & Paukstadt, L. H. (2009e: 311-364) reported on "Final observations on the wild silkmoths of Nanggroe Aceh Darussalam, Sumatra, Indonesia (Lepidoptera: Saturniidae)" based on five expeditions carried out by the authors from between 2006 and 2009. The following species of the genus Loepa were observed in Aceh: L. megacore JORDAN, 1911, L. sikkima javanica MELL, 1939 [sensu Paukstadt & Paukstadt 2009], and L. sumatrana NÄSSIG, LAMPE & KAGER, 1989. The number of 39 observations of L. sumatrana were recorded for Aceh (p. 323). The altitudinal distribution of *Loepa* (p. 325, table 3) and the biotop descriptions (p. 324, table 2) were provided for L. megacore, L. sikkima javanica [sensu Paukstadt & Paukstadt 2009] and L. sumatrana. L. sumatrana was observed in primary lower montane rainforest (1,428 m), primary lower montane rainforest and tropical pine forest (1,458 m), primary lower montane rainforest with mist forest in higher altitudes (1,766m and 1,978 m), and lower montane rainforest and arid areas with tropical pine forest (1,795 m). L. megacore and L. sumatrana were considered being typical species of the Barisan Range (p. 326). Table 4 (p. 327) shows the altitudinal distribution of all species of the family Saturniidae from Sumatra. L. sumatrana was recorded from the highlands from 1,428 to 1,978 m. The authors separated the Saturniidae of Aceh in four groups following the altitudinal distribution (p. 328). L. sumatrana was placed in group 2 of species of the higher mountain region. The altitudinal distribution of Saturniidae in Aceh based on collections by Paukstadt & Paukstadt from between 2006 and 2009 was recorded in table 5 (p. 329). The suggested life-cycle of L. sumatrana was reported for Aceh with peaks in II and IV/V (p. 336) [suggest a bivoltine life-cycle]. The complete observation data for Aceh of L. sumatrana were provided (p. 357) on the annual frequency (diagram 66), the altitudinal distribution (diagram 67), the circadian flight times (diagram 68), and the geographical distribution (map 22).
- Brechlin (2010a) described nine new taxa of the genus *Loepa* MOORE, 1859 including two species from Indonesia.

Remarks: The contribution by Brechlin (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered to be not valid, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the taxonomical act regarding *L. javanica* MELL, 1939 consequently is invalid.

- Brechlin (2010b: 23-35) described nine new taxa of the genus *Loepa* MOORE, 1859 including two new species from Indonesia. Those were *L. diehli* BRECHLIN, 2010 from Sumatra and *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi. A checklist of the names in the genus *Loepa* was provided (p. 28). *L. javanica* MELL, 1939 was raised to full species status. The new taxa were also compared with *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 from Sumatra. The memberships of the new taxa to either the *katinka*-subgroup (p. 25) or the *sikkima*-subgroup (p. 27) were discussed.
- Paukstadt, U. & Paukstadt, L. H. (2010a: 80-88) provided an overview on the saturniid moths of Sumatra with special reference to the Nanggroe Aceh

Darussalam Province, Indonesia. Four species of the genus *Loepa* MOORE, 1859 were recorded for Sumatra. Those were *Loepa megacore* JORDAN, 1911, *L. javanica* MELL, 1939, *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989, and *L. diehli* BRECHLIN, 2010.

- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae of the Indonesian Archipelago (New Guinea excluded). *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 (Sumatra) was listed.
- Paukstadt, U. & Paukstadt, L. H. (2010c: 203-228) provided a brief overview on the megacore-complex (sensu Nässig, Lampe & Kager (1996) of the genus Loepa MOORE, 1856 from the Indonesian Archipelago ("Sundaland") and the Malay Peninsula. L. sumatrana Nässig, LAMPE & KAGER, 1989 was mentioned as a taxon of the megacore-complex.
- Meister (2011: 155) confirmed that foodplants for *L. sumatrana* NÄSSIG, LAMPE & KAGER, 1989 [from Sumatra] remain unknown.

martinii BRECHLIN & PAUKSTADT, 2010 (Loepa)

Original citation and spelling: "Loepa martinii n. sp."

Original description: Brechlin, R. & Paukstadt, U. (2010a): Eine neue Art der Gattung *Loepa* MOORE, 1859 von Borneo (Lepidoptera: Saturniidae). – Entomo-Satsphingia, 3 (1), 09.01.2010: pp. 18-21, 2 col.-pls. with 14 figs.

Remarks: The contribution by Brechlin & Paukstadt (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165).

Redescription: Brechlin, R. & Paukstadt, U. (2010b): Eine neue Art der Gattung *Loepa* MOORE, 1859 von Borneo (Lepidoptera: Saturniidae). – Entomo-Satsphingia, 3 (1), published 09.01.2010 as per cover page but actually published not before 26.01.2010, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165), pp. 19-22, 2 col.-pls. with 14 figs.

Type locality: Borneo, Sabah, Mt. Trus Madi, 1100 m.

- **Etymology:** The new species was named in honor of Mr. Bernd Martini (Ingolstadt, Germany) who carried out several entomological expeditions to Sabah. The new species was collected and reared by him.
- **Type material:** The original description based on the ♂ holotype by original designation in coll. Museum Witt (Munich, Germany) [ex coll. Brechlin (Pasewalk, Germany)], 53 ♂ and 21 ♀ paratypes including the ♀ allotype (designated). The paratypes were recorded being preserved in coll. B. Martini (Ingolstadt, Germany), coll. K. Martini (Ingolstadt, Germany), coll. Brechlin (Pasewalk, Germany), coll. L. H. Paukstadt (Wilhelmshaven, Germany) now in coll. U. & L. H. Paukstadt, coll.

Nässig *in* SMFL / Senckenberg Museum Frankfurt Lepidoptera (Frankfurt am Main, Germany), coll. Ping *in* SMFL / Senckenberg Museum Frankfurt Lepidoptera (Frankfurt am Main, Germany), in coll. Natural History Museum (London, Great Britain). The collection in which the \mathcal{Q} allotype has been preserved remained unspecified in the original description.

