A Preliminary Annotated Checklist of the Brahmaeidae of the World – Part VE. The vingerhoedti-group of the genus Dactyloceras MELL, 1927 (Lepidoptera: Brahmaeidae)

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Key words: Lepidoptera, Brahmaeidae, *Brahmaea, Dactyloceras, Shinocksiceras, lucina-*group, *bramarbas-*group, *neumayeri-*group, *vingerhoedti-*group, *richinii, barnsi*, annotated checklist, Afrotropical fauna, Oriental fauna, Palearctic fauna, bibliography, checklist.

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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 auch spätere Ergänzungen oder Korrekturen erleichtern sollte. Der Teil VE befasst sich speziell mit der *vingerhoedti*-Gruppe (sensu Paukstadt & Paukstadt 2021) der afrotropischen Gattung *Dactyloceras* MELL *in* Hering *in* Seitz, 1927. Diese erste zusammenhängende Analyse der Familie Brahmaeidae soll keine Gattungsrevision 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. New results of 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 VE deals specifically with the vingerhoedti-group (sensu Paukstadt & Paukstadt 20121) of the Afrotropical genus Dactyloceras MELL in Hering in Seitz, 1927. This first coherent analysis of the family Brahmaeidae is not intended to represent a generic 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.

The vingerhoedti-group

Collective-group names established by Bouyer (2002) Entomologia Africana, revue de l'A.S.B.L. «Société d'Entomologie africaine», 7 (1): pp. 15-27, and further publications by the same author comply with the requirements of the ICZN (1999) Art. 1.2, 10.3, 13.3.2, 23.7, 42.2.1, 66.1, and 67.14. Bouyer (2008: 184) noted that the discoveries of *D.* (Shinocksiceras) vandeweghei BOUYER, 2008, *D.* (Shinocksiceras) minettii BOUYER, 2008, *D.* (Shinocksiceras) cadioui BOUYER, 2008, and *D.* (Shinocksiceras) tanzaniensis BOUYER, 2008, as well as the two previous ones *D. vingerhoedti* BOUYER, 2005 and *D. noellae* BOUYER, 2006 call into question the division of the subgenus Shinocksiceras BOUYER, 2002 into collective-groups previously proposed by Bouyer (2002). The collective-group names bramarbas-group and barnsi-group (sensu Bouyer 2002) were deleted by Bouyer (2008) because they obviously not only do not represent monophyletic groups, but in addition also no longer offer any useful advantage in the identification or classification of the subgenus Shinocksiceras BOUYER, 2002.

We intend to establish collective-group names herein tentative for certain assemblages of taxonomic convenience and use the name *vingerhoedti*-group (sensu Paukstadt & Paukstadt 2021) for a group of taxa in the genus *Dactyloceras* Mell *in* Hering *in* Seitz, 1927 consists of the following taxa (named after the oldest available name):

vingerhoedti BOUYER, 2005 (Dactyloceras (Shinocksiceras)) cadioui BOUYER, 2008 (Dactyloceras (Shinocksiceras)) tanzaniensis BOUYER, 2008 (Dactyloceras (Shinocksiceras)) murphyi BOUYER, 2012 (Dactyloceras (Shinocksiceras))

D. barnsi (JOICEY & TALBOT, 1924) (Brahmaea) not fits into this group genitically due its closer relationship with the taxa of both collective-groups, the vingerhoedtigroup and the neumayeri-group (sensu Paukstadt & Paukstadt 2021). D. barnsi was not assigned to this group and treated without collective-group status (incertae sedis) as already done with D. richinii BERIO, 1940.

We would like to point out that in this work we do not divide the taxa of the genus *Dactyloceras* MELL, 1927 into the nominotypical subgenus and *Shinocksiceras* BOUYER, 2002 although we currently recognize the taxonomic status of *Shinocksiceras*. It is believed to confirm the status of *Shinocksiceras* during a generic revision. We would also like to point out that the classification into collective-groups is provisional and needs to be confirmed and possibly corrected in the course of a generic revision.

The collective-group name *vingerhoedti*-group (sensu Paukstadt & Paukstadt 2021) is hereby proposed tentative for certain assemblages of taxonomic convenience.

