

**A Preliminary Annotated Checklist of the
Brahmaeidae of the World – Part VIII.
The genera *Calliprogonos* MELL & HERING, 1937
and *Spiramiopsis* HAMPSON, 1901
(Lepidoptera: Brahmaeidae)**

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A Preliminary Annotated Checklist of the Brahmaeidae of the World – Part VIII. The genera *Calliprogonos* MELL & HERING, 1937 and *Spiramiopsis* HAMPSON, 1901 (Lepidoptera: Brahmaeidae)

Zusammenfassung: Der folgende Beitrag zur Kenntnis der Familie Brahmaeidae SWINHOE, 1892 (Lepidoptera) ist Teil der Serie „*Brahmaeidae of the World*“, die nach Fertigstellung eine möglichst vollständige Übersicht über diese Familie geben sollte. Neue Erkenntnisse und neue Namen wurden eingearbeitet soweit sie bis zur Drucklegung aus der Literatur bekannt und uns zugänglich waren. Auf Grundlage von etwa 400 Einzelpublikationen wurde versucht, eine aktuelle und nahezu vollständige Literaturübersicht über die Familie Brahmaeidae zu erstellen. Der Umfang machte eine möglichst zweckmässige Unterteilung in bestimmte Themenbereiche notwendig, die spätere Ergänzungen oder Korrekturen erleichtern sollte. Der Teil VIII befasst sich speziell mit der paläarktischen Gattung *Calliprogonos* MELL & HERING in Mell, 1937 und der afrotropischen Gattung *Spiramiopsis* HAMPSON, 1901 die von vielen modernen Autoren in die Familie Brahmaeidae gestellt werden, deren taxonomische Stellung aber kontrovers diskutiert wird. Diese erste zusammenhängende Analyse der Familie Brahmaeidae soll keine Revision darstellen, sondern lediglich den heutigen Kenntnisstand aufzeigen und eine gute Arbeitsgrundlage für weitere Studien zur Familie Brahmaeidae SWINHOE, 1892 bieten.

Summary: The following contribution to knowledge the family Brahmaeidae SWINHOE, 1892 (Lepidoptera) is part of the series "*Brahmaeidae of the World*", which should give a complete overview of this family after completion. Results of previous studies and new names were incorporated as far as they were known from literature up to the time of printing and were accessible to us. On the basis of about 400 individual publications, an attempt was made to create an up-to-date and almost complete overview of the literature on the family Brahmaeidae. The scope made it necessary to subdivide the information into certain subject areas as expediently as possible, which should facilitate subsequent additions or corrections. Part VIII deals specifically with the Palaearctic genus *Calliprogonos* MELL & HERING in Mell, 1937 and the Afrotropical genus *Spiramiopsis* HAMPSON, 1901 which are placed by many modern authors in the family Brahmaeidae, but whose taxonomic position is controversially discussed. This first coherent analysis of the family Brahmaeidae is not intended to represent a revision, but merely to show the current state of knowledge and provide a good working basis for further studies on the family Brahmaeidae SWINHOE, 1892.

Preliminary Checklist of Brahmaeidae SWINHOE, 1892

Insecta: Lepidoptera: Glossata: Bombycoidea LATREILLE, 1802

Brahmaeidae SWINHOE, 1892

***Calliprogonos* MELL & HERING in Mell, 1937 [b]**

‡*Calliprogonos* MELL, 1937 [a]; STATUS-; *nomen nudum*

‡*Calliprogonus*; Laithwaite, Watson & Whalley (1975: 169) [lapsus, incorrect subsequent spelling]

‡*Calliprognos*; Nässig (1980: 79, 80) [incorrect subsequent spelling]

***miraculosa* MELL, 1937 [b]; STATUS-; type-species of *Calliprogonos* MELL & HERING in Mell, 1937 [b] by monotypy**

‡*miraculosa* MELL, 1937 [a]; STATUS-; *nomen nudum*

***Spiramiopsis* HAMPSON, 1901**

***comma* HAMPSON, 1901 (*Spiramiopsis*); STATUS-; type-species of *Spiramiopsis* HAMPSON, 1901 by monotypy**

Type localities

***Calliprogonos* MELL & HERING in Mell, 1937**

***miraculosa* MELL, 1937 (*Calliprogonos*):** Taipeishan (Südshensi) [China, South Shaanxi Province, T'ai-pai Shan], 1700 m.

***Spiramiopsis* HAMPSON, 1901**

***comma* HAMPSON, 1901 (*Spiramiopsis*):** C. Colony, Kowie R., Grahamstown [South Africa, Cape Colony, Province East Cape, Kowie River].



Map 1. Type localities of *Calliprogonos* MELL & HERING in Mell, 1937 and *Spiramiopsis* HAMPSON, 1901 (Lepidoptera: Brahmaeidae).

1. *Calliprogonos miraculosa* MELL, 1937 (*Calliprogonos*)
2. *Spiramiopsis comma* HAMPSON, 1901 (*Spiramiopsis*)

***Calliprogonos* MELL & HERING in Mell, 1937**

Original citation and spelling: *Calliprogonos* n. g. / *Calliprogonos* MELL et M. HER.

Original description: Mell, R. (1937b) [25.xi.1937]: Beiträge zur Fauna sinica. XIV. Ergänzungen zur Sphingiden-, Brahmaeiden- und Eupterotidenfauna Chinas (Lep.). – Deutsche Entomologische Zeitschrift, Berlin, 1937, (I/II): pp. 1-19, 1 pl.

Remarks: Naumann (2009: 7) noted that the names *Calliprogonos* (: 32) and *miraculosa* (: 34) were first published by Mell (1937a) without any description, nor diagnosis or association to each other and therefore are considered *nomina nuda* and not available, cf. ICZN (1999) Art.13.3 and Art.13.4.

Above remark by Naumann (2009: 7) is not correct in all parts but his consideration is, cf. “Remarks” in further text and under the chapter ‡*Calliprogonos* MELL, 1937[a] (*nomen nudum*).

Type-species: *Calliprogonos miraculosa* MELL, 1937 by monotypy.

Taxonomic History: Mell (1937) [10.iii.1937] cited *Calliprogonos* in the Brahmaeidae, however the name is considered a *nomen nudum*; Mell (1937b) [25.xi.1937] placed *Calliprogonos* in the Brahmaeidae; Sauter (1986) placed *Calliprogonos* and *Dactyloceras* in the new subfamily Dactyloceratinae of the genus *Dactyloceras*; Lemaire & Minet ([1998]) remarked that due to the fact that Dactyloceratinae (*Dactyloceras* + *Calliprogonos*) are likely to be para- or polyphyletic, it seems premature to recognize subfamilies in Brahmaeidae.

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *Calliprogonos* MELL & HERING in Mell, 1937 are as follows:

‡*Calliprogonos* MELL, 1937 [10.iii.1937 published in Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36]; STATUS-; *nomen nudum*

‡*Calliprogonus*; Laithwaite, Watson & Whalley (1975: 169) [lapsus, incorrect subsequent spelling]

‡*Calliprogno*s; Nässig (1980: 79, 80) [incorrect subsequent spelling]
Calliprogonos MELL; Bryk (1949) [error in authorship or original description]
Calliprogonos MELL; Nässig (1980: 79) [error in authorship or original description]

Calliprogonos MELL; Fletcher & Nye in Nye (1982) [error in authorship or original description]

Calliprogonos MELL; Holloway (1987) [error in authorship or original description]

Calliprogonos MELL; Paukstadt, U. & Ragus (1990) [error in authorship or original description]

Calliprogonos MELL; Fletcher & Nye in Nye (1995 [reprint]) [error in authorship or original description]
Calliprogonos MELL; Nässig & Treadaway (1998) [error in authorship or original description]
Calliprogonos MELL; Naumann (2008) [error in authorship or original description]
Calliprogonos MELL; Gegechkori & Didmandze (2015) [error in authorship or original description]
Calliprogonos MELL; Zolotuhin (2016) [error in authorship or original description]
Calliprogonos MELL; Kaleka, Singh & Saini (2017) [error in authorship or original description]
Calliprogonos MELL, 1937; Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) [error in authorship or original description]

Further readings on *Calliprogonos* MELL & HERING, 1937

Mell (1937a) [10.iii.1937] Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, 2 maps, 5 text-figs., cited the genus *Calliprogonos* and the species *miraculosa* as part of the work “The areas of biologically very closely related species of the same genus and adaptation to continental warm periods as a determining factor for area size and times of appearance of the adults”. The citations go far beyond just mentioning the names. The following brief description can be found on page 33: ‘The thick hair (including the wings), as well as the reduction of the genus specific *Brahmaea* pattern which remains on rudiments of the postdiscal area in the forewing only ... as well as the splendid spot on the base of the forewing is unique in the family and is caused by strong arching of the basal line towards the middle of the wing’ [translated from German]. So it is not as if only the name was mentioned, but also a short description, albeit simple but apt. The ♂ genitalia structures, in particular the process of the valve of the ♂ genitalia in *Brahmaea certhia*, *Brahmophthalma wallichii* and *Calliprogonos miraculosa* were described as similar in all three genera of the Asian Brahmaeidae. *Calliprogonos* and *miraculosa* were named together as *Calliprogonos miraculosa* on pages 3 and 34 and the generic name was cited on 6 further pages.

Remarks: unfortunately there is no valid description that meets the requirements of the ICZN (1999). Therefore, both names are considered invalid and not available.

Mell (1937b) [25.xi.1937] Beiträge zur Fauna sinica, XIV, pp. 1-19; validly proposed the genus-group name *Calliprogonos* MELL et M. HER.[ING] for a single new species: *Calliprogonos miraculosa* MELL from the Taipanshan, 1700 m, South Shensi [Shaanxi], China. The following figures (line drawings) were provided: uncus of *Calliprogonos* (: [7] fig. 7c, and valva of *C. miraculosa* (fig. 8).

Bryk (1949) Arkiv för Zoologi, Band 41 A, N:o 1 [26.i.1949], pp. 20-26; noted if the genus *Calliprogonos* MELL [sic], 1937, which is clearly distinct in the pattern morphology is excluded, only the genus *Brahmaea* WALKER remains in the Palaearctic. Some observations on the venation in *Brahmaea* and *Dactyloceras* were presented and several species in Brahmaeidae shortly described, compared, and several conclusions presented.

Mell (1958) Dtsch. Entomol. Z., N. F. 5, (I/II), pp. 185-213, 11 text-figs.; noted that *Brahmaea* in China was an immigrant of tropical descent from the northern edge of Gondwanaland, while *Calliprogonos* was presumably coined in the newly populated Central Asian region (: 187-188).

Sauter (1967) [20.vii.1967] Mitt. schweiz. ent. Ges., XL (1/2), 1967, pp. [125]-129, 2 text-figs., recorded six genera of the family Brahmaeidae. Those were *Dactyloceras* MELL from Africa south of the Sahara, *Brahmidia* BRYK, *Brahmaeops* BRYK, *Brahmophthalma* MELL, and *Calliprogonos* MELL & HERING each with a single species in East Asia and *Brahmaea* WALKER with two species in Asia Minor and two species and a subspecies in the Pacific-Palearctic region from Central China to the Amur. *Acanthobrahmaea* was proposed as a new genus for *B. europaea* HARTIG. *C. miraculosa* MELL was cited as type-species of *Calliprogonos* (: 129).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Brahmidia* BRYK, 1949 and *Brahmaeops* BRYK, 1949 are junior synonyms of *Brahmophthalma* MELL, 1928.