- **Taxonomical notes:** The first published name *L. martinii* BRECHLIN & PAUKSTADT, 2010 was considered to be a nomen nudum because the publication not fits with the requirements of the ICZN (1999), cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165); the redescription was considered being validly published. *L. martinii* BRECHLIN & PAUKSTADT, 2010 is considered to be an endemic species on the island of Borneo. The next relatives are *L. cynopis* NÄSSIG & SUHARDJONO, 1989 an endemic species from Java and *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 an endemic species from Bali, *L. megacore* JORDAN, 1911 an endemic species from Sumatra, and *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 an endemic species from the Malay Peninsula.
- Geographical and altitudinal ranges: The range of *Loepa martinii* BRECHLIN & PAUKSTADT, 2010 is restricted to the island of Borneo. Geographical records are available for Sabah and Sarawak (East Malaysia), Brunei, and the Indonesian Kalimantan Barat Province (West Kalimantan) and the Kalimantan Selatan Province (South Kalimantan). The altitudinal distribution was recorded from 370 m (West Kalimantan) to 1,800 m (Mt. Kinabalu, Sabah), cf. Brechlin & Paukstadt (2010: 19) and from 1,660 to 2,110 m for the Mt. Kinabalu, Sabah, cf. Holloway (1976: 85).
 - **General notes:** The populations of the genus *Loepa* MOORE, 1859 from the island of Borneo were cited in earlier literature mostly under the names of *L. katinka* (WESTWOOD, 1847) or *L. megacore* JORDAN, 1911. Brechlin & Paukstadt (2010b: 21, col.-pl.) figured the \Diamond holotype (fig. 1) and the \heartsuit allotype (fig. 2) in color. The \Diamond genitalia structures of *L. martinii* BRECHLIN & PAUKSTADT, 2010 were figured in color (p. 22, figs. 7 and 8, both figures based on paratype specimens). Meister (2011: 155) noted that foodplants of *L. martinii* remain unknown. This species was reared in Germany by B. Martini (Ingolstadt, Germany) using *Parthenocissus* sp. (unspecified) as substitute foodplant, cf. Brechlin & Paukstadt (2010b: 19). Descriptions of the life history / early stages are not yet available.
- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).

Hybridizations and sericulture: Inter-generic and inter-specific pairings with *Loepa martinii* BRECHLIN & PAUKSTADT, 2010 are unknown from literature. There is no information on sericulture available.

Further readings on *martinii* (in chronological order):

Holloway (1976: 85) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Holloway 1976; error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*) from Mt. Kinabalu, Sabah, East Malaysia from altitudes of 1,660 m, 1,930 m, and 2,110 m [the record from Borneo may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010].

Remarks: With exception of the records from India all further records were probably based on misinterpretations also because previous authors mentioned some endemic species of the *katinka*-group (sensu Naumann 1995) as subspecies of *L. katinka* (WESTWOOD, 1847) (*Saturnia*). *Loepa katinka* (WESTWOOD, 1847) is an Indian / Himalayan species which is replaced for example by *L. megacore* JORDAN, 1911 in Sumatra, *L. cynopis* NÄSSIG & SUHARDJONO, 1989 in Java, *L. minahassae* MELL, 1939 in northern Sulawesi, *L. finnackermanni* BRECHLIN, 2010 in southern Sulawesi, and *L. martinii* BRECHLIN & PAUKSTADT, 2010 in Borneo. *L. formosensis* MELL, 1939 is an endemic to Taiwan. *L. katinka* sensu stricto is replaced by *L. mindanaensis* SCHÜSSLER *in* Strand, 1933 (Mindanao), *L. nigropupillata* NÄSSIG & TREADAWAY, 1988 (Luzon), *L. palawana* NÄSSIG & TREADAWAY, 1997 (Palawan), and *L. visayana* BRECHLIN, 2000 (Leyte), and from Myanmar *L. diffunoccidentalis* BRECHLIN, 2010 and *L. diffundata* NAUMANN, NÄSSIG & LÖFFLER, 2008 (Laos = type locality, Vienam, Thailand, South Myanmar). The southern Chinese populations of the *katinka*-subgroup of the *katinka*-group belong to *L. kuangtungensis* MELL, 1939.

Allen (1981: 103, 113-114, pl. 7) recorded *L. megacore* JORDAN, 1909 [sensu Allen 1981] [error in publication date of *L. megacore* JORDAN, 1911] for Brunei [the record for Brunei may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010].

Remarks: Both records by Allen based on 3 singletons from Brunei. *L. megacore* JORDAN, 1911 is endemic to Sumatra and replaced by *L. martinii* BRECHLIN & PAUKSTADT, 2010 on the island of Borneo.

- Barlow (1982: 49) recorded *Loepa sikkima* MOORE *et al.* [sensu Barlow 1982] [sic; correct as *Loepa sikkima* MOORE and allies as written in the Taxonomic Appendix by Holloway *in* Barlow, Note 18., p. 192] from Borneo [the record from Borneo may be referable to *L. siamensis malayensis* BRECHLIN, 2010 or *L. martinii* BRECHLIN & PAUKSTADT, 2010]. Barlow referred to the taxonomic Appendix, Note 18 [by Holloway].
- Holloway in Barlow (1982: 192) Note 18, regarding *Loepa sikkima* MOORE and allies remarked that *Loepa sikkima* MOORE is identified for the first time away from its typical locality in the N. E. Himalaya (Malaya [sensu Holloway 1982; the record from Borneo [sensu Holloway 1982; the record from Borneo [sensu Holloway 1982; the record from Borneo may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010]) based on a misinterpretation.
- Holloway (1987: 106-108) illustrated a Bornean species under the name of *L. megacore* JORDAN, 1911 [sensu Holloway 1987; this record from Borneo is referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010] (col.-pl. 7, fig. 10 [the

figured δ adult is referable to *L. megacore* sensu lato rather than to *L. martinii* BRECHLIN & PAUKSTADT, 2010]). The following δ genitalia structures were figured for comparisons: *L. sikkima* (Borneo: fig. 136) and *L. megacore* (Sumatra: fig. 137). Holloway remarked (p. 107) that *L. katinka* (sensu Holloway 1976: 85) actually is *Loepa megacore* JORDAN, 1911 [sensu Holloway 1987; the record from Borneo may be referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010]. Holloway recorded two species for Sundaland including Borneo (p. 106). Those were *Loepa sikkima* MOORE, 1865 (*Antheraea*) [sensu Holloway 1987] [lapsus in combination with *Antheraea* HÜBNER, 1819 ("1816") and error in publication date of *L. sikkima* MOORE, 1866 ("1865")] and *Loepa megacore* JORDAN, 1911 [sensu Holloway 1987].