Important notes: This contribution to knowledge the Brahmaeidae is regarded as provisional with regard to completeness and occasionally provisional with regard to the status of scientific names that are specially marked here.

All quotations made in this issue (Part VE) about taxa that do not belong to the subgenus *Brahmophthalma* Mell, 1928, the subgenus *Brahmaea* Walker, 1855 and/or the genus *Dactyloceras* Mell, 1927 are provisional with regard to their taxonomic status. These taxa are dealt with conclusively in the relevant parts of the entire publication on the family Brahmaeidae SWINHOE, 1892.

Dactyloceras MELL, 1927

Brahmaeidae SWINHOE, 1892

Dactyloceras MELL in Hering in Seitz, 1927

Dactyloceras MELL in Hering in Seitz, 1927; STATUS-; subgenus of

Dactyloceras MELL in Hering in Seitz, 1927

Shinocksiceras BOUYER, 2002; STATUS-; subgenus of *Dactyloceras* MELL in Hering in Seitz, 1927

vingerhoedti Bouyer, 2005 (Dactyloceras (Shinocksiceras))

cadioui BOUYER, 2008 (Dactyloceras (Shinocksiceras))

tanzaniensis BOUYER, 2008 (Dactyloceras (Shinocksiceras))

murphyi BOUYER, 2012 (Dactyloceras (Shinocksiceras))

Type localities

vingerhoedti BOUYER, 2005 (*Dactyloceras* (*Shinocksiceras*)): Tanzania, Masenghetis forest, Morogoro.

cadioui BOUYER, 2008 (*Dactyloceras* (*Shinocksiceras*)): Tanzania, Rukwa reg., Mbizi Mts. F.R., 2,252 m.

tanzaniensis BOUYER, 2008 (*Dactyloceras* (*Shinocksiceras*)): Tanzania, Njombe.

murphyi BOUYER, 2012 (*Dactyloceras* (*Shinocksiceras*)): Malawi, Nyika N. P. [National Park], km 30 Chiunda-Juniper rd [road], 2,440 m, 10°42'S 33°57'E.



Map 1. Type localities of the taxa of the *vingerhoedti*-group* of the genus *Dactyloceras* Mell *in* Hering *in* Seitz, 1927 (Lepidoptera: Brahmaeidae).

- 1. vingerhoedti Bouyer, 2005 (Dactyloceras (Shinocksiceras))
- 2. cadioui BOUYER, 2008 (Dactyloceras (Shinocksiceras))
- 3. tanzaniensis BOUYER, 2008 (Dactyloceras (Shinocksiceras))
- 4. murphyi BOUYER, 2012 (Dactyloceras (Shinocksiceras))

^{*}Remarks: the collective-group name *vingerhoedti*-group (sensu Paukstadt & Paukstadt 2021) was established tentative for certain assemblages of taxonomic convenience only.

Dactyloceras MELL, 1927 The vingerhoedti-group of Dactyloceras MELL, 1927

vingerhoedti Bouyer, 2005 (Dactyloceras (Shinocksiceras))

Original citation and spelling: *Dactyloceras* (*Shinocksiceras*) vingerhoedti n. sp.

Original description: Bouyer, T. (2005) Description de nouveaux *Dactyloceras* MELL, 1927 et notes sur le genre (Lepidoptera, Brahmaeidae). – Lambillionea, CV, 3, Septembre 2005: pp. 453-455; 2 col.figs.

Type locality: Tanzania, Masenghetis forest, Morogoro.

Geographical and altitudinal distribution: type material from Tanzania, Masenghetis forest, Morogoro and from Rwanda, Forêt de Nyungwe [Rwanda is needed excluded from the geographical distribution because the ♂ paratype of *vingerhoedti* BOUYER, 2005 from Rwanda, Nyungwe became later a ♂ paratype of *D. vandeweghei* BOUYER, 2008]. Thus far there are no proven altitudinal records available from literature.

Etymology: not explicitly mentioned in the original description but most likely named in honor of E. Vingerhoedt, one of the collectors of Brahmaeidae in Africa.