Laithwaite, Watson & Whalley (1975) [01.i.1975] The Dictionary of Butterflies and Moths, xlvii + 296 pp., 405 col.-pls. / figs.; placed *Acanthobrahmaea*, *Brahmaea*, *Calliprogonos* [sic] and *Dactyloceras* in the Brahmaeidae, a small family of about 20 species (: 169). *C. miraculosa* MELL & HERING [sic] of the genus *Calliprogonos* MELL & HERING was recorded from China at an altitude of about 1520 m (: 172). The species was figured in color (: fig. 340e).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. The authors of *Calliprogonos* are Mell & Hering in Mell (1937) concluded from the citation by Mell (1937b), but the author of *Calliprogonos miraculosa* is Mell (1937).

Nässig (1980) [xii.1980] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N. F. Bd. 1 (3/4), pp. 77-91; 7 figs. [incl. 3 maps.]; recognized four genera in the Brahmaeidae. Those were the African *Dactyloceras* MELL, the Italian *Acanthobrahmaea* SAUTER, the Asian typical *Brahmaea* WALKER and the isolated *Calliprognos* [sic] MELL [sic] from SW China. Two subgenera of *Brahmaea* were recognized. Those were *Brahmaea* WALKER and *Brahmophthalma* MELL. The author noted (: 79) that apart from the Southwest Chinese *Calliprognos* [sic], all Brahmaeids have the typical pattern in common, which consists of little bright colors but dense light and dark wavy lines that create a complicated pattern.

Remarks: the African genus *Spiramiopsis* HAMPSON, 1901 was omitted by Nässig (1980). At the time being *Acanthobrahmaea* SAUTER, 1967 is recognized as junior synonym of *Brahmaea* WALKER, 1855.

Fletcher & Nye in Nye (1982) *The Generic Names of Moths of the World*, 4, p. 28; listed *Calliprogonos* MELL [sic], 1937, Dt. ent. Z. 1937: 9, under Brah[maeidae]. The type-species was confirmed to be *Calliprogonos miraculosa* MELL, 1937 by monotypy. The species was recorded from China: south Shensi province [Shaanxi; alternately Shensi], Tapai Shan.

Remarks: the citation by Fletcher & Nye in Nye (1982: 28) was based on an error in the original description. The names ‡*Calliprogonos* and ‡*miraculosa* were first cited as *nomina nuda* by Mell (1937a) [10.iii.1937] in Archiv für Naturgeschichte, Leipzig, N.F. 6 (1), pp. 1-36 but validly described by Mell (1937b) [25.xi.1937] in Deutsche Entomologische Zeitschrift, Berlin, 1937, (1/2), pp. 1-19, as *Calliprogonos* MELL & HERING in Mell, 1937 and *miraculosa* MELL, 1937.

Sbordoni & Forestiero (1984) *Il Mondo delle Farfalle*, 312 pp.; see Sbordoni & Forestiero (1985) *Weltenzyklopädie der Schmetterlinge* [German Edition].

Sbordoni & Forestiero (1985) *Weltenzyklopädie der Schmetterlinge*, 312 pp.; placed the genera *Dactyloceras*, *Acanthobrahmaea*, *Brahmaea*, and *Calliprogonos* in the Brahmaeidae and the genera *Lemonia*, *Spiramiopsis*, and *Sabalia* in the Lemoniidae (: 142). The authors noted that *Spiramiopsis* was also placed sometimes to the Eupterotidae or Brahmaeidae. The proboscis of the taxa in the family Brahmaeidae was noted being without function and the adults in the Lemoniidae were characterized as having no proboscis. *Calliprogonos miraculosa* was figured in color (: [143], fig. 10).

Remarks: Paukstadt, U. & Paukstadt, L. H. (1987) Ent. Z. (Essen), 97 (9), pp. 113-121, demonstrated that adults of *Brahmophthalma* MELL, 1928 actively imbibed water / sugar solution with the reduced proboscis and thereby extending life expectancy.

At the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Spiramiopsis* HAMPSON, 1901 is placed in the Brahmaeidae, cf. Hamilton, St. Laurent, Dexter, Kitching, Breinhold, Zwick, Timmermans, Barber & Kawahara (2019).

Sauter (1986) [31.xii.1986] *Nota lepid.*, 9 (3-4), 1986 [December 31st, 1986 as per header], pp. 262-271, 3 text-figs.; placed *Acanthobrahmaea* SAUTER, 1967, *Brahmaea* WALKER, 1888 [sic], *Brahmidia* BRYK, 1948 [sic], *Brahmaeops* BRYK, 1948 [sic], and *Brahmophthalma* MELL, 1930 [sic] as genera in the subfamily Brahmaeinae (: 268-269) of the family Brahmaeidae. *Calliprogonos* MELL & HERING, 1937 and *Dactyloceras* MELL, 1930 [sic] were placed in the new subfamily Dactyloceratinae. *C. miraculosa* MELL & HERING [sic], 1937 was cited as typus generis of *Calliprogonos* MELL & HERING, 1937. An updated generic diagnostic for *Acanthobrahmaea* SAUTER, 1967 and a key for the genera was provided.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Brahmidia* BRYK, 1949 and *Brahmaeops* BRYK, 1949 are junior synonyms of *Brahmophthalma* MELL, 1928. *Brahmaea* WALKER, 1855 and *Brahmophthalma* MELL, 1928 are subgenera of *Brahmaea* WALKER, 1855.

Holloway (1987: 91-93) *The Moths of Borneo*, Part 3; recognized four genera in the family Brahmaeidae. Those were the Oriental and Palaearctic *Brahmaea* WALKER, the European *Acanthobrahmaea* SAUTER, the monotypical Chinese *Calliprogonos* MELL [sic], and the Afrotropical *Dactyloceras* MELL. Short descriptions and

comparisons as well as host plant relationships were provided. Holloway (: 92) noted that the Chinese *Calliprogonos* has uniformly pale brown wings except of broad cream-colored margins on both wings and a dark, distally convex, basal patch to the forewing.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Owada, Brahmaeidae; in Sugi (ed.) (1987) Larvae of Larger Moths in Japan, pp. 120-122; cited *Brahmaea*, *Dactyloceras* and *Calliprogonos mirabilis* MELL & HERING [sic] in the Brahmaeidae (: 120). [text Japanese]

Trentini & Marini (1989) J. Res. Lepid., 27 (2), 1988, pp. 136-138; reported on a chromosome study of *Brahmaea japonica* BUTLER. The distribution of taxa of Euroasiatic species of *Brahmaea*, *Calliprogonos*, and *Acanthobrahmaea*, Indo-Australian species of *Brahmaea*, and Ethiopian species of *Dactyloceras* was demonstrated in fig. 1 (distribution map).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Paukstadt, U. & Ragus (1990) [15.i.1990] Ent. Z. (Essen), 100 (1/2): pp. 11-30, 29 figs. phot.h.-t.; described and figured the preimaginal instars of *B. (Brahmaea) tancrei* AUSTAUT, 1896 from South Korea. *Brahmaea* WALKER, 1855 with its subgenera *Brahmaea* and *Brahmophthalma*, *Acanthobrahmaea* SAUTER, *Dactyloceras* MELL, and *Calliprogonos* MELL [sic] were treated as genera in Brahmaeidae (: 18).

Remarks: *Brahmaea (Brahmaea) tancrei* AUSTAUT, 1896 is a junior subjective synonym of *B. (Brahmaea) lunulata carpenteri* BUTLER, 1883. At the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Nässig & Paukstadt, U. (1990: 117-136) [xii.1990] Heterocera Sumatrana (Göttingen), 6 (Dec 1990); provided general features of the family Brahmaeidae with a short account of systematics and basic classification of the family. Nine species of Asiatic and European Brahmaeidae were tentatively included into the four genera *Calliprogonos* MELL & M. HERING, 1937, *Brahmaea* WALKER, 1855, *Acanthobrahmaea* SAUTER, 1967, and *Brahmophthalma* MELL, (1930) [sic]. The authors noted that *Calliprogonos mirabilis* MELL, 1937 stands very isolated in the Asiatic brahmaeid fauna and that its lone placement within the genus *Calliprogonos* MELL & M. HERING, 1937 is fully justified. Some further general notes on taxonomy of the family Brahmaeidae were presented.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Oberprieler & Duke (1994) [xi.1994] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. 15 (3), pp. 199-244, 8 col.-figs., 8 b/w-figs.; gave a historical review of the taxonomic placements of the genus *Spiramiopsis* HAMPSON, 1901. The immature stages of *S. comma* were compared with those of other selected bombycoids, mainly with those of *Brahmaea* (including *Acanthobrahmaea*, *Brahmophthalma*, and *Brachygnatha*) and *Dactyloceras*. The immature stages of *Calliprogonos mirabilis* MELL, 1937 from China were recorded being still unknown, as well as those of *Brachygnatha* (= *Brahmaea*) *diastemata* ZHANG & YANG. The taxonomic

position of *Spiramiopsis comma* on preimaginal characters in the Bombycoidea was discussed in detail (: 225-238). The authors concluded that the taxonomic position of *Spiramiopsis* remains not entirely clear but proposed to place this genus in a family of its own.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Brachygnatha* ZHANG & YANG, 1993 is a junior synonym of *Brahmaea* WALKER, 1855.

Fletcher & Nye in Nye (reprint 1995) The Generic Names of Moths of the World, 4, p. 28, listed *Calliprogonos* MELL [sic], 1937, Dt. ent. Z. 1937: 9, under Brah[maeidae]. The type-species was confirmed to be *Calliprogonos miraculosa* MELL, 1937 by monotypy. The species was recorded from China: south Shensi province [Shaanxi; alternately Shensi], Tapai Shan.

Remarks: the citation by Fletcher & Nye (1982: 28) was based on an error in the original description. The names ‡*Calliprogonos* and ‡*miraculosa* were first cited as *nomina nuda* by Mell (1937a) [10.iii.1937] in Archiv für Naturgeschichte, Leipzig, N.F. 6 (1), pp. 1-36, but validly described by Mell (1937b) [25.xi.1937] in Deutsche Entomologische Zeitschrift, Berlin, 1937, (1/2), pp. 1-19, as *Calliprogonos* MELL & HERING in Mell, 1937 and *miraculosa* MELL, 1937.

Lemaire & Minet ([1998]) 18. The Bombycoidea and their Relatives. In: Kristensen (ed)., Volume 4, Subvolume 35, placed the following nine families in the Bombycoidea s. str.: Eupterotidae, Bombycidae, Endromidae, Mirinidae, Saturniidae, Carthaeidae, Lemoniidae, Brahmaeidae, and Sphingidae; key to families (: 322-333). *Spiramiopsis* was included in the Brahmaeidae (: 342) because *Spiramiopsis* shares at least eight imaginal synapomorphies with *Dactyloceras*, *Calliprogonos*, *Acanthobrahmaea*, and *Brahmaea* (Minet 1994). *Calliprogonos miraculosa* (: 343, fig. E) was figured. The genera *Brahmaea*, *Spiramiopsis*, *Calliprogonos*, *Dactyloceras*, and *Acanthobrahmaea* were compared (: 342-344). The authors noted that Sauter (1986) divided the family in two subfamilies: Dactyloceratinae and Brahmaeinae but does not take account of *Spiramiopsis*. Lemaire & Minet remarked that due to the fact that Dactyloceratinae (*Dactyloceras* + *Calliprogonos*) are likely to be para- or polyphyletic, it seems premature to recognize subfamilies in Brahmaeidae.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Nässig & Treadaway (1998) [vii.1998] Nachr. entomol. Ver. Apollo, Frankfurt/Main, Suppl. 17 (07.1998), pp. 425-440; noted that the family Brahmaeidae comprises ca. 5-10 species of the genus *Dactyloceras* MELL, 1930 [sic], 1 species of the genus *Calliprogonos* MELL, 1937 [sic], and ca. 9 species of the genus *Brahmaea* WALKER, 1855 s.l. (including the synonyms *Brahmophthalma* MELL, 1930 [sic], *Brahmaeops* BRYK, 1949, *Brahmidia* BRYK, 1949, *Acanthobrahmaea* SAUTER, 1967, and *Brachygnatha* ZHANG & YANG, 1993). It was remarked that the position of *Spiramiopsis comma* HAMPSON, 1901 within the family remains obscure. The authors referred to the discussion in Minet (1994) and Oberprieler & Duke (1994). Nässig & Treadaway (1998) listed *hearseyi* WHITE, [1862], *hearseyi ardoeno* KALIS, 1934, and *celebica* TOXOPEUS,

[1939] in the genus *Brahmaea* WALKER, 1855. *B. hearseyi ardoeno* was reported from Luzon, Mindoro, Panay, Negros, and Mindanao (Philippines) and from Sundaland (Sumatra, Java, West Malaysia, and Borneo).