- Nässig & Treadaway (1988: 159-176) compared *L. mindanaensis* with *L. megacore* JORDAN, 1911 [sensu lato; unspecified origin]. *L. mindanaensis* was reported being certainly closely related with *L. megacore* [sensu Nässig & Treadaway 1988] via the fringe of islands between southwestern Mindanao and northeastern Borneo via the Sula Archipelago [unproven; the record from Borneo is referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010] [no specimens of this genus from the Sula Archipelago are known in collections so far]. *L. megacore* was recorded from Borneo [the record from Borneo is referable to *L. martinii* BRECHLIN & PAUKSTADT, 2010].
- Nässig & Suhardjono (1989: 205) L. cynopis was reported being closely related with the North Sundanian L. megacore JORDAN, 1911 [sensu Nässig & Suhardjono 1989; this record is referable to a number of distinct and endemic species of the megacore-complex: L. megacore JORDAN, 1911 (Sumatra), L. martinii BRECHLIN & PAUKSTADT, 2010 (Borneo), and L. lampei PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay Peninsula)]. Under the subheader "Diagnosis and discussion" the authors reported L. megacore [sensu Nässig & Suhardjono 1989] being known from Sundaland except Java (i.e., Borneo [the record from Borneo is referable to L. martinii BRECHLIN & PAUKSTADT, 2010])]. All records of katinka from the Greater Sunda Islands were reported being misidentified and partly L. megacore [sensu Nässig & Suhardjono 1989; the record may be referable to L. megacore JORDAN, 1911 from Sumatra and L. martinii BRECHLIN & PAUKSTADT, 2010 from Borneo]. Nässig & Suhardjono mentioned that Holloway (1987) figured the Bornean species L. megacore [sei!].
- Pinratana & Lampe (1990: 21-24, fig. [unnumbered]) L. sikkima [sensu Pinratana & Lampe 1990] was recorded for Borneo [the record from Borneo may be referable to L. siamensis malayensis BRECHLIN, 2010 or L. martinii BRECHLIN & PAUKSTADT, 2010 which is a species of the katinka-subgroup of the katinka-group (sensu Naumann 1995)].
- Nässig & Treadaway (1997: 323-366) discussed the relationships between the Sundanian [= Sunda Shelf region: parts of the Southeast Asian mainland, Sumatra, Java, Bali, and Borneo] and the Philippine taxa of the *megacore*-group. A member of the *megacore*-group which was cited has been *L. megacore* JORDAN, 1911 (p. 357) [sensu Nässig & Treadaway 1997; group of ?biospecies: *L. megacore* (Sumatra), *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011 (Malay)

Peninsula), *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo), and *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 (Bali)].

- Paukstadt, U. & Paukstadt, L. H. (2004c: 111-188) applied the name *L. megacore* [sensu Paukstadt & Paukstadt 2004] to the populations from West Malaysia [= *L. lampei* PAUKSTADT, PAUKSTADT & BRECHLIN, 2011], Borneo [the record from Borneo is referable to *L. martinii* BRECHLIN & PAUKSTADT 2010], and Sumatra.
- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae (Lepidoptera) of the Indonesian Archipelago (Island of New Guinea excluded). The authors mentioned Saturnia katinka WESTWOOD, 1848 [error in publication date of S. katinka WESTWOOD, 1847] being the type species of the genus Loepa MOORE, 1859. L. martinii BRECHLIN & PAUKSTADT, 2010 was listed for the island of Borneo.
- Brechlin & Paukstadt (2010a) described a new species from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010. Differences with other taxa in the *katinka*-group (sensu Naumann 1995) were discussed.

Remarks: The contribution by Brechlin & Kitching (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the designations of the lectotypes are considered invalid.

- Brechlin & Paukstadt (2010b: 19-22) described a new species of the [*katinka*-subgroup of the] *katinka*-group (sensu Naumann 1995) of the genus *Loepa* MOORE, 1859 from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010. The new species was recorded from Sabah (type locality), Sarawak (both East Malaysia), Brunei, and the Indonesian South Kalimantan Province, North Kalimantan Province, and West Kalimantan Province. The following adults were figured dorsally in color (p. 21): $\stackrel{\circ}{\circ} L$. *martinii* holotype (Sabah) (fig. 1) and [\bigcirc] *L. martinii* paratype (allotype) (Sabah) (fig. 2). The following $\stackrel{\circ}{\circ}$ genitalia structures were figured in color for comparisons (aedeagus separate) (p. 22): *L. martinii* paratypes (Sabah) (figs. 7-8).
- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae (Lepidoptera) of the Indonesian Archipelago (Island of New Guinea excluded). The authors listed *L. martinii* BRECHLIN & PAUKSTADT, 2010 (Borneo).
- Paukstadt, U. & Paukstadt, L. H. (2010c: 203-228) recorded *L. martinii* BRECHLIN & PAUKSTADT, 2010 from Borneo.
- Meister (2011: 155) confirmed that foodplants for *L. martinii* BRECHLIN & PAUKSTADT, 2010 remain unknown.

finnackermanni BRECHLIN, 2010 (Loepa)

Original citation and spelling: "Loepa finnackermanni n. sp."

Original description: Brechlin, R. (2010a): Neue Taxa der Gattung *Loepa* MOORE, 1859 (Lepidoptera: Saturniidae). – Entomo-Satsphingia (Pasewalk / Prenzlau, Germany), 3 (1), 09.01.2010: pp. 22-33, 4 col.-pls. with 32 figs.

Remarks: Above publication was considered being invalid because the requirements of the ICZN (1999) were not followed, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165).

Redescription: Brechlin, R. (2010b): Neue Taxa der Gattung *Loepa* MOORE, 1859 (Lepidoptera: Saturniidae). – Entomo-Satsphingia (Pasewalk / Prenzlau, Germany), 3 (1), 09.01.2010 as per cover page (actually not before 26.01.2010, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165)), pp. 23-35, 4 col.-pls. with 32 figs.