Type material: the description based on the ♂ holotype, the ♀ allotype and 4 ♂ paratypes by original designation from the type locality, and a ♂ paratype from Rwanda. All type specimens were recorded in coll. Th. Bouyer (Chênée, Belgium).

Remarks: the $\[\]$ allotype of *vingerhoedti* BOUYER, 2005 became later the $\[\]$ allotype of *D. tanzaniensis* BOUYER, 2008. The $\[\]$ paratype of *vingerhoedti* BOUYER, 2005 from Rwanda, Nyungwe became later a $\[\]$ paratype of *D. vandeweghei* BOUYER, 2008.

Weritz, Riekert & Naumann (2016: 336) reported the holotype has been purchased by S. Naumann (Berlin) and will be incorporated with the coll. Naumann in the Rainer Seegers Foundation and eventually into the collections of Museum für Naturkunde in Berlin.

Remarks: the Recommendation of the ICZN (1999) 16C was not followed by Bouyer (2005); however this is a recommendation only. There is evidence that the primary types were stored contrary to the ICZN (1999) Recommendation 16C, but there is no evidence that the Recommendation 72F was not met, or that the author did not follow the recommendations given therein, with the exception that the types were not deposited in any institution.

Taxonomic notes: *Dactyloceras vingerhoedti* BOUYER, 2005 has been a species of the *barnsi*-group (sensu Bouyer 2005). Later, the names *bramarbas*-group and *barnsi*-group (sensu Bouyer 2002) were deleted by Bouyer (2008) because they obviously not represent monophyletic groups and no longer offer any useful advantage in the identification or classification of the subgenus *Shinocksiceras* BOUYER, 2002.

D. vingerhoedti BOUYER, 2005 is provisionally placed in the vingerhoedti-group (sensu Paukstadt & Paukstadt 2021).

Dactyloceras (Shinocksiceras) vingerhoedti BOUYER, 2005 was listed as species 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: one of the ♂ paratypes from Tanzania and the ♀ allotype from Tanzania were figured in color in the original description (: 455, figs. 1 and 2) [the ♀ allotype became later the ♀ allotype of *D. tanzaniensis* BOUYER, 2008]. 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 05 SEP 2021] figured 2 ♂ from Uganda, Kayonza Forest, Kigezi and Rwanda, Nyungwe Forest, 2,500 m [the identity was not confirmed by DNA analysis (not confirmed)].

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *vingerhoedti* BOUYER, 2005 are as follows:

‡vingerheoti; Bouyer (2008: 188) [lapsus, incorrect subsequent spelling]

Hybridizations: inter-generic and inter-specific pairings with *vingerhoedti* BOUYER, 2005 are unknown from literature.

Further readings on vingerhoedti BOUYER, 2005

Bouyer (2005) [ix.2005] Lambillionea, 105 (3), pp. 453-455, 2 col.figs.; described the new species *Dactyloceras* (*Shinocksiceras*) vingerhoedti from Tanzania and Rwanda. The new species was compared with *Dactyloceras barnsi* (Joicey & Talbot, 1924), *D. karinae* Bouyer, 2002 and *D. ducarmei* Bouyer, 2002. An updated arrangement of the *bramarbas*, barnsi and widenmanni collective-groups of the subgenus *Shinocksiceras* Bouyer, 2002 was presented (: 454). The barnsigroup (sensu Bouyer 2005) comprises of *Dactyloceras* (*Shinocksiceras*) barnsi, *D.* (*S.*) karinae, *D.* (*S.*) ducarmei, *D.* (*S.*) richinii Berio, 1940, and *D.* (*S.*) vingerhoedti Bouyer, 2005. A ♂ paratype and the ♀ allotype of *D. vingerhoedti* Bouyer, 2005 from Tanzania [see "Remarks" below] were figured in color (: 455, figs. 1 and 2).

Remarks: the \bigcirc allotype of *vingerhoedti* BOUYER, 2005 became later the \bigcirc allotype of *D. tanzaniensis* BOUYER, 2008 and the \bigcirc paratype of *vingerhoedti* BOUYER, 2005 from Rwanda became later a \bigcirc paratype of *D. vandeweghei* BOUYER, 2008.