Remarks: errors in the original descriptions of *Calliprogonos* MELL & HERING in Mell, 1937, *Brahmophthalma* MELL, 1928 and *Dactyloceras* MELL in Hering in Seitz, 1927. *Brahmophthalma* MELL, 1927 is recognized as subgenus of *Brahmaea* WALKER, 1855 at the time being. Consequently the names *Brahmaeops* BRYK, 1949 and *Brahmidia* BRYK, 1949 are considered junior synonyms of *Brahmophthalma* MELL, 1927. At the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

The recorded range of *B. (Brahmophthalma) hearseyi ardoeno* refers to several closely allied taxa. Those are *B. (Brahmophthalma) paukstadorum* NAUMANN & BROSCHE, 2005 from Negros (type locality), Luzon, Mindoro and Panay, *B. (Brahmophthalma) naessigi* NAUMANN & BROSCHE, 2005 from Mindanao, *B. (Brahmophthalma) loeffleri* NAUMANN & BROSCHE, 2005 from Sumatra, West Malaysia and Borneo, and *B. (Brahmophthalma) ardoeno* KALIS, 1934 from Java.

Brechlin (2000) [vi.2000] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F.21 (1), pp. 5-10; remarked (: 9) that the Taipeiishan, the high mountain wedge of the Kwenlun, which is driven furthest eastwards, occupies a highly significant biogeographical position, which is also confirmed by records of, for example, *Calliprogonos miraculosa* MELL, 1937 of the monotypical genus *Calliprogonos* MELL & M. HERING, 1937 (Brahmaeidae).

Brechlin (2001) [vi.2001] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F.22 (2): pp. 89-100; noted (: 91) that the discovery of *Saturnia (Rinaca) kitchingi* underlines once again the biogeographically highly significant position of the Taipeiishan, which Mell (1938) had already emphasized. Many species of this region, such as *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae) habitually are quite distant from their closest relatives, which indicates that these taxa have been isolated for a long time.

Naumann (2008) [30.i.2008] Family Brahmaeidae, Brahmids Moths, pp. 111-116, in: Kühne (2008) Butterflies and moths diversity of the Kakamega forest (Kenya), 203 pp.; recorded the family Brahmaeidae from Asia, southern and southeastern Europe and Africa. Five genera were assigned to the Brahmaeidae. Those were *Brahmaea* WALKER, 1855 (Turkey and Caucasus to Sulawesi, Philippines, Japan, and the Amur), *Calliprogonos* MELL, 1937 [sic] (China: Shaanxi and Sichuan), *Acanthobrahmaea* SAUTER, 1967 (Southern Italy), *Dactyloceras* MELL in Hering in Seitz (ed.), 1927 (Africa excluding the South and arid Northwestern regions), and *Spiramiopsis* HAMPSON, 1901 (Southern Africa).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Zwicky (2008) Systematic Entomology (Oxford), 33, pp. 190-209; presented a phylogenetic hypothesis of Bombycoidea based on molecular data. Several genera of the Brahmaeidae were included, also *Sabalia* and *Lemonia* but *Calliprogonos* was lacking.

Remarks: the relationships within Brahmaeidae remain obscure since the phylogenetic analysis did not include the Palearctic species *Calliprogonos* MELL & HERING, 1937.

Naumann (2009) Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. 30 (1/2), pp. 5-8; reported on a rediscovery of the Chinese *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae) from the province of Sichuan. For the first time being the ♀ adult was described and figured and the ♂ genitalia structures were figured. Short notes on the nomenclature and taxonomy of the genus *Calliprogonos* were presented. The author noted that the family Brahmaeidae was traditionally considered to compromise the following five genera: the Eurasian *Brahmaea* WALKER, 1855 with its questionable subgenera *Brahmaea*, *Brahmophthalma* MELL, 1930 and *Brachygnatha* ZHANG & YANG, 1993, the Italian *Acanthobrahmaea* SAUTER, 1967, the Chinese *Calliprogonos* MELL & HERING, 1937, the African *Dactyloceras* MELL, 1927 with its subgenera *Dactyloceras* and *Shinocksiceras* BOUYER, 2002, and the Southafrican *Spiramiopsis* HAMPSON, 1901. Naumann noted that the name *Calliprogonos* was first published by Mell (1937a: 32) as “*Calliprogonos* (Brahmaeidae, n. g.)” but without a proper description nor diagnosis or even association with the species *miraculosa*, which is mentioned (p. 34) but also not described nor indicated as a new species and the type of *Calliprogonos* [see “Remarks” below]. Therefore both names were considered to be *nomina nuda* and unavailable.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Brachygnatha* ZHANG & YANG, 1993 is a junior synonym of *Brahmaea* WALKER, 1855.

We consider the explanations by Naumann (2009: 7) about ‡*Calliprogonos* MELL, 1937 [a] to be partially incorrect, but this does not change at all his conclusion that the names ‡*Calliprogonos* MELL, 1937 [a] and ‡*miraculosa* MELL, 1937 [a] are *nomina nuda*. The genus ‡*Calliprogonos* and the species ‡*miraculosa* were part of the work “The areas of biologically very closely related species of the same genus and adaptation to continental warm periods as a determining factor for area size and times of appearance of the adults” by Mell and goes far beyond just mentioning the names ‡*Calliprogonos* and ‡*miraculosa*. The following brief description can be found on page 33: The thick hair (including the wings), as well as the reduction of the genus specific *Brahmaea* pattern which remains on rudiments of the postdiscal area in the forewing only ... the splendid spot on the base of the forewing is unique in the family and is caused by strong arching of the basal line towards the middle of the wing. So it is not as if only the name was mentioned, but also a short description, albeit simple but apt. The ♂ genitalia structures, in particular the process in the valve of the ♂ genitalia in *Brahmaea certhia*, *Brahmophthalma wallichii* and ‡*Calliprogonos* ‡*miraculosa* were described as similar in all three genera of the Brahmaeidae in Asia. ‡*Calliprogonos* and ‡*miraculosa* were named together as ‡*Calliprogonos* ‡*miraculosa* on pages 3 and 34 and the generic name was cited on 6 further pages within text parts. Nevertheless, there is no valid description that meets the requirements of the ICZN. Therefore, both names are considered invalid and not available.

Nässig & Naumann (2010) Entomologica romanica, 15: pp. 17-20; shortly discussed phylogenetic and systematic issues concerning the classification of the Saturniidae, Brahmaeidae (including the former family Lemoniidae), Endromidae, and Eupterotidae. The authors estimated 1 species in the genus *Calliprogonos* (Brahmaeidae) in the Palaearctic Region. The Palaearctic Region was new defined by the authors.

Paukstadt, L. H. & Paukstadt, U. (2015) [20.vi.2015] Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 13 (8), pp. 388-404; described and figured the immature stages of *Brahmaea wallichii* (GRAY, 1831) from the mountainous China (Lepidoptera: Brahmaeidae). In the 'Systematics' (: 389) *Brahmaea* WALKER, 1855 was listed as nomen nudum. *Brahmaea* WALKER, 1855, the Afrotropical *Spiramiopsis* HAMPSON, 1901 and *Dactyloceras* MELL [i.l. Hering] in Seitz, 1927, *Calliprogonos* MELL & HERING in Mell, 1937, and the Italian *Acanthobrahmaea* SAUTER, 1967 were cited as genera of Brahmaeidae SWINHOE, 1892.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is recognized as a junior synonym of *Brahmaea* WALKER, 1855.

Gegechkori & Didmandze (2015) American Journal of Environmental Protection, 2015, 4 (3-1), pp. 82-92; recognized four genera in the Brahmaeidae, namely the Oriental and Palaearctic genus *Brahmaea* WALKER with 8 species, a monotypic European genus *Acanthobrahmaea* SAUTER, a monotypic Chinese genus *Calliprogonos* MELL [sic], and the Afrotropical genus *Dactylocerus* [sic] MELL with 8 species. Gegechkori & Didmandze remarked that the Palaearctic *Lemonia* HÜBNER with about 20 species was included in the Brahmaeidae by some authors.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855. *Calliprogonos* was validly described by Mell & Hering in Mell (1937).

Zolotuhin (2016) [27.xi.2016] Eversmannia, No. 47-48; pp. 4-10 [+1]; proposed the new subgeneric name *Transbrahmaea* for two species (a geographically disjunctive group) distributed in Transcaucasia and Asia Minor. Those were *B. christophi* STAUDINGER, 1885 and *B. ledereri* ROGENHOFER, 1873 with its subspecies *zaba* DE FREINA, 1982. *Calliprogonos* MELL, 1937 [sic] was cited within Brahmaeidae.

Remarks: *Transbrahmaea* ZOLOTUHIN, 2016 is considered a junior synonym of *Brahmaea* WALKER, 1855. The authors of the validly described *Calliprogonos* were Mell & Hering in Mell (1937).

Paukstadt, U. & Paukstadt, L. H. (2017b) [14.v.2017] Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 15 (2), pp. 47-72; described and figured the preimaginal instars of *Brahmaea certhia* (FABRICIUS, 1793) from Jiangsu, China. *Brahmaea* WALKER, 1855, the Afrotropical *Spiramiopsis* HAMPSON, 1901 and *Dactyloceras* MELL [i.l. Hering] in Seitz, 1927, and the Chinese *Calliprogonos* MELL & HERING in Mell, 1937 were cited as genera of the Brahmaeidae.

Kaleka, Singh & Saini (2017) J. Entomol., 14 (5), pp. 234-240, 2017; noted that the family Brahmaeidae is found in Africa, and the Oriental and Palaearctic regions. The family was reported being presented by four genera, namely the Oriental and Palaearctic genus *Brahmaea* WALKER with 8 species, the monotypic European genus *Acanthobrahmaea* SAUTER, the monotypic Chinese genus *Calliprogonos* MELL [sic], and the Afrotropical genus *Dactyloceras* MELL with 8 species.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; listed the name *Calliprogonos* MELL, 1937 [sic] as genus in the family Brahmaeidae.

Remarks: the correct citation is *Calliprogonos* MELL & HERING in Mell, 1937 because invalidly described ‡*Calliprogonos* MELL, 1937 is considered a *nomen nudum*.

Wang, Holloway, Wahlberg, Wang & Nylin (2019) Systematic Entomology, 44, pp. 211-225; discussed the resemblance of the habitus of *Calliprogonos* MELL & HERING to that of the new subfamily Heraculinae WANG, HOLLOWAY, WAHLBERG, WANG & NYLIN, 2019 of the family Pseudobistonidae (Lepidoptera: Geometroidea). *Calliprogonos* (Brahmaeidae) was figured in color (: 219, fig. 9c) and compared with adults of *Heracula* (Pseudobistonidae). A distribution map of *Heracula* and *Calliprogonos* was provided (: 223, fig. 14).

Remarks: *Calliprogonos miraculosa* MELL, 1937 was figured in color dorsally.

‡*Calliprogonos* MELL, 1937

[*nomen nudum*]

Original citation and spelling: *Calliprogonos* (Brahmaeidae, n. g.)