- **Type locality:** Indonesia, Sulawesi (SE) [Southeast], Sulawesi Tenggara [Province Sulawesi Tenggara], Melia Benoa resort, ca. 4.14°S 122.06°E, 60 m.
- **Etymology:** The new species was named in honor of Mr. Finn Ackermann (Pasewalk, Germany).
- **Type material:** The description based on the ♂ holotype by original designation in coll. Dr. Ron Brechlin (Pasewalk, Germany). The holotype was assigned to Museum Witt (Munich, Germany) and will be finally preserved in Zoologische Staatssammlungen (Munich, Germany). 142 ♂ and 26 ♀ paratypes were included into the type series, a ♀ allotype was designated. Paratypes were reported being preserved in the following collections: 68 ♂ / 20 ♀ paratypes in coll. Brechlin / CRBP (Pasewalk, Germany), 36 ♂ / 3 ♀ paratypes in coll. (Ulrich &) Laela H. Paukstadt / CLPW (Wilhelmshaven, Germany), 25 ♂ / 2 ♀ in coll. Nässig *in* Senckenberg Museum Frankfurt am Main / CWAN *in* SMFL (Frankfurt am Main, Germany), and 9 ♂ in coll. van Schayck / CEvS (Wetter, Germany).
- **Taxonomical notes:** The first published name *L. finnackermanni* BRECHLIN, 2010 (*Loepa*) was considered to be a nomen nudum because the publication not fits with the requirements of the ICZN (1999), cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The species was validly redescribed. *L. finnackermanni* BRECHLIN, 2010 is considered to be an endemic species in southern Sulawesi. Proved records were so far from the South Sulawesi Province and the Southeast Sulawesi Province. *L. finnackermanni* is replaced in northern Sulawesi by *L. minahassae* MELL, 1939. The actual ranges of both species remain unknown.

- Geographical and altitudinal ranges: So far *L. finnackermanni* BRECHLIN, 2010 (*Loepa*) is only known from southern Sulawesi (South Sulawesi Province and Southeast Sulawesi Province). Scattered records of the genus *Loepa* MOORE, 1859 are from the islands of Tanahjampea (Selayar Archipelago, South Sulawesi Province), Buton (Buton Archipelago, Southeast Sulawesi Province), and Peling (Banggai Archipelago, Central Sulawesi Province). At the time being the populations of the Central Sulawesi Province cannot be assigned to either the southern species *L. finnackermanni* or the northern species *L. minahassae* with certainty.
- General notes: Paukstadt, U. & Paukstadt, L. H. (1991) figured the 👌 and \mathcal{Q} adults in phot. h.-t. (p. 23, fig. 10 [\mathcal{J}] and fig. 11 [\mathcal{Q}]) and the \mathcal{J} genitalia structures in phot. h.-t. (p. 25, fig. 16) of L. minahassae from the South Sulawesi Province, near Bantimurung [sensu Paukstadt & Paukstadt 1991; the populations from Bantimurung, South Sulawesi Province are referable to L. finnackermanni BRECHLIN, 2010]. Paukstadt, L. H. & Paukstadt, U. (1996: 385-391) described and illustrated (phot. h.-t.) the preimaginals and adults of L. minahassae MELL, 1939 from Puncak Palopo, South Sulawesi Province [sensu Paukstadt & Paukstadt 1996; the populations from Puncak Palopo, South Sulawesi Province are referable to L. finnackermanni BRECHLIN, 2010]. Illustrations of the larval instars (figs. 1-7) and of the 3° and 9° adults dorsally (figs. 8-9). Naumann (1995: 86) recorded Tetracera scandens (Dilleniaceae) as natural foodplant for L. minahassae [sensu Naumann 1995; the record is referable to L. finnackermanni BRECHLIN, 2010]. The adults of L. minahassae [sensu Naumann 1995] from Mt. Sampuraga at the border of the South and Central Sulawesi Provinces [the specimens may be referable to *L. finnackermanni* BRECHLIN, 2010] were illustrated in color dorsally (p. 139, pl. XV, figs. 6 [$\stackrel{\wedge}{\bigcirc}$] and 7 [$\stackrel{\bigcirc}{\bigcirc}$]). The matura larva and the cocoon of L. minahassae [sensu Naumann 1995; the populations from Puncak Palopo are referable to L. finnackermanni BRECHLIN, 2010] were illustrated in color (p. 119, pl. V, fig. 3 [larva laterally], fig. 3 [larva dorsally], and fig. 4 [cocoon]). A distribution map for L. minahassae [sensu Naumann 1995; part. referable to L. finnackermanni BRECHLIN, 2010] was provided (p. 107, map VII). Brechlin (2010a) figured the \mathcal{E} holotype (p. 30, col.-pl. 1, fig. 3) and the $\stackrel{\bigcirc}{_{+}}$ allotype (paratype) (col.-pl. 1, fig. 4) of *L. finnackermanni* BRECHLIN, 2010 both dorsally from Southeast Sulawesi, the barcode-no. of the \bigcirc holotype was stated (p. 23) being BC-RBP 1376, and the \bigcirc genitalia structures of a paratype specimen from the South Sulawesi Province were figured in color (p. 32, fig. 19). Above publication was considered being invalid, cf. Nässig, Kitching, Peigler & Treadaway

(2010: 145-165). Brechlin (2010b) figured the 3° holotype (p. 32, col.-pl. 1, fig. 3) and the \bigcirc allotype (paratype) (col.-pl. 1, fig. 4) of *L. finnackermanni* BRECHLIN, 2010 both dorsally from Southeast Sulawesi, the barcode-no. of the 3° holotype was noted (p. 24) being BC-RBP 1376, and the 3° genitalia structures of a paratype specimen from the South Sulawesi Province were figured in color (p. 34, fig. 19). Meister (2011: 154) stated that foodplants for *L. finnackermanni* BRECHLIN, 2010 [from southern Sulawesi] remain unknown. He omitted at least the records of the natural foodplant *Tetracera scandens* (Dilleniaceae) by Naumann (1995: 86) and L. H. Paukstadt & U. Paukstadt (1996: 385) and of a substitute foodplant of the family Vitaceae by L. H. Paukstadt & U. Paukstadt (1996: 385).

- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).
- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa finnackermanni* BRECHLIN, 2010 are unknown from literature. There is no information on sericulture available.
- Further readings on *finnackermanni* (in chronological order):
- Eecke van (1929: [137]-138) recorded *L. katinka* (WESTWOOD, 1848) [sensu van Eecke 1929; error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Celebes [Sulawesi] [this record from Sulawesi may be referable to *L. minahassae* MELL, 1939 (northern Sulawesi) rather than *L. finnackermanni* BRECHLIN, 2010 (southern Sulawesi)].
- Bouvier (1936: 231-235) recorded *L. katinka sikkima* MOORE [sensu Bouvier 1936] from Celebes [Sulawesi] [this record from Sulawesi may be referable to *L. minahassae* MELL, 1939 rather than *L. finnackermanni* BRECHLIN, 2010 because at the time of publication specimens of this genus were known from northern Sulawesi only].
- Nieuwenhuis (1948: 145) recorded a 3 Loepa katinka WESTWOOD, 1848 [sensu Nieuwenhuis 1948] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Sambioet [Sambiut, Pulau Peleng] and a 9 from Noelion [Nulion, Pulau Peleng], Banggai Archipelago [the record from the Banggai Archipelago may be referable to *L. finnackermanni* BRECHLIN, 2010 rather than *L. minahassae* MELL, 1939; see "Remarks" below]. The misinterpretation probably based on the paper by van Eecke (1930: 406). References with records of *L. katinka* [sensu lato] were uncritically provided, e.g., van Eecke (1930: 406) with a record from Celebes [Sulawesi].