Bouyer (2006) [ix.2006] Lambillionea, CVI (3), Tome I, pp. 402-404, 2 col.figs.; described the new species *Dactyloceras* (*Shinocksiceras*) *noellae* from Kenya. The new species was placed in the updated *barnsi*-group (sensu Bouyer 2006) which consists of the following taxa of the subgenus *Shinocksiceras*: *barnsi* (JOICEY & TALBOT, 1924), *ducarmei* BOUYER, 2002, *karinae* BOUYER, 2002, *noellae* BOUYER, 2006, *richinii* BERIO, 1940, and *vingerhoedti* BOUYER, 2005 from Rwanda and Tanzania. The author noted that *D. noellae* is the third species of *Dactyloceras* known from Kenya after *D. lucina* (forest species from central and western Africa, present in Kakamega, in western Kenya) and *D. widenmanni* (KARSCH, 1895) (eastern species from Kasigau, Kibwezi, Nairobi,). The author noted that he might expect to find one or two more species [in Kenya], in this case *D. vingerhoedti* in southern highland forests and *D. barnsi* in western highland forests (?Nandi, ?Mt. Elgon).

Remarks: the record of *D. vingerhoedti* BOUYER, 2005 from Rwanda refers to *D. vandeweghei* BOUYER, 2008 and the record of *D. vingerhoedti* BOUYER, 2005 from Tanzania partly (the female) refers to the later described *D. tanzaniensis* BOUYER, 2008.

Naumann (2008) [30.i.2008] Family Brahmaeidae, Brahmid Moths, pp. 111-116, *in*: Kühne (2008) Butterflies and moths diversity of the Kakamega forest (Kenya), 203 pp.; recorded *Dactyloceras* Mell *in* Hering *in* Seitz, 1927 from Africa excluding the South and arid Northwestern regions. Recently proposed emendations to names of taxa in *Dactyloceras* were discussed. The author noted that the ♂ genitalia structures of *Shinocksiceras* which were found distinct from those of the subgenus *Dactyloceras* by Bouyer (2002) were of no subgeneric significance (: 112). The correct authorship / original description of *Dactyloceras* Mell *in* Hering *in* Seitz, 1927 was pointed out. 19 taxa of *Dactyloceras* and their type localities were listed (: 112-113), including *D. vingerhoedti* Bouyer, 2005.

Bouyer (2008) [vi.2008] Lambillionea, CVIII, (2), pp. 184-188, 4 col.figs., 6 figs. phot.h.-t.; described 5 new taxa of the subgenus *Shinocksiceras* Bouyer, 2002 of the genus *Dactyloceras* Mell, 1927 of the family Brahmaeidae. The new taxa were compared with *D. barnsi* (Joicey & Talbot, 1924), *D. vingerhoedti* Bouyer, 2005, *D. noellae* Bouyer, 2006, and *D. ostentator* Hering, 1927. The definition of the structures (uncus only) were figured in phot.h.-t. (: 188) of *D. vingerhoedti* [sic].

Weritz, Riekert & Naumann (2016) [04.i.2016] Entomofauna, 37 (2), pp. 333-352; presented an updated list of taxa of the genus *Dactyloceras* Mell, 1927 listed in chronological order, the type localities were included, as well as the actual geographic situation was added when necessary. No remarks on the taxonomic status including synonymies were made. *D. vingerhoedti* BOUYER, 2005 (type locality: Tanzania, Masenghetis forest, Morogoro) was included in this overview.

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 *vingerhoedti* BOUYER, 2002 as species in the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* [HERING] [sic], 1927.

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 05 SEP 2021]; recorded *D. vingerhoedti* BOUYER, 2005 from the type locality and noted the misidentifications of a ♂ paratype and a ♀ allotype. The distribution range of *D. vingerhoedti* was provided in a map and table as Tanzania and Rwanda [= *D. vandeweghei* BOUYER, 2008]. Two ♂ were figured in color from Uganda, Kayonza Forest, Kigezi and from Rwanda, Nyungwe Forest, 2,500 m.