Original description: Mell (1937) [10.iii.1937] Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, 2 maps, 5 text-figs.

Remarks: the name *Calliprogonos* proposed by Mell in above work is considered a *nomen nudum* and not available, cf. ICZN (1999) Art.13.3 and Art.13.4.

Taxonomic notes: ‡*Calliprogonos* ‡*miraculosa* MELL, 1937 [a] published in Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, were not validly described and are considered to be *nomina nuda* and not available, cf. ICZN (1999) Art.13.3 and Art.13.4. Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; listed the name *Calliprogonos* MELL [sic], 1937 in the family Brahmaeidae but omitted ‡*Calliprogonos* MELL, 1937.

Remarks: ‡*Calliprogonos* MELL, 1937[a] was omitted by the authors.

***Calliprogonos* MELL & HERING, 1937**

***miraculosa* MELL, 1937 (*Calliprogonos*)**

Original citation and spelling: *Calliprogonos miraculosa* sp. n.

Original description: Mell, R. (1937b): Beiträge zur Fauna sinica. XIV. Ergänzungen zur Sphingiden-, Brahmaeiden- und Eupterotidenfauna Chinas (Lep.). – Deutsche Entomologische Zeitschrift (Berlin), 1937, (I/II): pp. 1-19; text-figs. 1-20, 1 pl. phot. h.-t. figs. 21-22.

Remarks: Mell (1937) [10.iii.1937] Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, 2 maps, 5 text-figs., first mentioned the species-group name *miraculosa* in connection with the new genus *Calliprogonos* but both names were not validly described and are considered to be nomina nuda and not available, cf. ICZN (1999) Art.13.3 and Art.13.4.

Type locality: Taipei (Südshensi) [China, South Shaanxi Province, Tapai Shan], 1700 m.

Geographical and altitudinal distribution: China, provinces of Shaanxi and Sichuan, cf. Naumann (2009: 5). Altitudinal records are available from the Sichuan Province, 25 km W Guan Xian, from 1700 m.

Etymology: not explicitly stated in the original description. Concluded from text the species name *miraculosa* was probable derived from the word “miraculous”.

Type material: the description of *miraculosa* clearly based on three ♂ specimens. The ♂ [holo]type (called “type” in the publication) by original designation and a ♂ paratype were cited being in Coll. Höne; a ♂ paratype was cited being preserved in Museum Berlin. A paratype was figured in the original description.

A ♂ paratype preserved in the Natural History Museum (London, U.K.) was figured by Lemaire & Minet (1999: 343). This paratype was originally preserved in the Museum für Naturkunde der Humboldt-Universität (Berlin, Germany). The details of its transfer to London are unclear, cf. Naumann (2009: 5).

A type was reported being preserved in Museum Alexander König, Bonn, cf. Sauter (1987: 267) *Nota lepid.*, 9 (3-4), 1986.

Naumann (2009: 5) recorded the holotype and 1 paratype in Museum Alexander König.

Zoologisches Forschungsmuseum Alexander Koenig listed a syntype of *miraculosa* as follows: Family: Brahmaeidae; Taxon: *miraculosa*; Original name: *Calliprogonos miraculosa*; Author, year, page: Mell

1937: 9; Type: ST [syntype]; cf. https://www.zfmk.de/dateien/atoms/files/types_zfmk_lepidoptera_bombycidae_0.pdf.

Taxonomic notes: *Calliprogonos miraculosa* MELL, 1937 is the only species in *Calliprogonos* MELL & HERING in Mell, 1937. *Calliprogonos* is distinct from *Brahmaea* WALKER, 1855 but considered to be a genus in the Brahmaeidae SWINHOE, 1892.

The name *miraculosa* MELL, 1937 was listed as species-group name of *Calliprogonos* MELL, 1937 [sic] in Kitching, I.J., Rougerie, R., Zwick, A., Hamilton, C.A., St Laurent, R.A., Naumann, S., Ballesteros Mejia, L. & Kawahara, A.Y. (2018): A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e 22236.

General notes: Mell (1937b: [7]) figured (line drawings) the uncus of *Calliprogonos* (: [7] fig. 7c, and the valva ventrally of *C. miraculosa* (fig. 8). Laithwaite, Watson & Whalley (1975) figured *C. miraculosa* in color (: fig. 340e). Naumann (2009) figured the ♂ (including the holotype) and ♀ adults of *C. miraculosa* dorsally and ventrally (: 6, figs. 1-5), the ♂ genitalia structures (: 7, fig. 7), and the legs [not specified] of a ♂ paratype (: 7, fig. 8). Wang, Holloway, Wahlberg, Wang & Nylin (2019) figured *Calliprogonos* MELL & HERING in color dorsally (: 219) and provided a distribution map (: 223).

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *miraculosa* MELL, 1937 are as follows:

‡*miraculosa* MELL, 1937 [published in Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36]; STATUS-; *nomen nudum*

Hybridizations: inter-generic and inter-specific pairings with *miraculosa* MELL, 1937 are unknown from literature.

Further readings on *miraculosa* MELL, 1937

Mell (1937a) [10.iii.1937] Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, 2 maps, 5 text-figs., cited the genus *Calliprogonos* and the species *miraculosa* as part of the work “The areas of biologically very closely related species of the same genus and adaptation to continental warm periods as a determining factor for area size and times of appearance of the adults”. The following brief description can be found on page 33: ‘The thick hair (including the wings), as well as the reduction of the genus specific *Brahmaea* pattern which remains on rudiments of the postdiscal area in the forewing only ... as well as the splendid spot on the base of the forewing is unique in the family and is caused by strong arching of the basal line

towards the middle of the wing'. The ♂ genitalia structures, in particular the process in the valve of the ♂ genitalia in *Brahmaea certhia*, *Brahmophthalma wallichii* and *Calliprogonos miraculosa* were described as similar in all three genera of the Asian Brahmaeidae. The pages 3 and 34 were dealing with *Calliprogonos miraculosa*.

Remarks: unfortunately there is no valid description that meets the requirements of the ICZN (1999). Therefore, both names are considered invalid and not available.

Mell (1937b) [25.xi.1937] Beiträge zur Fauna sinica, XIV, pp. 1-19; validly proposed the genus-group name *Calliprogonos* MELL et M. HER.[ING] for a single new species: *Calliprogonos miraculosa* MELL from the Taipanshan, 1700 m, South Shensi [Shaanxi], China. The following figures (line drawings) were provided: uncus of *Calliprogonos* (: [7] fig. 7c, and valva of *C. miraculosa* (fig. 8).

Sauter (1967): Mitt. schweiz. ent. Ges., XL (1/2), 1967 [20 Jul 1967]: pp. [125]-129, 2 text-figs., recorded four genera of the family Brahmaeidae for East Asia. Those were *Brahmidia* BRYK, *Brahmaeops* BRYK, *Brahmophthalma* MELL, and *Calliprogonos* MELL & HERING. *C. miraculosa* MELL was cited as type-species of *Calliprogonos* MELL & HERING (: 129).

Remarks: *Brahmidia* BRYK, 1949 and *Brahmaeops* BRYK, 1949 are junior synonyms of *Brahmophthalma* MELL, 1928.

Laithwaite, Watson & Whalley (1975) The Dictionary of Butterflies and Moths, xlvii + 296 pp., 405 col.-pls. / figs.; placed *Acanthobrahmaea*, *Brahmaea*, *Calliprogonos* [sic], and *Dactyloceras* in Brahmaeidae, a small family of about 20 species. *C. miraculosa* MELL & HERING [sic] of the genus *Calliprogonos* MELL & HERING was recorded from China at an altitude of about 1520 m. This species was figured in color (: fig. 340e).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Fletcher & Nye in Nye (1982) The Generic Names of Moths of the World, 4, p. 28, listed *Calliprogonos* MELL, 1937 [sic], Dt. ent. Z. 1937: 9, under Brah[maeidae]. The type-species was confirmed to be *Calliprogonos miraculosa* MELL, 1937 by monotypy. The species was recorded from China: south Shensi province [Shaanxi; alternately Shensi], Tapai Shan.

Remarks: concluded from the literature cited this entry based on ‡*Calliprogonos* MELL, 1937 which is considered to be a *nomen nudum*.

Sbordoni & Forestiero (1984) Il Mondo delle Farfalle, 312 pp.; see Sbordoni & Forestiero (1985) Weltenzyklopädie der Schmetterlinge [German Edition].

Sbordoni & Forestiero (1985) Weltenzyklopädie der Schmetterlinge, 312 pp.; placed the genera *Dactyloceras*, *Acanthobrahmaea*, *Brahmaea*, and *Calliprogonos* in the Brahmaeidae. The authors noted that *Spiramiopsis* was also placed sometimes to the Eupterotidae or Brahmaeidae. Information on the distribution ranges was provided for *C. miraculosa* (Tapai Mts., Central China). The ♂ adult of *C. miraculosa* was figured in color (: [143], fig. 10). The proboscis of the taxa in the

family Brahmaeidae were noted being without function and the adults in the Lemoniidae were characterized as having no proboscis.

Remarks: Paukstadt, U. & Paukstadt, L. H. (1987) Ent. Z. (Essen), 97 (9), pp. 113-121, demonstrated that adults of *Brahmophthalma* MELL, 1928 actively imbibed water / sugar solution with the reduced proboscis and thereby extending life expectancy.

At the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Sauter (1986) [31.xii.1986] Nota lepid., 9 (3-4), 1986 [December 31st, 1986 as per header], pp. 262-271, 3 text-figs.; placed *Acanthobrahmaea* SAUTER, 1967, *Brahmaea* WALKER, 1988 [sic], *Brahmidia* BRYK, 1948 [sic], *Brahmaeops* BRYK, 1948 [sic], and *Brahmophthalma* MELL, 1930 [sic] in the subfamily Brahmaeinae (: 268-269) of Brahmaeidae. A work by Dujardin (1977: 99) was viewed critically in that Sauter wrote (: 269) "The zoogeographical theories, from which Dujardin starts, have to adapt to the observed facts, not the other way around!" *Calliprogonos* MELL & HERING, 1937 and *Dactyloceras* MELL, 1930 [sic] were placed in the new subfamily Dactyloceratinae. *C. miraculosa* MELL & HERING [sic] was cited as *typus generis* for *Calliprogonos* MELL & HERING, 1937.

Remarks: *Brahmaeops* BRYK, 1949 and *Brahmidia* BRYK, 1949 are considered to be junior synonyms of *Brahmophthalma* MELL, 1928 and *Acanthobrahmaea* SAUTER, 1967 is a junior synonym of *Brahmaea* WALKER, 1855. *Brahmophthalma* MELL, 1928 is placed as subgenus in *Brahmaea* WALKER, 1855. *Calliprogonos* MELL & HERING, 1937 and *Dactyloceras* MELL in Hering in Seitz, 1927 are genera in Brahmaeidae SWINHOE, 1892. *Dactyloceras* MELL, 1930 is a junior primary homonym.

Owada, Brahmaeidae; in Sugi (ed.) (1987) Larvae of Larger Moths in Japan, pp. 120-122; cited *Brahmaea*, *Dactyloceras* and *Calliprogonos miraculosa* MELL & HERING [sic] in the family Brahmaeidae (: 120). [text Japanese]

Trentini & Marini (1989) J. Res. Lepid., 27 (2), 1988, pp. 136-138; reported on a chromosome study of *Brahmaea japonica* BUTLER. The distribution of taxa of Euroasiatic species of *Brahmaea*, *Calliprogonos miraculosa* MELL, and *Acanthobrahmaea*, Indo-Australian species of *Brahmaea*, and Ethiopian species of *Dactyloceras* was demonstrated in fig. 1 (distribution map).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Nässig & Paukstadt, U. (1990) [xii.1990] Heterocera Sumatrana (Göttingen), 6 (Dec 1990), pp. 117-136; noted that *Calliprogonos miraculosa* MELL, 1937 stands very isolated in the Asiatic brahmaeid fauna and that its lone placement within the genus *Calliprogonos* MELL & M. HERING, 1937 is fully justified. Some further general notes on taxonomy of the family Brahmaeidae were presented.