Remarks: The ranges of *L. finnackermanni* BRECHLIN, 2010 which is a Southern Sulawesian species and *L. minahassae* MELL, 1939 which is a Northern Sulawesian species remain uncertain in Central Sulawesi including the Banggai Archipelago. We tentatively assign the populations of Pulau Peleng to the taxon which is distributed in the South and Southeast Sulawesi Provinces. This is *L. finnackermanni* BRECHLIN, 2010.

- Roepke (1953: 227-230) noted that in the Archipelago *katinka* forms "weak" subspecies [sensu Roepke 1953]: *k. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939] from Sulawesi. Roepke (p. 229) placed *L. k. minahassae* MELL from North Celebes [Sulawesi] and South? Celebes [South Sulawesi is occupied by *L. finnackermanni* BRECHLIN, 2010] into the *katinka*group [sensu Roepke 1953] of the genus *Loepa. Loepa sikkima sikkima* MOORE [sensu Roepke 1953] was recorded from Celebes [Sulawesi] [misinterpretation; the record from Sulawesi may be referable to *L. minahassae* MELL, 1939 rather than *L. finnackermanni* BRECHLIN, 2010] (based on a record by Bouvier).
- Holloway (1976: 85) recorded *Loepa katinka* (WESTWOOD, 1848) [sensu Holloway 1976] [error in publication date of *L. katinka* (WESTWOOD, 1847) (*Saturnia*)] from Sulawesi [records for Sulawesi are referable to *L. minahassae* MELL, 1939 (northern Sulawesi) or *L. finnackermanni* BRECHLIN, 2010 (southern Sulawesi)].
- Holloway (1987: 106-108) recorded two species for Sundaland (p. 106): L. sikkima MOORE, 1865 (Antheraea) [sensu Holloway 1987] [lapsus in combination with Antheraea HÜBNER, 1819 ("1816") and error in publication date of L. sikkima MOORE, 1866 ("1865")] and L. megacore JORDAN, 1911 [sensu Holloway 1987; part. misinterpretation]. The author remarked that there can be distinct species in Sulawesi [this remark may be referable to L. minahassae MELL, 1939 (northern Sulawesi) and L. finnackermanni BRECHLIN, 2010 (southern Sulawesi)].
- Nässig & Treadaway (1988: 155-176) elevated *L. minahassae* MELL, 1939 to full species rank (pp. 159, 165) (*minahassae* was originally described as subspecies of *katinka*). The pattern and color morphology of *L. minahassae* from Celebes (Sulawesi) [unspecified origin; the citation may be part. referable to *L. finnackermanni* BRECHLIN, 2010] was compared with those of *L. nigropupillata* NÄSSIG & TREADAWAY, 1988 from the Philippines.
- Paukstadt, U. & Paukstadt, L. H. (1991: 17-27) reported on an entomological expedition to Celebes [Sulawesi]. The authors recorded *Loepa minahassae* MELL, 1939 [sensu Paukstadt & Paukstadt 1991] from southern Sulawesi [the record for southern Sulawesi may be referable to *L. finnackermanni* BRECHLIN, 2010]. \mathcal{J} and \mathcal{Q} adults from the South Sulawesi Province, near Bantimurung were figured in phot. h.-t. dorsally (p. 23, fig. 10 \mathcal{J} and fig. 11 \mathcal{Q}), the \mathcal{J} genitalia structures of *L. minahassae* [sensu Paukstadt & Paukstadt 1991; = *L. finnackermanni* BRECHLIN, 2010] were illustrated in phot. h.-t. (p. 25, fig. 16).
- Stone (1991: 28) recorded *Cissus* and *Leea* as foodplants for *katinka* (WESTWOOD) ssp. [sensu Stone 1991] based on Bouvier (1936) [this record may be referable to *L. katinka* (WESTWOOD, 1847) (*Saturnia*), *L. sikkima* MOORE, 1866 ("1865"), *L. hayatiae* PAUKSTADT & BRECHLIN, 2011, *L. cynopis* NÄSSIG & SUHARDJONO, 1989, *L. javanica* MELL, 1939, *L. minahassae* MELL, 1939 and *L. finnackermanni* BRECHLIN, 2010, *L. megacore* JORDAN, 1911, *L. damartis* JORDAN *in* Seitz, 1911 and allied, and finally *L. miranda* MOORE, 1865 and allied].
- Naumann (1995: 83-87) placed *L. minahassae* (sensu Naumann (1995) to the *katinka*-group but not explicitly to the *katinka*-subgroup or the *sikkima*-subgroup (both sensu Naumann 1995). *L. minahassae* was compared with *L. katinka*

(WESTWOOD, 1848) [error in publication date of L. katinka (WESTWOOD, 1847) (Saturnia)] and L. sikkima MOORE, 1865 [error in publication date of L. sikkima MOORE, 1866 ("1865")]. The author noted that L. minahassae is similar L. sikkima in the β genitalia structures. The altitudinal distribution of L. minahassae was recorded from 30 to 1,800 m and the circadian flight times for 3 adults between 2040 hrs. and 0430 hrs. local time. The mature larva (pp. 118-119, col.-pl. V, figs. 2 and 3) and the cocoon (pp. 118-119, col.-pl. V, fig. 4) of L. minahassae were described and illustrated in color based on material from Puncak Palopo, South Sulawesi Province [the record from Puncak Palopo is referable to L. finnackermanni BRECHLIN, 2010]. \eth and \bigcirc adults from Mt. Sampuraga, South Sulawesi Province (pp. 138-139, col.-pl. XV), ♀ holotype of L. katinka minahassae MELL, 1938 [sic] from Minahasa, North Sulawesi Province, and \circlearrowleft of L. minahassae [infrasubspecific variation ab. vandenberghi ROEPKE, 1953] from North Sulawesi were illustrated in color. Naumann (1995: 85) recorded two specimens from the Central Sulawesi Province, Banggai Archipelago, A \bigcirc singleton from Noelion, Pulau Peleng, Sept. 1937 and a 3 singleton from Sambiut, Pulau Peleng, Jul. 1933 both in Nationaal Natuurhistorisch Museum / RMNH (Leiden, Netherlands). From the South Sulawesi Province, Selavar Archipelago, Pulau Tanahjampea, Apr. 1939 a 3 singleton was reported being preserved in Zoölogisch Museum / ZMA (Amsterdam, Netherlands). All three specimens were collected on smaller islands off the coast of Sulawesi.