Remarks: the figured 3 specimens from Rwanda and Uganda, two neighboring states of Tanzania, are allmost similar to the figured paratype by Bouyer (2005) but also can belong to distinct taxa due to the unknown range of variability.

cadioui Bouyer, 2008 (Dactyloceras (Shinocksiceras))

- **Original citation and spelling:** *Dactyloceras* (*Shinocksiceras*) cadioui n. sp.
- Original description: Bouyer, Th. (2008) Nouveaux *Dactyloceras* MELL, 1927 d'Afrique centrale et orientale (Brahmaeidae, Lepidoptera). Lambillionea, CVIII, June 2008, pp. 184-188; 4 col.figs., 6 phot.h.-t.
- **Type locality:** Tanzania, Rukwa reg.[ion], Mbizi Mts. F.R. [Forest Reserve], 2,252 m.
- Geographical and altitudinal distribution: so far only recorded from the type series from Tanzania, Rukwa Region, Mbizi Mts. Forest Reserve, 2,252 m, and 2,236 m. 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 04 SEP 2021]; recorded *D. cadioui* also from Tanzania, Mwanza Region, Geita Forest, Katolo village, 02°53.552'S 032°09.442'E, 1,304 m and Tanzania, Rukwa Region, Mbizi Forest Reserve, 07°53.576'S 031°40.735'E, 2,240 m (identity rather uncertain due to missing confirmation by barcoding of BOLD).
- **Etymology:** the new species was affectionately dedicated to Jean-Marie Cadiou, who suddenly disappeared in 2007, in homage to his work on the global Sphingidae, to his innumerable contributions to African entomology and his unwavering attachment to human values.

Type material: the ♂ holotype by original designation and an unstated number of ♂ paratypes (at least a ♂ singleton) were cited being preserved in coll. Th. Bouyer (Chênée, Belgium). The whereabouts of a further ♂ paratype specimen collected 24.i.2006 was not explicitly mentioned.

Remarks: the Recommendation of the ICZN (1999) 16C was not followed; however this is a recommendation only. There is evidence that the primary types were stored contrary to the ICZN (1999) Recommendation 16C, but there is no evidence that the Recommendation 72F was not met, or that the author did not follow the recommendations given therein, with the exception that the types were not deposited in any institution.

The author recorded "Holotype et paratypes mâles [holotype and paratype males]: coll. Th. Bouyer" but listed a "Paratype mâle [paratype male]:" only (lapsus?).

Weritz, Riekert & Naumann (2016: 336) reported the holotype has been purchased by S. Naumann (Berlin) and will be incorporated with the coll. Naumann in the Rainer Seegers Foundation and eventually into the collections of Museum für Naturkunde in Berlin.

Taxonomic notes: *D. cadioui* was described as species of the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* MELL, 1927 (Brahmaeidae). The names *bramarbas*-group and *barnsi*-group (sensu Bouyer 2002) were deleted by Bouyer (2008) because they obviously not represent monophyletic groups, but in addition also no longer offer any useful advantage in the identification or classification of the subgenus *Shinocksiceras* BOUYER, 2002.

D. cadioui BOUYER, 2008 is provisionally placed in the *vingerhoedti*group (sensu Paukstadt & Paukstadt 2021) at the time being.

Dactyloceras (Shinocksiceras) cadioui BOUYER, 2008 was listed as species 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: the ♂ holotype was figured in color dorsally (: 187, fig. 4) and part of the ♂ genitalia structures (uncus only) (: 188). 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 04 SEP 2021]; figured two ♂ adults of *cadioui* in color dorsally (identity uncertain rather).

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *cadioui* BOUYER, 2008 are as follows: so far nothing known from literature

Hybridizations: inter-generic and inter-specific pairings with *cadioui* BOUYER, 2008 are unknown from literature.