Oberprieler & Duke (1994) [xi.1994] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. 15 (3), pp. 199-244, 8 col.-figs., 8 b/w-figs.; gave a historical review of the taxonomic placements of the genus *Spiramiopsis* HAMPSON, 1901. The immature stages of *Calliprogonos miraculosa* MELL, 1937 from China were recorded being still unknown, as well as those of *Brachygnatha* (= *Brahmaea*) *diastemata* ZHANG & YANG. The taxonomic position of *Spiramiopsis comma* on preimaginal characters in the Bombycoidea was discussed in detail (: 225-238). The authors

concluded that the taxonomic position of *Spiramiopsis* remains not entirely clear but proposed to place this genus in a family of its own.

Fletcher & Nye in Nye (reprint 1995) The Generic Names of Moths of the World, 4, p. 28, listed *Calliprogonos* MELL, 1937 [sic], Dt. ent. Z. 1937: 9, under Brah[maeidae]. The type-species was confirmed to be *Calliprogonos miraculosa* MELL, 1937 by monotypy. The species was recorded from China: south Shensi province [Shaanxi; alternately Shensi], Tapai Shan.

Remarks: concluded from the literature cited this entry based on ‡*Calliprogonos* MELL, 1937 which is considered to be a *nomen nudum*.

Brechlin (2000) [vi.2000] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F.21 (1), pp. 5-10; remarked (: 9) that the Taipeishan, the high mountain wedge of the Kwenlun, which is driven furthest eastwards, occupies a highly significant biogeographical position, which is also confirmed by records of, for example, *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae).

Brechlin (2001) [vi.2001] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F.22 (2): pp. 89-100; noted (: 91) that the discovery of *Saturnia (Rinaca) kitchingi* underlines once again the biogeographically highly significant position of the Taipeishan, which Mell (1938) had already emphasized. Many species of this region, such as *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae) habitually are quite distant from their closest relatives, which indicates that these taxa have been isolated for a long time.

Sauter (1986) [31.xii.1986] Nota lepid., 9 (3-4), 1986 [December 31st, 1986 as per header]; placed *Dactyloceras* MELL, 1930 with its typus generis *D. lucina* DRURY and *Calliprogonos* MELL & HERING, 1937 with its typus generis *C. miraculosa* MELL & HERING [sic] in the new subfamily Dactyloceratinae.

Lemaire & Minet ([1998]) 18. The Bombycoidea and their Relatives. In: Kristensen (ed.), Volume 4, Subvolume 35; illustrated (: 343) *Calliprogonos miraculosa* (fig. E).

Naumann (2008) [30.i.2008] Family Brahmaeidae, Brahmids Moths, pp. 111-116, in: Kühne (2008) Butterflies and moths diversity of the Kakamega forest (Kenya), 203 pp.; cited the genus *Calliprogonos* MELL, 1937 [sic] (China: Shaanxi and Sichuan) with its single species *C. miraculosa* MELL, 1937.

Naumann (2009) [vi.2009] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. 30 (1/2), pp. 5-8; reported on a rediscovery of the Chinese *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae) from the province of Sichuan. Short notes on the nomenclature and taxonomy of the genus *Calliprogonos* were presented. The author noted that the family Brahmaeidae was traditionally considered to comprise the following five genera: the Eurasian *Brahmaea* MELL, 1930 with its questionable subgenera *Brahmaea*, *Brahmophthalma* MELL, 1930 and *Brachygnatha* ZHANG & YANG, 1993, the Italian *Acanthobrahmaea* SAUTER, 1967, the Chinese *Calliprogonos* MELL & HERING, 1937, the African *Dactyloceras* MELL, 1927 with its subgenera *Dactyloceras* and *Shinocksiceras* BOUYER, 2002, and the Southafrican *Spiramiopsis* HAMPSON, 1901. He also noted that Zwick (2008) reassigned *Lemonia* HÜBNER, 1820 and *Sabalia* WALKER, 1865

of the Lemoniidae to Brahmaeidae as had already been proposed by Karsch (1898). For the first time being the ♀ adult of *C. miraculosa* was described and the ♂ genitalia structures were figured (: 6-7). The following color figures were attached: ♂ holotype dorsally from Shaanxi (fig. 1), ♂ dorsally from Sichuan (fig. 2) and ventrally (fig. 3), ♀ dorsally from Sichuan (fig. 4) and ventrally (fig. 5); the habitat of *C. miraculosa* in Sichuan (fig. 6); ♂ genitalia structures (aedeagus separate) (fig. 7), and the ♂ legs of a paratype specimen (fig. 8) [legs not specified].

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 and *Brachygnatha* ZHANG & YANG, 1993 are recognized as a junior synonyms of *Brahmaea* WALKER, 1855

Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; listed the name *miraculosa* MELL, 1937 as species of the genus *Calliprogonos* MELL [sic], 1937 in the family Brahmaeidae.

Remarks: ‡*miraculosa* MELL, 1937[a] was omitted by the authors.

Wang, Holloway, Wahlberg, Wang & Nylin (2019) Systematic Entomology, 44, pp. 211-225; discussed the resemblance of the habitus of *Calliprogonos* MELL & HERING to that of the new subfamily Heraculinae WANG, HOLLOWAY, WAHLBERG, WANG & NYLIN, 2019 of the family Pseudobistonidae (Lepidoptera: Geometroidea). *Calliprogonos* [*miraculosa* MELL, 1937] (Brahmaeidae) was figured in color (: 219, fig. 9c) and compared with adults of *Heracula* (Pseudobistonidae). A distribution map for the genera *Heracula* and *Calliprogonos* was provided (: 223, fig. 14).

‡*miraculosa* MELL, 1937 (*Calliprogonos*)

[*nomen nudum*]

Original citation and spelling: *miraculosa*; *Calliprogonos miraculosa*

Original description: Mell (1937a) [10.iii.1937] Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, 2 maps, 5 text-figs.

Remarks: both names were not validly described and are considered to be *nomina nuda* and not available, cf. ICZN (1999) Art.13.3 and Art.13.4.

Type locality (no type locality as such): Taipeihan (Südshensi) [China, South Shaanxi Province, Tapai Shan], 1700 m.

Geographical and altitudinal distribution: see *miraculosa* MELL, 1937[b].

Etymology: see *miraculosa* MELL, 1937[b].

Type material (no type material as such): the description of *miraculosa* based on three ♂ specimens.

Taxonomic notes: the name ‡*miraculosa* MELL, 1937 published in Beiträge zur Fauna sinica. XVI. Die Areale biologisch sehr nahestehender Arten des gleichen Genus und Anpassung an kontinentale Wärmespannen als bestimmender Faktor für Arealgröße und Erscheinungszeiten der Imago. – Archiv für Naturgeschichte, Leipzig, N.F. 6 (1): pp. 1-36, was not validly described and is considered to be a *nomen nudum*.

Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; omitted the names ‡*miraculosa* MELL, 1937 and the genus ‡*Calliprogonos* MELL, 1937 of the family Brahmaeidae.

General notes: n/a.

Synonyms: n/a.

Hybridizations: n/a.

***Spiramiopsis* HAMPSON, 1901**

Original citation and spelling: Genus SPIRAMIOPSIS, nov.

Original description: IX. A Classification of a new Family of the Lepidoptera. – The Transactions of the entomological Society of London for the Year 1901, Part II 1901 [10 July 1901], pp. (187)-192, text-figs. [1]-[21].

Type-species: *Spiramiopsis comma* HAMPSON, 1901 by monotypy.

Taxonomic history: Hampson (1901: 187) placed *Spiramiopsis* together with *Lemonia* and *Sabalia* in the new genus Sabaliadae HAMPSON, 1901 [= Lemoniidae (sensu Fletcher & Nye 1982)]. Aurivillius (1901) transferred *Spiramiopsis* to the subfamily Striphnopteryginae of the Striphnopterygidae [= Eupterotidae]. Jordan (1923) transferred *Spiramiopsis* from the Sabaliadae to the Brahmaeidae. Gaede (1927-1928) transferred *Spiramiopsis* back to the Eupterotidae. Forbes (1955) rejected *Spiramiopsis* from the Eupterotidae and transferred it to the Lemoniidae. Pinhey (1975: 129) transferred *Spiramiopsis* to the subfamily Striphnopteryginae of the Eupterotidae. Laithwaite, Watson & Whalley (1975) placed the genus *Spiramiopsis* in the Lemoniidae. Fletcher & Nye in Nye (1982) noted that *Spiramiopsis* would be better placed in the Bombycidae. Sbordoni & Forestiero (1985: 142) placed *Lemonia*, *Spiramiopsis*, and *Sabalia* in the Lemoniidae. Vári & Kroon (1986) transferred *Spiramiopsis* to the Brahmaeidae. Oberprieler & Duke (1994) remains *Spiramiopsis* as *incertae sedis* in Bombycoidea. Fletcher & Nye in Nye (1995 [Reprint]) noted that *Spiramiopsis* would be better placed in the Bombycidae. Scoble (1995) transferred *Spiramiopsis* to the Brahmaeidae.

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *Spiramiopsis* HAMPSON, 1901 are as follows: nothing found in literature thus far

Further readings on *Spiramiopsis* HAMPSON, 1901

Hampson (1901) [10.vii.1901] Trans. ent. Soc. London, 1901, II, pp. [187]-192; established the new family Sabaliadae for the genera *Lemonia*, *Sabalia* and *Spiramiopsis* for species with proboscis absent and based on the venation. A key to genera was provided. The author noted that the new family cannot be called Lemonidae because the name has been occupied in the butterflies. The new family was reported being closely allied to Brahmaeidae which however have the proboscis fully developed and a different facies.

Remarks: Hampson established the genus *Spiramiopsis* for a single new species and the genus remained monotypic ever since. The new species *Spiramiopsis comma* has been the only taxon included in *Spiramiopsis*, which represents a type-species by monotypy.

Aurivillius (1901) Bihang till Kongliga Svenska Vetenskapsakademiens Handlingar 27 (7), transferred the genus *Spiramiopsis* HAMPSON, 1901 to the subfamily Striphnopteryginae of the family Striphnopterygidae [= Eupterotidae].

Remarks: the family-group name Striphnopterygidae WALLENGREN, 1858 is a junior synonym of Eupterotidae SWINHOE, 1892.

Janse (1917) Check-list of the South African Lepidoptera Heterocera, listed *Spiramiopsis comma* HAMPSON, 1901 as number 1244 for South Africa and placed this species in the Striphnopteryginae of the Striphnopterygidae (: 80).

Jordan (1923) [iii.1923] Nov. Zool., XXX, 1923, pp. 163-166; distinguished the families mainly by structure in the metathorax and proximal abdominal segments. Jordan was dealing with the families in question in six sections. Section VI (like IV) was briefly described with frenulum present but its bristles often missing and due to the special venation. Three families were included. Those were 12. the Lemoniidae, which was noted very close to the Eupterotidae, 13. the Brahmaeidae which included *Spiramiopsis*, and 14. the Sphingidae (: 166).

Remarks: Jordan transferred *Spiramiopsis comma* HAMPSON, 1901 from the family Sabaliidae HAMPSON, 1901 to the family Brahmaeidae SWINHOE, 1892.