- Nässig, Lampe & Kager (1996b: 136-139) remarked that Naumann (1995) figured a larva of *L. minahassae* [sensu Nässig, Lampe & Kager 1996] from Sulawesi [the illustration by Naumann (1995) is referable to *L. finnackermanni* BRECHLIN, 2010]. The authors recorded *Tetracera scandens* (Dilleniaceae) as natural foodplant for *L. minahassae* [from the South Sulawesi Province] based on Naumann (1995) [the record is referable to *L. finnackermanni* BRECHLIN, 2010].
- Paukstadt, L. H. & Paukstadt, U. (1996: 385-391) described and illustrated (phot. h.t.) the preimaginals and adults of *Loepa minahassae* MELL, 1938 [sensu Paukstadt & Paukstadt 1996] [error in publication date of *L. minahassae* MELL, 1939] from Puncak Palopo, South Sulawesi Province [the record from Puncak Palopo may be referable to *L. finnackermanni* BRECHLIN, 2010]. Figures: 1st instar – 5th instar (p. 387, figs. 1-4, p. 388, figs. 5-6, and p. 389, fig. 7), $\overset{\circ}{\supset}$ and $\overset{\circ}{\bigcirc}$ adults dorsally (p. 390, figs. 8-9). The authors remarked that *L. minahassae* ab. *vandenberghi* ROEPKE, 1953 is an infrasubspecific variation of *L. minahassae*.
- Gupta (1997: 417) recorded the distribution of *L. katinka* [sensu Gupta 1997] Indonesia [the record for Indonesia is referable to a some distinct and endemic species of the *katinka*-subgroup of the *katinka*-group (sensu Naumann 1995), one of those is *L. finnackermanni* BRECHLIN, 2010 (S Sulawesi [type locality]].
- Nässig & Treadaway (1998: 393-398) remarked (p. 395) that the Sundanian [unspecified] *Loepa megacore* JORDAN, 1911 can also be found at altitudes lower than 700 m, the maximum altitudes are around 2,000 m. The authors remarked that the differences in later larval instars in related species are not very prominant. *L. katinka*, *L. minahassae* MELL, 1938 [unspecified origin; error in publication date of *minahassae* MELL, 1939; sensu Nässig & Treadaway 1998; the record may be

part. referable to *L. finnackermanni* BRECHLIN, 2010], and *L. formosensis* MELL, 1929 [error in publication date of *formosensis* MELL, 1939] were listed.

- d'Abrera (1998: 46-51) recorded *L. minahassae* MELL, 1938 [error in publication date of *L. minahassae* MELL, 1939] [sensu d'Abrera 1998] from Sulawesi and the \Im and \Im adults from W. Celebes, Lindoe [the Lore Lindu National Park is a forested protected area in the province of Central Sulawesi, the area of the national park is 2,180 km² covering both lowland and montane forests (200 to 2,610 meters above sea level), cf. http://www.dephut.go.id] are figured in color dorsally (p. 49) [due to the origin the figured specimens may be referable to *L. finnackermanni* BRECHLIN, 2010 rather than *L. minahassae* MELL, 1939].
- Paukstadt, U. & Paukstadt, L. H. (2004c: 111-188) mentioned that *L. minahassae* MELL, 1939 [sensu Paukstadt & Paukstadt 2004] from Sulawesi was reared and the life history was described by Paukstadt, L. H. & Paukstadt, U. (1996) [the report is referable to *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi].
- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus *Loepa* MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll. Museum Zoologicum Bogoriense (Cibinong) Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae)". *L. minahassae* MELL, 1939 [sensu Paukstadt, Paukstadt, Suhardjono, Sutrisno & Aswari 2009] from southern Sulawesi [the record from southern Sulawesi is referable to *L. finnackermanni* BRECHLIN, 2010] was recorded for the collection. The contents of pin-labels was annotated. The cocoon of *L. cynopis* (Java) was figured for the first time being (p. 183, col.-pl. 5). Pin-labels of all adults and cocoons of the genus *Loepa* MOORE, 1859 in coll. MZB / Museum Zoologicum Bogoriense were figured in color (p. 177, col.-pl. 3 and p. 179, col.-pl. 4).
- Brechlin (2010a: 22-33) described *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi (Indonesia)

Remarks: The contribution by Brechlin (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the taxonomical act regarding *L. javanica* MELL, 1939 was consequently invalid.

- Brechlin (2010b: 23-35) described *L. finnackermanni* BRECHLIN, 2010 from southern Sulawesi (Indonesia). The following adults were figured in color dorsally (p. 32, col.-pl. 1, figs. 1-8 and p. 33, col.-pl. 2, figs. 9-16): ♂ *L. finnackermanni* holotype (Southeast Sulawesi Province) (fig. 3), ♀ *L. finnackermanni* paratype (allotype) (Southeast Sulawesi Province) (fig. 4), and ♂ *L. minahassae* MELL, 1939 (North Sulawesi Province) (fig. 5). The following ♂ genitalia structures were figured in color (aedeagus separate) (p. 34, figs. 17-24 and p. 35, figs. 25-32): *L. finnackermanni* paratype (South Sulawesi Province) (fig. 19), *L. minahassae* (North Sulawesi Province) (fig. 20).
- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) provided a preliminary checklist of the Saturniidae (Lepidoptera) of the Indonesian Archipelago (Island of New Guinea excluded). The authors mentioned *L. finnackermanni* BRECHLIN, 2010 (southern and southeastern Sulawesi.