Further readings on cadioui BOUYER, 2008

Bouyer (2008) [vi.2008] Lambillionea, CVIII, (2), pp. 184-188, 4 col.figs., 6 figs. phot.h.-t.; described 5 new taxa of the subgenus *Shinocksiceras* Bouyer, 2002 of the genus *Dactyloceras* Mell, 1927 of Brahmaeidae. Those were *vandeweghei* from Rwanda, *minettii* from Tanzania, *cadioui* from Tanzania, *tanzaniensis* from Tanzania, *collinsi* [unclear status, rather cited as subspecies of *ostentator* Hering, 1927] from R.D. [D.R.] Congo and Kenya. The new taxa were compared with *D. barnsi* (Joicey & Talbot, 1924), *D. vingerhoedti* Bouyer, 2005, *D. noellae* Bouyer, 2006, and *D. ostentator* Hering, 1927. The following \circlearrowleft holotypes were figured in color (: 187): *D.* (*S.*) *vandeweghei* (fig. 1), *D.* (*S.*) *minettii* (fig. 2), *D.* (*S.*) *cadioui* (fig. 4), and *D.* (*S.*) *tanzaniensis* (fig. 3). The following \circlearrowleft genitalia structures (uncus only) were figured in phot.h.-t. (: 188): *D. minettii*, *D. tanzaniensis*, *D. noellae*, *D. cadioui*, *D. vingerhoedti* [sic], and *D. vandeweghei*.

Weritz, Riekert & Naumann (2016) [04.i.2016] Entomofauna, 37 (2), pp. 333-352; presented an updated list of taxa of the genus *Dactyloceras* MELL, 1927 listed in chronological order, the type localities were included, as well as the actual geographic situation was added when necessary. No remarks on the taxonomic status including synonymies were made. *D. cadioui* BOUYER, 2008 (type locality: Tanzania, Rukwa reg., Mbizi Mts. F.R., 2,252 m) was included in this overview.

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 *cadioui* BOUYER, 2008 as species in the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* [HERING] [sic], 1927.

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 04 SEP 2021]; recorded *D. cadioui* BOUYER, 2008 from the type locality and from Tanzania, Mwanza Region, Geita Forest, Katolo village, 02°53.552'S 032°09.442'E, 1,304 m and Tanzania, Rukwa Region, Mbizi Forest Reserve, 07°53.576'S 031°40.735'E, 2,240 m. Each one & adult was figured in color dorsally. The authors correctly remarked that the number of & paratypes was not stated in the original description.

Remarks: the illustrated ♂ specimens from Tanzania largely agree with the type specimen of *D. cadioui* BOUYER, 2008, but could also belong to a closely related taxon from Tanzania.

tanzaniensis Bouyer, 2008 (Dactyloceras (Shinocksiceras))

Original citation and spelling: *Dactyloceras* (*Shinocksiceras*) tanzaniensis n. sp.

Original description: Bouyer, Th. (2008) Nouveaux *Dactyloceras* MELL, 1927 d'Afrique centrale et orientale (Brahmaeidae, Lepidoptera). – Lambillionea, CVIII, June 2008, pp. 184-188; 4 col.figs., 6 phot.h.-t.

Type locality: Tanzania, Njombe.

Geographical and altitudinal distribution: so far known from the type series from Tanzania, Njombe, the Iringa Province, Chimala forest, 1,950 m, and the Mbeya Province, Mt. Rungwe north, 2,300 m. 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 04 SEP 2021] recorded *D. tanzaniensis* BOUYER, 2008 from East Tanzania, Mufindi, 08°31.382'S 35°24.346'E, 2,025m.

Etymology: the name *tanzaniensis* refers to the African state where the type series was found, Tanzania.

Type material: the description based on the \circlearrowleft holotype and the \hookrightarrow allotype (ex \hookrightarrow allotype of *D. vingerhoedti*) by original designation and an unstated number of \circlearrowleft paratypes (probably two specimens). All type specimens were recorded being preserved in coll. Th. Bouyer (Chênée, Belgium). The listing of the type material has been not clear at all.

Remarks: the Recommendation of the ICZN (1999) 16C was not followed; however this is a recommendation only. There is evidence that the primary types were stored contrary to the ICZN (1999) Recommendation 16C, but there is no evidence that the Recommendation 72F was not met, or that the author did not follow the recommendations given therein, with the exception that the types were not deposited in any institution.

Weritz, Riekert & Naumann (2016: 336) reported the holotype has been purchased by S. Naumann (Berlin) and will be incorporated with the coll. Naumann in the Rainer Seegers Foundation and eventually into the collections of Museum für Naturkunde in Berlin.