Gaede (1927-1928) [26.vii.1927, 16.i.1928] 11. Familie: Eupterotidae. – *In*: Seitz (ed.): Die Gross-Schmetterlinge der Erde. Eine Systematische Bearbeitung der bis jetzt bekannten Gross-Schmetterlinge. Die Afrikanischen Spinner und Schwärmer, 14: pp. 293-311; placed the genus *Spiramiopsis* HAMPSON in the Eupterotidae. *Spiramiopsis comma* HAMPSON was reported from Capland [former Cape Colony, southern tip of Africa], Transvaal [province of the Republic South Africa] (: 296). *Spiramiopsis comma* was figured (col.-pl. 44 c).

Hering *in* Seitz (ed.) (1927a) [17.xi.1927] (with an introduction on the Brahmaeidae by Dr. A. Seitz) 12. Familie: Brahmaeidae, *in*: Die Gross-Schmetterlinge der Erde, (II) 14 – Die afrikanischen Spinner und Schwärmer, noted that greater structural differences between Indian and African members of the genus [*Brahmaea*] exist, so that the generic separation of the African species is justified. This includes *Spiramiopsis comma* HAMPSON based on Jordan's examinations, which was treated with the Eupterotidae.

Hering *in* Seitz (ed.) (1927b) [17.xi.1927], see Hering *in* Seitz (ed.) (1927a) (German Edition)

Mell (1937) Dtsch. Entomol. Z., 1937, (I/II), pp. 1-19, *in* „Ergänzungen zur Sphingiden-, Brahmaeiden und Eupterotidenfauna Chinas (Lep.)“; described the new genus *Calliprogonos* MELL & M. HERING with its type-species *Calliprogonos miraculosa* MELL, 1937 by monotypy from the Taipeishan, 1700 m, China. (: 11-12) The genus *Spiramiopsis* was placed in the Eupterotidae (not Brahmaeidae) based on Aurivillius (1901).

Hering *in* Seitz (ed.) (1943), see Hering *in* Seitz (ed.) (1927a) (German Edition)

Forbes (1955) [25.viii.1955] Tijdschr. v. Ent., 98 (2), 1955, pp. 85-132, discussed on the systematic of the family Eupterotidae. The Brahmaeidae and Lemoniidae (= Sabaliadae) were excluded from the Eupterotidae (: 85). *Spiramiopsis* HAMPSON, 1901 with its type-species *S. comma* HAMPSON was rejected from Eupterotidae and placed to the Lemoniidae (: 132).

Berger (1957) [25.x.1957] Lambilliona, 57, pp. 72-84; provided a 'Key for determining the families of macrolepidoptera and higher groups of microlepidoptera (Ethiopian fauna) [in French]'. The author noted that 'Nor can we admit the genus *Sabalia* among the Eupterotidae. *Sabalia* is a Lemoniidae; at most it can be considered as constituting a subfamily (Sabaliinae) of Lemoniidae characterized by longer tarsi than in true Lemoniidae. (Denticulate nails are not one of the characteristics of true Lemoniidae because this character is not observed in all *Lemonia*)' (: 73). He separated Brahmaeidae and Lemoniidae: Sabaliinae and, concluded from text, also placed *Spiramiopsis* to the Lemoniidae. He noted regarding the definition of Lemoniidae 'except at *Spiramiopsis*?' (: 80). He actually transferred *Sabalia* from the Eupterotidae to the Lemoniidae.

Pinhey (1975) Moths of Southern Africa; noted that the family Brahmaeidae contains two genera only, one in Africa and one in Asia. For southern Africa *Dactyloceras widenmanni* KARSCH, 1895 [sic] of the genus *Dactyloceras* MELL, 1930 [sic] with its type species *Phalaena (Attacus) lucina* DRURY from Sierra Leone was recorded from Mozambique, Rhodesia, Malawi, and Tanzania. The origin of the name *Dactyloceras* was explained, which means a finger horn, perhaps referring to the morphology of the spines on the larvae (: 109). The genus *Spiramiopsis* was placed in the subfamily Striphnopteryginae of the Eupterotidae (: 129). *Spiramiopsis comma* was figured in color (pl. 30, fig. 560♂).

Laithwaite, Watson & Whalley (1975) The Dictionary of Butterflies and Moths in Color; placed the genus *Spiramiopsis* HAMPSON in the Lemoniidae but noted, that the only species has been placed at times in the families Brahmaeidae and Eupterotidae (: 281). The only species *comma* HAMPSON was described including the larva. The adult was illustrated in color (: 318c).

Fletcher & Nye in Nye (1982) The generic names of the moths of the world, Vol. 4, p. 153, transferred *Spiramiopsis* HAMPSON, 1901 from the Brahmaeidae to the Bombycidae. Fletcher & Nye remarked that *Spiramiopsis* was established in the Sabaliadae, now Lemoniidae, and transferred to the Striphnopterygidae, now Eupterotidae, by Aurivillius (1901), and transferred to the Brahmaeidae by Seitz (1927).

Remarks: at the time being *Spiramiopsis* HAMPSON, 1901 is placed in the family Brahmaeidae SWINHOE, 1892.

The remark that *Spiramiopsis* was transferred by Seitz (1927) to the Brahmaeidae is not correct. Seitz or most likely Hering in Seitz (ed.) (1927) did not place *Spiramiopsis comma* to the family Brahmaeidae but remarked that according to Jordan's research, *Spiramiopsis comma* HAMPSON also belongs to the African *Brahmaea*, having been dealt with in the Eupterotidae, p. 296.

Sbordoni & Forestiero (1984) Il Mondo delle Farfalle, 312 pp.; see Sbordoni & Forestiero (1985) Weltenzyklopädie der Schmetterlinge [German Edition].

Sbordoni & Forestiero (1985) *Weltencyklopädie der Schmetterlinge*, 312 pp.; placed the genera *Dactyloceras*, *Acanthobrahmaea*, *Brahmaea*, and *Calliprogonos* in the Brahmaeidae, and the genera *Lemonia*, *Spiramiopsis*, and *Sabalia* were placed in the Lemoniidae (: 142). The authors noted that *Spiramiopsis* was also placed sometimes to the Eupterotidae or Brahmaeidae. The proboscis of the taxa in the family Brahmaeidae were noted being without function and the adults in the Lemoniidae were characterized as having no proboscis. A ♂ adult of *Spiramiopsis comma* was figured in color (: [143], fig. 4).

Remarks: Paukstadt, U. & Paukstadt, L. H. (1987) *Ent. Z. (Essen)*, 97 (9), pp. 113-121, demonstrated that adults of *Brahmophthalma* MELL, 1928 actively imbibed water / sugar solution with the reduced proboscis and thereby extending life expectancy.

At the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

At the time being the genera *Lemonia* HÜBNER, [1820], *Sabalia* WALKER, 1865 and *Spiramiopsis* HAMPSON, 1901 are placed in the family Brahmaeidae SWINHOE, 1892.

Vári & Kroon (1986) *Southern African Lepidoptera*; again placed the genus *Spiramiopsis* HAMPSON, 1901 in the Brahmaeidae based on similarities with the larva of the brahmaeid *Dactyloceras widenmanni* (KARSCH, 1895). Unfortunately the larva has been unknown to the authors.

Holloway (1987) *The Moths of Borneo*, part 3; noted an uncertain placement of the South African genus *Spiramiopsis* HAMPSON (: 4) which was currently resting in the Bombycidae (sensu Fletcher & Nye 1982).

Nässig & Paukstadt, U. (1990) [xii.1990] *Heterocera Sumatrana* (Göttingen), 6, pp. 117-136; noted that *Spiramiopsis* HAMPSON, 1901 is a member of the family Brahmaeidae (: 122). The authors noted that the larvae of *Spiramiopsis comma* HAMPSON, 1901 are known to feed upon *Clematis* which is a creeping member of the Ranunculaceae (: 122).

Remarks: this foodplant record was most likely based on an error, cf. Oberprieler & Duke (1994).

Scoble (1992) [please read: Scoble (1995) – corrected reprint]

Minet (1994) *Ent. Scand.*, 25 (1), remarked that *Spiramiopsis* is “a genuine member of the Brahmaeidae” (: 84).

Oberprieler & Duke (1994) [xi.1994] *Nachr. entomol. Ver. Apollo*, Frankfurt/Main, N.F. 15 (3), pp. 199-244, 8 col.-figs., 8 b/w-figs.; placed the genus *Spiramiopsis* HAMPSON, 1901 in the Bombycoidea LATREILLE, 1802 as “incertae sedis”. The authors gave a historical review of the taxonomic placements of the genus *Spiramiopsis* and of the previous records of the immature stages and larval foodplants of its sole species *comma* HAMPSON, 1901. The immature stages of *S. comma* were compared with those of other selected bombycoids, mainly with those of *Brahmaea* (including *Acanthobrahmaea*, *Brahmophthalma*, and *Brachygnatha*) and *Dactyloceras*. The authors reported that particular structures of the larval morphologies are not consistent in *Brahmaea* and *Dactyloceras* and also occur in *Lemonia* (Lemoniidae). Further comparisons were carried out with the Palaearctic genus *Lemonia* HÜBNER, [1820] 1816 and the eastern African

genus *Sabalia* WALKER, 1865 and the Bombycidae due to the placement of *Spiramiopsis comma* in this family by Fletcher & Nye (1982). Comparisons of the immature stages (: 222-225) with those of the Saturniidae, Sphingidae, and Mirinidae were done and found very different. The taxonomic position of *Spiramiopsis comma* on preimaginal characters in the Bombycoidea was discussed in detail (: 225-238). The authors concluded that the taxonomic position of *Spiramiopsis* remains not entirely clear but proposed to place this genus in a family of its own. Consequently, *Spiramiopsis* was not placed to any family but remains as *incertae sedis* in Bombycoidea.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 and *Brachygnatha* ZHANG & YANG, 1993 are treated as junior synonyms of *Brahmaea* WALKER, 1855.

Fletcher & Nye in Nye (1995) The generic names of the moths of the world, Vol. 4, p. 153, transferred *Spiramiopsis* HAMPSON, 1901 from the Brahmaeidae to the Bombycidae. Fletcher & Nye remarked that *Spiramiopsis* was established in the Sabaliadae, now Lemoniidae, and transferred to the Striphnopterygidae, now Eupterotidae, by Aurivillius (1901), and transferred to the Brahmaeidae by Seitz (1927).

Remarks: at the time being *Spiramiopsis* HAMPSON, 1901 is placed in the family Brahmaeidae SWINHOE, 1892.

Scoble (1995) The Lepidoptera . Form, Function and Diversity, ix + 404 pp.; noted regarding the diversity that very broad wings are found among Bombycoidea, particularly Saturniidae and Brahmaeidae (: 48). The Brahmaeidae were listed together with the Lemoniidae in the Bombycoidea (: 187). The Bombycoidea were reported to include four genera of moths which fall into two groups: 1. with densely hairy larvae and 2. those with naked or spiny (not densely haired) larvae. *Spiramiopsis* was provisionally assigned to Brahmaeidae, though sometimes placed in Lemoniidae by other authors (: 323). Scoble presented brief descriptions of the adults, larvae and the biology Brahmaeidae (: 322-323) and noted that the monotypic South African genus *Spiramiopsis* is included Brahmaeidae following Jordan (1923) although its affinities are uncertain.

Nässig & Treadaway (1998) Nachr. entomol. Ver. Apollo, Frankfurt/Main, Suppl. 17, remarked that the position of *Spiramiopsis comma* HAMPSON, 1901 from southern Africa within the family remains obscure due to apparent problems in the interpretation of synapomorphies shared with other species (: 426).