- Lampe (2010: 292) illustrated the preimaginals (1st, 2nd, 3rd, 4th, and 5th larval instar, cocoon and pupa dorsally and ventrolaterally) and the ♂ and ♀ adults of *Loepa minahassae* MELL, 1938 [error in publication year of *L. minahassae* MELL, 1939 (the Vol. 52, 1938, pp. 99-192 was printed 1st of February, 1939)] from Sulawesi in color. He unfortunately not provides with the source of the life stock which has been from southern Sulawesi with certainty. In a rearing report (log) of this species (p. 359) he noted that the material is from Sulawesi, Telur Kupu Malam. "Telur Kupu Malam" is not the location but is Indonesian and means "eggs of moth" instead.
- Meister (2011: 154) stated that foodplants for *L. finnackermanni* BRECHLIN, 2010 [from southern Sulawesi] are unknown. He omitted at least the records of the natural foodplant *Tetracera scandens* (Dilleniaceae) by Naumann (1995: 86) and L. H. Paukstadt & U. Paukstadt (1996: 385) and of a substitute foodplant of the family Vitaceae by L. H. Paukstadt & U. Paukstadt (1996: 385) which were clearly recorded for the populations of the genus *Loepa* from southern Sulawesi.
- Paukstadt, U. & Paukstadt, L. H. (2013: 49-51) reported on field observations on *Loepa finnackermanni* BRECHLIN, 2010 from South Sulawesi, Indonesia. *Ampelocissus martini* PLANCH. [A. L. P. P. de Candolle & A. C. de Candolle, Monogr. phan. 5: 373; 1887] (Vitaceae) was found being the host for *L. finnackermanni*. So far only *Tetracera scandens* (L.) MERR. (Dilleniaceae) has been recorded being the host for *L. finnackermanni*, cf. Naumann (1995).
- Paukstadt, L. H. & Paukstadt, U. (2013: 75-93) reported on an entomological expedition which was carried out by the senior author to the Selayar Islands, Sulawesi, Indonesia. The genus *Loepa* MOORE, 1859 was not observed on the island of Selayar. The authors remarked that four species of wild silkmoths were recorded from the islands of Butung (Buton), Muna and Kabaena in the south of the Southeast Sulawesi Province, cf. Naumann (1995) and Holloway, Naumann & Nässig (1998). One of those has been *Loepa minahassae* MELL, 1939 (today the populations from the South Sulawesi Province and the Southeast Sulawesi Province are referable to *Loepa finnackermanni* BRECHLIN, 2010). The authors remarked that six species of wild silkmoths were recorded from Tanahjampea, which is an island south of Selayar in the Selayar Archipelago by Naumann (1995), Naumann (2000), and Naumann & Peigler (2012). One of those has been *Loepa minahassae* MELL, 1939 (= *Loepa finnackermanni* BRECHLIN, 2010).
- Paukstadt, U. & Paukstadt, L. H. (2013: 271-288) noted that a further species has been recorded from the tiny island of Tanahjampea (also Jampea) further south off Selayar Island based on an old museum specimen. This has been *Loepa minahassae* MELL, 1939, cf. Naumann (1995). The populations of the genus *Loepa* MOORE, 1859 from southern and southeastern Sulawesi were later placed to *L. finnackermanni* BRECHLIN, 2010. So far only four species of the wild silkmoths are known for the Selayar Archipelago with certainty, including *L. finnackermanni*.

baliensis PAUKSTADT & PAUKSTADT, 2010 (Loepa)

Original citation and spelling: "Loepa baliensis n. sp."

- Original description: Paukstadt, U. & Paukstadt, L. H. (2010): Zwei neue wilde Seidenspinner vom indonesischen Archipel: *Cricula trifenestrata barisanensis* subsp. nov. und *Loepa baliensis* sp. nov. (Lepidoptera: Saturniidae). Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 8 (5): pp. 203-228, 2 col.-pls. (10 figs.), 4 b/w-figs., 6 diagrams, 1 map.
- **Type locality:** Indonesia, [Western Lesser Sunda Islands] Isl. [Island] of Bali, Bali Province, Bedugul env., ca. 1,350 m
- **Etymology:** The name *baliensis* is pointing to the type locality of this new species, the island of Bali, Western Lesser Sunda Isands, Indonesia.
- **Type material:** The description based on the \Im holotype in coll. L. H. Paukstadt (Wilhelmshaven, Germany) which is now preserved in coll. Museum Zoologicum Bogoriense / MZB (Bogor, Cibinong, Indonesia) and 178 \Im and 6 \heartsuit paratypes; a \heartsuit allotype was designated. The paratypes were reported being preserved in the following collections: 35 \Im and 1 \heartsuit (allotype) in Research Collection of Ulrich and Laela H. Paukstadt (Wilhelmshaven, Germany), 2 \Im 1 \heartsuit in coll. Dr. Wolfgang A. NÄSSIG / WAN *in* Senkenberg Museum Frankfurt Lepidoptera / SMFL (Frankfurt am Main, Germany), and 141 \Im and 4 \heartsuit in Research Collection of Dr. Ronald Brechlin / CRBP (Pasewalk, Germany).
- **Taxonomical notes:** The description of *Loepa baliensis* PAUKSTADT & PAUKSTADT, 2010 was mainly based on the particular zoogeography in the Indonesian Archipelago and on DNA barcoding of BOLD (Canadian entre for DNA Barcoding, Biodiversity Institute of Ontario, University of Guelph, Guelph, Ontario, Canada). *L. cynopis* NÄSSIG, LAMPE & KAGER, 1989 and *L. baliensis* were found being geographically grouping in DNA barcoding (of BOLD).
- **Geographical and altitudinal ranges:** *Loepa baliensis* PAUKSTADT & PAUKSTADT, 2010 is endemic to the island of Bali, Western Lesser Sunda Islands, Indonesia. Similar populations in the East Java Province may be referable to *L. baliensis* rather than *L. cynopis* NÄSSIG & SUHARDJONO, 1989. Contrary to the climatic situation in western Java and southern parts of eastern Java, some regions of Central Java, Eastern Java and Bali are mostly arid due to climate and topography / geology. Altitudinal records were from 550 m, 800 m, 1,300 m, and 1,350 m above sea level.
- General notes: A first record of *Loepa* MOORE, 1859 from Bali was published by Paukstadt, U. & Paukstadt, L. H. (2003: 23-39). The ♂ holotype of *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 was barcoded: BC[of

BOLD]-ULP0149. In the original description the 3° holotype of L. baliensis was figured in color (p. 221, col.-pl. 2, fig. 7 [dorsally] and fig. 8 [ventrally]) and the \mathcal{Q} allotype was figured in color (p. 221, col.-pl. 2, fig. 9 [dorsally] and fig. 10 [ventrally]). The \mathcal{E} genitalia structures of L. baliensis were figured in phot. h.-t. (p. 224, fig. 14 [aedeagus separate] based on the micro slide / dissection no. GP-UP 1093. Brechlin & Paukstadt (2010a: 21, fig. 11) figured the 3° genitalia structures of L. cynopis NÄSSIG & SUHARDJONO, 1989 [sensu Brechlin & Paukstadt 2010 from Bali [the illustration is referable to L. baliensis PAUKSTADT & PAUKSTADT, 2010]. The contribution was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the taxonomical act regarding L. javanica MELL, 1939 was consequently invalid. In the redescription Brechlin & Paukstadt (2010b: 22, fig. 11) figured the 3° genitalia structures of L. cynopis NÄSSIG & SUHARDJONO, 1989 [sensu Brechlin & Paukstadt 2010: the illustration is referable to L. baliensis PAUKSTADT & PAUKSTADT, 2010] from Bali.