Taxonomic notes: *D. tanzaniensis* was described as species of the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* MELL, 1927 (Brahmaeidae). The names *bramarbas*-group and *barnsi*-group (sensu Bouyer 2002) were deleted by Bouyer (2008) because they obviously not represent monophyletic groups and also no longer offer any useful advantage in the identification or classification of the subgenus *Shinocksiceras* BOUYER, 2002.

D. tanzaniensis BOUYER, 2008 is provisionally placed in the vingerhoedti-group (sensu Paukstadt & Paukstadt 2021).

Dactyloceras (Shinocksiceras) tanzaniensis BOUYER, 2008 was listed as species 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: the ♂ holotype was figured in color dorsally (: 187, fig. 3) and part of the ♂ genitalia structures (uncus dorsally only) (: 188). The ♀ allotype was figured in color by Bouyer (2005) (: 455, figs. 1 and 2) (as ♀ allotype of *D. vingerhoedti* BOUYER, 2005). 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 04 SEP 2021] figured *D. tanzaniensis* from Tanzania E, Mufindi, 08°31.382'S 35°24.346'E, 2.025 m in color.

Synonyms: for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *tanzaniensis* BOUYER, 2008 are as follows: so far nothing known from literature

Hybridizations: inter-generic and inter-specific pairings with *tanzaniensis* BOUYER, 2008 are unknown from literature.

Further readings on tanzaniensis BOUYER, 2008

Bouyer (2008) [vi.2008] Lambillionea, CVIII, (2), pp. 184-188, 4 col.figs., 6 figs. phot.h.-t.; described 5 new taxa of the subgenus Shinocksiceras BOUYER, 2002 of the genus Dactyloceras Mell, 1927 of the family Brahmaeidae. Those were vandeweghei from Rwanda, minettii from Tanzania, cadioui from Tanzania, tanzaniensis from Tanzania, collinsi [most likely described as subspecies of ostentator HERING, 1927] from the R.D. [D.R.] Congo and Kenya. The new taxa were compared with D. barnsi (JOICEY & TALBOT, 1924), D. vingerhoedti BOUYER, 2005, D. noellae BOUYER, 2006, and D. ostentator HERING, 1927. The following δ holotypes were figured in color (: 187): D. (S.) vandeweghei (fig. 1), D. (S.) minettii (fig. 2), D. (S.) cadioui (fig. 4), and D. (S.) tanzaniensis (fig. 3). The following δ genitalia structures (uncus only) were figured in phot.h.-t. (: 188): D. minettii, D. tanzaniensis, D. noellae, D. cadioui, D. vingerheodti [sic], and D. vandeweghei. The author noted that it is very likely that the geographic distribution of tanzaniensis is more extensive. D. cadioui and D. tanzaniensis were mentioned to be undoubtedly two sister species, both in terms of habitus and d genital structures, which are closely related. Bouyer (2008: 184) noted that the discoveries of vandeweghei BOUYER, 2008, minettii BOUYER, 2008, cadioui BOUYER, 2008, and tanzaniensis BOUYER, 2008, as well as the two previous ones vingerhoedti BOUYER, 2005 and noellae BOUYER, 2006 call into question the division of the subgenus Shinocksiceras BOUYER, 2002 into collective-groups previously proposed by Bouyer (2002). The collective-group names bramarbas-