Nässig & Treadaway (1998) [vii.1998] Nachr. entomol. Ver. Apollo, Frankfurt/Main, Suppl. 17 (07.1998), pp. 425-440; noted that the family Brahmaeidae comprises ca. 5-10 species of the genus *Dactyloceras* MELL, 1930 [sic], 1 species of the genus *Calliprogonos* MELL, 1937 [sic], and ca. 9 species of the genus *Brahmaea* WALKER, 1855 s.l. (including the synonyms *Brahmophthalma* MELL, 1930 [sic], *Brahmaeops* BRYK, 1949, *Brahmidia* BRYK, 1949, *Acanthobrahmaea* SAUTER, 1967, and *Brachygnatha* ZHANG & YANG, 1993). It was noted that the position of *Spiramiopsis comma* HAMPSON, 1901 within the family remains obscure. The authors referred to the discussion in Minet (1994) and Oberprieler & Duke (1994).

Remarks: error in the original descriptions of *Calliprogonos* MELL & HERING in Mell, 1937, *Brahmophthalma* MELL, 1928 and *Dactyloceras* MELL in Hering in Seitz, 1927. *Brahmophthalma* MELL, 1927 is recognized as subgenus of *Brahmaea* WALKER, 1855 at the time being. Consequently the names *Brahmaeops* BRYK, 1949 and *Brahmidia* BRYK, 1949 are junior synonyms of *Brahmophthalma* MELL, 1927.

Lemaire & Minet (1999 ["1998"]) 18. The Bombycoidea and their Relatives. In: Kristensen (ed.), Volume 4, Subvolume 35; placed the following nine families in the Bombycoidea s. str.: Eupterotidae, Bombycidae, Endromidae, Mirinidae, Saturniidae, Carthaeidae, Lemoniidae, Brahmaeidae, and Sphingidae; key to families (: 322-333). *Spiramiopsis* was included in the Brahmaeidae (: 342) because *Spiramiopsis* shares at least eight imaginal synapomorphies with *Dactyloceras*, *Calliprogonos*, *Acanthobrahmaea*, and *Brahmaea* (Minet 1994). *Spiramiopsis comma* was figured (: 343, fig. C). The genera *Brahmaea*, *Spiramiopsis*, *Calliprogonos*, *Dactyloceras*, and *Acanthobrahmaea* were compared (: 342-344). The authors noted that Sauter (1986) divided the family in two subfamilies: Dactyloceratinae and Brahmaeinae but does not take account of *Spiramiopsis*.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Vári, Kroon & Krüger (2002) Classification and Checklist of the species of Lepidoptera recorded in Southern Africa, xxi+384 pp.; placed *Spiramiopsis* HAMPSON, 1901 in the Brahmaeidae.

Naumann (2008) [30.i.2008] Family Brahmaeidae, Brahmids Moths, pp. 111-116, in: Kühne (2008) Butterflies and moths diversity of the Kakamega forest (Kenya), 203 pp.; recorded the family Brahmaeidae from Asia, southern and southeastern Europe and Africa. Five genera were assigned to Brahmaeidae. Those were *Brahmaea* WALKER, 1855 (Turkey and Caucasus to Sulawesi, Philippines, Japan, and the Amur), *Calliprogonos* MELL, 1937 [sic] (China: Shaanxi and Sichuan), *Acanthobrahmaea* SAUTER, 1967 (Southern Italy), *Dactyloceras* MELL in Hering in Seitz (ed.), 1927 (Africa excluding the South and arid Northwestern regions), and *Spiramiopsis* HAMPSON, 1901 (Southern Africa).

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Naumann (2009) [vi.2009] Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. 30 (1/2), pp. 5-8; reported on a rediscovery of the Chinese *Calliprogonos miraculosa* MELL, 1937 (Brahmaeidae) from the province of Sichuan. The author noted that the family Brahmaeidae was traditionally considered to comprise the following five genera: the Eurasian *Brahmaea* WALKER, 1855 with its questionable subgenera *Brahmaea*, *Brahmophthalma* MELL, 1930 and *Brachygnatha* ZHANG & YANG, 1993, the Italian *Acanthobrahmaea* SAUTER, 1967, the Chinese *Calliprogonos* MELL & HERING, 1937, the African *Dactyloceras* MELL, 1927 with its subgenera *Dactyloceras* and *Shinocksiceras* BOUYER, 2002, and the Southafrican *Spiramiopsis* HAMPSON, 1901.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Paukstadt, L. H. & Paukstadt, U. (2015) [20.vi.2015] Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 13 (8), pp. 388-404; described and figured the immature stages of *Brahmaea wallichii* (GRAY, 1831) from the mountainous China (Lepidoptera: Brahmaeidae). In the 'Systematics' (: 389) *Brahmaea* WALKER, 1855 was listed as nomen nudum. *Brahmaea* WALKER, 1855, the Afrotropical *Spiramiopsis* HAMPSON, 1901 and *Dactyloceras* MELL [i.l. Hering] in Seitz, 1927, *Calliprogonos* MELL & HERING in Mell, 1937, the Italian *Acanthobrahmaea* SAUTER, 1967 were cited as genera of Brahmaeidae SWINHOE, 1892.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Paukstadt, U. & Paukstadt, L. H. (2017b) [14.v.2017] Beiträge zur Kenntnis der wilden Seidenspinner (Wilhelmshaven), 15 (2), pp. 47-72; described and figured the preimaginal instars of *Brahmaea certhia* (FABRICIUS, 1793) from Jiangsu, China. *Brahmaea* WALKER, 1855, the Afrotropical *Spiramiopsis* HAMPSON, 1901 and *Dactyloceras* MELL [i.l. Hering] in Seitz, 1927, and the Chinese *Calliprogonos* MELL & HERING in Mell, 1937 were cited as genera of the Brahmaeidae.

Weritz, Riekert & Naumann (2016) [04.i.2016] Entomofauna, 37 (20); recorded the following in Africa distributed genera in the family Brahmaeidae SWINHOE, 1892: *Dactyloceras* MELL in Hering in Seitz (ed.), 1927, *Spiramiopsis* HAMPSON, 1901, *Lemonia* HÜBNER, 1820 ("1816"), and *Sabalia* WALKER, 1865. The latter two genera were included the family Brahmaeidae due to the synonymization of the families Lemoniidae and Brahmaeidae by Zwick (2008).

Zolotuhin (2016) [27.xi.2016] Eversmannia, No. 47-48; pp. 4-10 [+1]; proposed the new subgeneric name *Transbrahmaea* for two species (a geographically disjunctive group) distributed in Transcaucasia and Asia Minor. Those were *B. christophi* STAUDINGER, 1885 and *B. ledereri* ROGENHOFER, 1873 with its subspecies *zaba* DE FREINA, 1982. *Spiramiopsis* HAMPSON, 1901 was cited within Brahmaeidae.

Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; listed the genus-group name *Spiramiopsis* HAMPSON, 1901 in the family Brahmaeidae.

Hamilton, St. Laurent, Dexter, Kitching, Breinhold, Zwick, Timmermans, Barber & Kawahara (2019) [bioRxiv reprint doi: <https://doi.org/10.1101/517995> 17995 online version posted 11.i.2019]; reported that the Bombycoidea are an ecologically and taxonomically diverse superfamily but little attention has been given to understanding their evolution and the drivers of their diversity. A well-supported phylogeny that identified important evolutionary patterns was produced. The authors noted that the family-rearrangements of Zwick (2008) and Zwick, Regier, Mitter & Cummings (2011) were recovered in their phylogenetic results. Taxa formerly classified in the "Lemoniidae" (e.g., Lemaire & Minet (1998) were covered within Brahmaeidae. The tree did contain the Brahmaeidae with 68 spp.

as sister family of the species-rich Eupterotidae with 396 spp. The tree contains *Brahmaea japonica*, *B. hearseyi*, *B. europaea*, *Dactyloceras* sp., *Spiramiopsis comma*, and *Lemonia philopalus* in the Brahmaeidae. *Brahmaea paukstatorum* [indefinite origin] was figured in color.

De Prins, J. & De Prins, W. (2011-2021) Afromoths, online database of Afrotropical moth species (Lepidoptera); World Wide Web electronic publication (<http://www.afromoths.net>) [accession date 01 DEC 2021] listed *Spiramiopsis comma* HAMPSON, 1901 in the family Brahmaeidae. A ♂ adult from South Africa, KwaZulu-Natal, Dargle Road, Howick, Lemonwood Cottages, 29°29'17 [sic] from coll. M. Ströhle (Weiden, Germany) was figured in color.

***comma* HAMPSON, 1901 (*Spiramiopsis*)**

Original citation and spelling: *Spiramiopsis comma*, n. sp.

Original description: Hampson, G. F. (1901): IX. A Classification of a new Family of the Lepidoptera. – The Transactions of the Entomological Society of London for the Year 1901, Part II 1901 [10 July 1901], pp. (187)-192, text-figs. [1]-[21].

Type locality: C. Colony, Kowie R., Grahamstown [South Africa, Cape Colony, Province East Cape, Kowie River, Makhanda].

Geographical and altitudinal distribution: records were from south-eastern Africa, from the eastern Cape Province through Transkei, Natal and Swaziland north along the escarpment of Transvaal, with a record from Mozambique, cf. Oberprieler & Duke (1994), Hampson (1901), Pinhey (1975), Gaede (1927-1928), and De Prins, J. & De Prins, W. (2011-2021) Afromoths, online database of Afrotropical moth species (Lepidoptera); World Wide Web electronic publication (<http://www.afromoths.net>) [accession date 01 DEC 2021].

Etymology: the name *comma* is pointing to the pattern in the forewings which was described as large comma-shaped discoidal stigma which was red-brown pencilled with olive and defined by a strong black line and narrow ochreous line.

Type material: the description of *comma* clearly based on a single ♂ specimen collected by Dr. Becker which represents a holotype by monotypy. The specimen was figured in the original description including its wing venation, head and antenna laterally, and a leg (b&w drawings).

Taxonomic history: see under *Spiramiopsis* HAMPSON, 1901.

Taxonomic notes: *Spiramiopsis comma* HAMPSON, 1901 is the only species in *Spiramiopsis* HAMPSON, 1901 and was originally described in the new family Sabaliadae HAMPSON, 1901. Further genera in this family have been *Lemonia* and *Sabalia*.

The name *comma* HAMPSON, 1901 was listed as species-group name of *Spiramiopsis* HAMPSON, 1901 in Kitching, I.J., Rougerie, R., Zwick, A., Hamilton, C.A., St Laurent, R.A., Naumann, S., Ballesteros Mejia, L. & Kawahara, A.Y. (2018): A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236.

General notes: Hampson (1901) figured the ♂ holotype by monotypy including the venation, head and antenna laterally, and a leg. Gaede in Seitz (ed.) (1927-1928) figured *Spiramiopsis comma* (col.-pl. 44 c). Pinhey (1975) figured *Spiramiopsis comma* in color (pl. 30, fig. 560♂). Laithwaite, Watson & Whalley (1975) figured *S. comma* HAMPSON in color (: 318c). Sbordoni & Forestiero (1984, 1985) figured a ♂ adult of *Spiramiopsis comma* in color (: [143], fig. 4). Lemaire & Minet (1999 ["1998"]) figured *Spiramiopsis comma* (: 343, fig. C). Oberprieler & Duke (1994) figured the adult and the complete life history in color and b/w (: 204): color figures of the ♂ adult (fig.1), 1st larval instar (fig. 2), 2nd larval instar (fig. 3), 3rd larval instar (fig. 4), 4th larval instar (fig. 5), 5th larval instar, young larva (fig. 6), 5th larval instar, mature larva (fig. 7), and the eyespots in the mature larva at the metathorax (fig. 8), b/w drawings of the egg shell (fig. 9), front view of the head capsule (fig. 10), typical chalaza of the 1st instar larva, lateral view (fig. 11), 1st larval instar lateral view (fig. 12), setal map (fig. 13), and pupa ventrally, dorsally and laterally (figs. 14-16). De Prins, J. & De Prins, W. (2011-2021) Afromoths, online database of Afrotropical moth species (Lepidoptera). World Wide Web electronic publication (<http://www.afromoths.net>) [accession date 01 DEC 2021] figured a ♂ adult of *Spiramiopsis comma* HAMPSON, 1901 from South Africa, KwaZulu-Natal, Dargle Road, Howick, Lemonwood Cottages, 29°29'17 [sic] from coll. M. Ströhle (Weiden, Germany) in color.