- **Synonyms:** The appropriate misinterpretations, junior subjective synonyms, junior objective synonyms, and incorrect subsequent spellings are available in Vol. 13 (1).
- **Hybridizations and sericulture:** Inter-generic and inter-specific pairings with *Loepa baliensis* PAUKSTADT & PAUKSTADT, 2010 are unknown from literature. There is no information on sericulture available.

Further readings on *baliensis* (in chronological order):

- Roepke (1953: 228) remarked that no species of *Loepa* MOORE, 1859 is known from Bali, the Lesser Sunda Islands, and New Guinea.
- Paukstadt, U. & Paukstadt, L. H. (2003: 23-39) upgraded the name *Loepantheraea* TOXOPEUS, 1940 from synonymy from *Antheraea* HÜBNER, 1819 ("1816") and combined *rosieri* for the first time with the subgenus *Loepantheraea* TOXOPEUS, 1940. The new combination of *rosieri* with the subgenus *Loepantheraea* based on differences in the morphology of the chorion surface structures, the morphology of the 1st instar larva, the wing venation of the adults, the ♂ genitalia structures, and the leg morphology of the adults in comparisons to other taxa of the subgenus *Antheraea*. The tibial spurs of *Loepa cynopis* NÄSSIG & SUHARDJONO, 1989 from Bali [sensu Paukstadt & Paukstadt 2003; the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT 2010] were illustrated (p. 35, fig. 9f).
- Paukstadt, U. & Paukstadt, L. H. (2004c: 111-188) reported *L. megacore* [sensu Paukstadt & Paukstadt 2004] being closely related with *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Java and Bali [sensu Paukstadt & Paukstadt 2004; the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010].

- Paukstadt, U., Paukstadt, L. H., Suhardjono, Sutrisno & Aswari (2009: 151-204) provided an overview on the specimens of the genus Loepa MOORE, 1859 in "An Annotated Catalogue of the Saturniidae in Coll, Museum Zoologicum Bogoriense (Cibinong) – Saturniini Part II (Lepidoptera: Saturniidae: Saturniinae)". Loepa cynopis NÄSSIG & SUHARDJONO, 1989 from Java and Bali [sensu Paukstadt, Paukstadt, Suhardiono, Sutrisno & Aswari 2009: the record from Bali is referable to L. baliensis PAUKSTADT & PAUKSTADT, 2010] were recorded for the MZB collection. The "List of reared specimens preserved in the collection of the Museum Zoologicum Bogoriense (Cibinong)" (p. 158) contains Loepa cynopis from West Java. Altitudinal records (minimum, maximum, and average) for the genus Loepa were recorded in table 1 (p. 159): for L. cynopis from Java (average 1,425 m) and L. cynopis from Bali [sensu Paukstadt, Paukstadt, Suhardjono, Sutrisno & Aswari 2009; = L. baliensis] (average 1,228 m). The collecting years of Loepa species (p. 160) and collecting months (p. 161) were recorded followed by a list of collecting sites which were found being recorded at pin-labels (p. 162). The annotated pin-labels of L. cynopis from Java (pp. 175-176) and of L. cynopis from Bali [sensu Paukstadt, Paukstadt, Suhardjono, Sutrisno & Aswari 2009; = L. *baliensis*] (pp. 176-177) were recorded. Pin-labels of all specimens in coll. MZB / Museum Zoologicum Bogoriense were figured in color (p. 177, col.-pl. 3 and p. 179, col.-pl. 4).
- Brechlin & Paukstadt (2010a: 18-21) figured the ♂ genitalia of *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Bali [sensu Brechlin & Paukstadt 2010a; the illustration is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010] (p. 22, fig. 11).
 Remarks: The contribution by Brechlin & Paukstadt (2010a) was reported not following the requirements of the ICZN (1999) and therefore considered being unpublished for the purposes of zoological nomenclatured, cf. Nässig, Kitching, Peigler & Treadaway (2010: 145-165). The names of the new species are not available and the taxonomical act regarding *L. javanica* MELL, 1939 was consequently invalid.
- Brechlin & Paukstadt (2010b: 19-22) described a new species of the *katinka*-group (sensu Naumann 1995) from Borneo: *Loepa martinii* BRECHLIN & PAUKSTADT, 2010. The new species was compared with *L. cynopis* NÄSSIG & SUHARDJONO, 1989 from Java and Bali [sensu Brechlin & Paukstadt 2010; the record from Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010]. The ♂ genitalia structures of *L. cynopis* from Bali [sensu Brechlin & Paukstadt 2010; = *L. baliensis* PAUKSTADT & PAUKSTADT, 2010] were figured (p. 22, col.-fig. 11). **Remarks:** *L. cynopis* NÄSSIG & SUHARDJONO, 1989 is considered being an endemic species on the island of Java. This species is replaced by the endemic *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 on the island of Bali. The original description of *L. iavanica* was
- on the Island of Java. This species is replaced by the endemic *L. baliensis* PAUKSTADT & PAUKSTADT, 2010 on the island of Bali. The original description of *L. javanica* was published by Mell (1939).
- Paukstadt, U. & Paukstadt, L. H. (2010b: 159-174) listed *L. cynopis* Nässig & SUHARDJONO, 1989 (Java) and sp. nov. (Bali) [unnamed; the record for Bali is referable to *L. baliensis* PAUKSTADT & PAUKSTADT, 2010].
- Paukstadt, U. & Paukstadt, L. H. (2010c: 203-228) described the new species *L. baliensis* PAUKSTADT & PAUKSTADT, 2012 (*Loepa*) from Bali. The adults were figured in color (p. 221, col.-pl. 2, figs. 7-10): $\overset{\circ}{\supset}$ holotype dorsally (fig. 7) and ventrally (fig. 8), $\overset{\circ}{\ominus}$ allotype dorsally (fig. 9) and ventrally (fig. 10). The $\overset{\circ}{\supset}$

genitalia structures were figured in phot. h.-t. (aedeagus separate) (p. 224): paratype (fig. 14).

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