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *comma* HAMPSON, 1901 are as follows:
nothing found in literature thus far

Hybridizations: inter-generic and inter-specific pairings with *comma* HAMPSON, 1901 are unknown from literature.

Further readings on *comma* HAMPSON, 1901

- Hampson (1901) [10.vii.1901] Trans. ent. Soc. London, 1901, II, pp. [187]-192; established the new family Sabaliadae for the genera *Lemonia*, *Sabalia* and the new genus *Spiramiopsis* for species with proboscis absent and based on the venation. A key to genera was provided. The only species included *Spiramiopsis* has been the new species *Spiramiopsis comma*. *S. comma* was illustrated (b/w drawings) including its venation of forewings and hindwings, head and antenna laterally, and a leg.
- Janse (1917) Check-list of the South African Lepidoptera Heterocera, placed *Spiramiopsis comma* HAMPSON, 1901 in the Striphnopteryginae of the Striphnopterygidae.
- Platt (1921) South African Journal of natural History, 3 (1), pp. 65-138; recorded *Secamone gerrardii* HARV. ex BENTH. as larval foodplant.
- Gaede (1927-1928) [26.vii.1927, 16.i.1928] 11. Familie: Eupterotidae. – In: Seitz (ed.): Die Gross-Schmetterlinge der Erde. Eine Systematische Bearbeitung der bis jetzt bekannten Gross-Schmetterlinge. Die Afrikanischen Spinner und Schwärmer, 14: pp. 293-311; recorded *Spiramiopsis comma* HAMPSON from Capland [former Cape Colony, southern tip of Africa], Transvaal [province of the Republic South Africa] (: 296). *Spiramiopsis comma* was figured (col.-pl. 44 c).
- Hering in Seitz (ed.) (1927a) [17.xi.1927] (with an introduction on the Brahmaeidae by Dr. A. Seitz) 12. Familie: Brahmaeidae, in: Die Gross-Schmetterlinge der Erde, (II) 14 – Die afrikanischen Spinner und Schwärmer, noted that greater structural differences between Indian and African members of the genus [*Brahmaea*] exist, so that the generic separation of the African species is justified. This includes *Spiramiopsis comma* HAMPSON based on Jordan's examinations, which was treated with the Eupterotidae.
- Hering in Seitz (ed.) (1927b) [17.xi.1927], see Hering in Seitz (ed.) (1927a) (German Edition)
- Hering in Seitz (ed.) (1943), see Hering in Seitz (ed.) (1927a) (German Edition)
- Forbes (1955) [25.viii.1955] Tijdschr. v. Ent., 98 (2), 1955, pp. 85-132, discussed on the systematic of the family Eupterotidae and rejected *S. comma* HAMPSON from Eupterotidae and placed to the Lemoniidae (: 132).
- Pinhey (1975) Moths of Southern Africa; noted that the family Brahmaeidae contains two genera only, one in Africa and one in Asia. The genus *Spiramiopsis* was placed in the subfamily Striphnopteryginae of the Eupterotidae (: 129). *Spiramiopsis comma* was figured in color (pl. 30, fig. 560♂). The author noted that the larva feeds on *Secamone* from Duke's notes. The distribution was recorded from East Cape, Natal and Transvaal.
- Remarks:** *Secamone* R.BR. 1810 (Apocynaceae: Secamonoideae) is a widespread genus across much of Africa, northern Australia, southern Asia, with numerous species endemic to Madagascar.

- Laithwaite, Watson & Whalley (1975) *The Dictionary of Butterflies and Moths in Color*; placed the genus *Spiramiopsis* HAMPSON in the Lemoniidae and figured *S. comma* HAMPSON in color (: 318c).
- Fletcher & Nye in Nye (1982) *The generic names of the moths of the world*, Vol. 4, p. 153, transferred *Spiramiopsis* HAMPSON, 1901 from the Brahmaeidae to the Bombycidae (:153). Fletcher & Nye cited *Spiramiopsis comma* HAMPSON, 1901 as type-species by monotypy of *Spiramiopsis* HAMPSON, 1901.
- Remarks:** at the time being *Spiramiopsis* HAMPSON, 1901 is placed in the family Brahmaeidae SWINHOE, 1892.
- Sbordoni & Forestiero (1984) *Il Mondo delle Farfalle*, 312 pp.; see Sbordoni & Forestiero (1985) *Weltenzyklopädie der Schmetterlinge* [German Edition].
- Sbordoni & Forestiero (1985) *Weltenzyklopädie der Schmetterlinge*, 312 pp.; figured a ♂ adult of *Spiramiopsis comma* in color (: [143], fig. 4).
- Nässig & Paukstadt, U. (1990) [xii.1990] *Heterocera Sumatrana* (Göttingen), 6, pp. 117-136; noted that *Spiramiopsis* HAMPSON, 1901 is a member of the family Brahmaeidae (: 122). The authors noted that the larvae of *Spiramiopsis comma* HAMPSON, 1901 are known to feed upon *Clematis* which is a creeping member of the Ranunculaceae (: 122).
- Remarks:** above foodplant record was most likely based on an error, cf. Oberprieler & Duke (1994).
- Oberprieler & Duke (1994) [xi.1994] *Nachr. entomol. Ver. Apollo*, Frankfurt/Main, N.F. 15 (3), pp. 199-244, 8 col.-figs., 8 b/w-figs.; gave a historical review of the taxonomic placements of the genus *Spiramiopsis* and of the previous records of the immature stages and larval foodplants of its sole species *comma* HAMPSON, 1901. The immature stages of *S. comma* were compared with those of other selected bombycoids, mainly with those of *Brahmaea* (including *Acanthobrahmaea*, *Brahmophthalma*, and *Brachygnatha*) and *Dactyloceras*. The authors reported that particular structures of the larval morphologies are not consistent in *Brahmaea* and *Dactyloceras* and also occur in *Lemonia* (Lemoniidae). Further comparisons were carried out with the Palaearctic genus *Lemonia* HÜBNER, [1820] 1816 and the eastern African genus *Sabalia* WALKER, 1865 and the Bombycidae due to the placement of *Spiramiopsis comma* in this family by Fletcher & Nye (1982). Comparisons of the immature stages (: 222-225) with those of the Saturniidae, Sphingidae, and Mirinidae were done and found very different. The following color figures were provided (: 204): ♂ adult (fig.1), 1st larval instar (fig. 2), 2nd larval instar (fig. 3), 3rd larval instar (fig. 4), 4th larval instar (fig. 5), 5th larval instar, young larva (fig. 6), 5th larval instar, mature larva (fig. 7), and the eyespots in the mature larva at the metathorax (fig. 8). The following figures (b/w drawings) were provided: egg shell (fig. 9), front view of the head capsule (fig. 10), typical chalaza of the 1st instar larva, lateral view (fig. 11), 1st larval instar lateral view (fig. 12), setal map (fig. 13), and pupa ventrally, dorsally and laterally (figs. 14-16). The taxonomic position of *Spiramiopsis comma* on preimaginal characters in the Bombycoidea was discussed in detail (: 225-238). The authors concluded that the taxonomic position of *Spiramiopsis*

remains not entirely clear but proposed to place this genus in a family of its own. Consequently, *Spiramiopsis* was not placed to any family but remains as *incertae sedis* in Bombycoidea.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 and *Brachygnatha* ZHANG & YANG, 1993 are treated as junior synonyms of *Brahmaea* WALKER, 1855.

Fletcher & Nye in Nye (1995 [Reprint]) The generic names of the moths of the world, Vol. 4, xiv + 192 pp.; transferred *Spiramiopsis* HAMPSON, 1901 from the Brahmaeidae to the Bombycidae (:153). Fletcher & Nye cited *Spiramiopsis comma* HAMPSON, 1901 as type-species by monotypy of *Spiramiopsis* HAMPSON, 1901.

Remarks: at the time being *Spiramiopsis* HAMPSON, 1901 is placed in the family Brahmaeidae SWINHOE, 1892.

Nässig & Treadaway (1998) [vii.1998] Nachr. entomol. Ver. Apollo, Frankfurt/Main, Suppl. 17 (07.1998), pp. 425-440; noted that the position of *Spiramiopsis comma* HAMPSON, 1901 within the family remains obscure. The authors referred to the discussion in Minet (1994) and Oberprieler & Duke (1994).

Lemaire & Minet (1999 ["1998"]) 18. The Bombycoidea and their Relatives. In: Kristensen (ed)., Volume 4, Subvolume 35; included *Spiramiopsis* in the Brahmaeidae (: 342) because *Spiramiopsis* shares at least eight imaginal synapomorphies with *Dactyloceras*, *Calliprogonos*, *Acanthobrahmaea*, and *Brahmaea* (Minet 1994). *Spiramiopsis comma* was figured (: 343, fig. C). The authors noted that Sauter (1986) divided the family in two subfamilies: Dactyloceratinae and Brahmaeinae but does not take account of *Spiramiopsis*.

Remarks: at the time being *Acanthobrahmaea* SAUTER, 1967 is treated as a junior synonym of *Brahmaea* WALKER, 1855.

Kitching, Rougerie, Zwick, Hamilton, St Laurent, Naumann, Ballesteros Mejia & Kawahara (2018) A global checklist of the Bombycoidea (Insecta: Lepidoptera); published online 2018 Feb 12. doi: 10.3897/BDJ.6.e22236; listed the species-group name *comma* HAMPSON, 1901 in the genus *Spiramiopsis* HAMPSON, 1901 of the family Brahmaeidae.

Hamilton, St. Laurent, Dexter, Kitching, Breinhold, Zwick, Timmermans, Barber & Kawahara (2019) [bioRxiv reprint doi: <https://doi.org/10.1101/517995> online version posted 11.i.2019]; provided a TaxonID Tree which contains the Brahmaeidae with 68 spp. as sister family of the species-rich Eupterotidae with 396 spp. The tree contains *Brahmaea japonica*, *B. hearseyi*, *B. europaea*, *Dactyloceras* sp., *Spiramiopsis comma*, and *Lemonia philopalus* in the Brahmaeidae.

De Prins, J. & De Prins, W. (2011-2021) Afromoths, online database of Afrotropical moth species (Lepidoptera). World Wide Web electronic publication (<http://www.afromoths.net>) [accession date 01 DEC 2021] listed *Spiramiopsis comma* HAMPSON, 1901 in the family Brahmaeidae. A ♂ adult from South Africa, KwaZulu-Natal, Dargle Road, Howick, Lemonwood Cottages, 29°29'17 [sic] from coll. M. Ströhle (Weiden, Germany) was figured in color. A host plant record of *Secamone* sp. (Apocynaceae) was based on Pinhey (1975: 129).

Remarks: *Secamone* R.Br. 1810 (Apocynaceae: Secamonoideae) is a widespread genus across much of Africa, northern Australia, southern Asia, with numerous species endemic to Madagascar.

Remarks: The chapter “Literature” was provided in *Beiträge zur Kenntnis der wilden Seidenspinner*, Vol. 19 (16). Further literature is supposedly included in the last issue of this series.

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Artikel/Article: [A Preliminary Annotated Checklist of the Brahmaeidae of the World – Part VIII. The genera Calliprogonos MELL & HERING, 1937 and Spiramiopsis HAMPSON, 1901 \(Lepidoptera: Brahmaeidae\) 3-36](#)