- group and *barnsi*-group (sensu Bouyer 2002) were deleted by Bouyer (2008) because they obviously not only do not represent monophyletic groups, but in addition also no longer offer any useful advantage in the identification or classification of the subgenus *Shinocksiceras* BOUYER, 2002.
- Bouyer (2012) [xii.2012] Lambillionea, CXII, (3), 2012: pp. 221-225; described the new species *Dactyloceras* (*Shinocksiceras*) *murphyi* of the family Brahmaeidae from the Nyika Plateau, Malawi. The \circlearrowleft holotype was figured in color dorsally (: 223, fig. 3) and ventrally (: 224, fig. 6). The new species was compared with *D. tanzaniensis* BOUYER, 2008.
- Weritz, Riekert & Naumann (2016) [04.i.2016] Entomofauna, 37 (2), pp. 333-352; presented an updated list of taxa of the genus *Dactyloceras* Mell, 1927 listed in chronological order, the type localities were included, as well as the actual geographic situation was added when necessary. No remarks on the taxonomic status including synonymies were made. *D. tanzaniensis* BOUYER, 2008 (type locality: Tanzania, Njombe) was included in this overview.
- 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 *tanzaniensis* BOUYER, 2008 as species in the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* [HERING] [sic], 1927.
- 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 04 SEP 2021]; recorded *D. tanzaniensis* BOUYER, 2008 from the type locality and a 3 adult (figured in color) from Tanzania E, Mufindi, 08°31.382'S 35°24.346'E, 2,025m. The authors noted that the number of 3 paratypes was not stated in the original description.

Remarks: the figured specimen is almost similar the holotype figured by Bouyer (2008).

murphyi BOUYER, 2012 (Dactyloceras (Shinocksiceras))

- **Original citation and spelling:** Dactyloceras (Shinocksiceras) murphyi n. sp.
- **Original description:** Bouyer, Th. (2012) Description de nouvelles espèces des genres *Tissanga* Aurivillius, 1903 et *Dactyloceras* Mell, 1927 du Malawi (Lepidoptera, Brahmaeidae, Eupterotidae). Lambillionea, CXII, (3), 2012: pp. 221-225; 6 col.figs.
- **Type locality:** Malawi, Nyika N. P. [National Park], km 30 Chiunda-Juniper rd [road], 2,440 m, 10°42'S 33°57'E.

- **Geographical and altitudinal distribution:** so far only known from North Malawi, Nyika N. P. [National Park] [Nyika Plateau], 2,440 m.
- **Etymology:** the new species was named in honor of Ray J. Murphy, who for many years has been harvesting insects in Malawi, part of the Bombycoides he entrusted to the author.
- Type material: the description based on the ♂ holotype by original designation in coll. Th. Bouyer (Chênée, Belgium) and 2 ♂ paratypes (there is no information in the original description on the whereabouts of the two ♂ paratypes but these were confirmed in coll. Bouyer by 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 04 SEP 2021]). Remarks: the Recommendation of the ICZN (1999) 16C was not followed; however this is a recommendation only. There is evidence that the primary types were stored contrary to the ICZN (1999) Recommendation 16C, but there is no evidence that the Recommendation 72F was not met, or that the author did not follow the recommendations given therein, with the exception that the types were not deposited in any institution.
 - Weritz, Riekert & Naumann (2016: 336) reported the holotype has been purchased by S. Naumann (Berlin) and will be incorporated with the coll. Naumann in the Rainer Seegers Foundation and eventually into the collections of Museum für Naturkunde in Berlin.
- **Taxonomic notes:** Bouyer (2012: 222) noted that *D.* (*S.*) *murphyi* BOUYER, 2012 is more closely related to *tanzaniensis* BOUYER, 2008 but he did not include this taxon in any collective-group.
 - *D. murphyi* BOUYER, 2012 is provisionally placed in the *vingerhoedti*group (sensu Paukstadt & Paukstadt 2021).
 - *Dactyloceras* (*Shinocksiceras*) *murphyi* BOUYER, 2012 was listed as species 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:** the ♂ holotype was figured in color dorsally (: 223, fig. 3) and ventrally (: 224, fig. 6) in the original description.
- **Synonyms:** for misinterpretations see the appropriate text parts. Junior subjective synonyms, junior objective synonyms, errors and incorrect subsequent spellings for *murphyi* BOUYER, 2012 are as follows: so far nothing known from literature
- **Hybridizations:** inter-generic and inter-specific pairings with *murphyi* BOUYER, 2012 are unknown from literature.

Further readings on murphyi BOUYER, 2012

Bouyer (2012) [xii.2012] described the new species *Dactyloceras* (*Shinocksiceras*) *murphyi* of the family Brahmaeidae from the Nyika Plateau, Malawi. The 30 holotype was figured in color dorsally (: 223, fig. 3) and ventrally (: 224, fig. 6). The new species was found being closer to *D. tanzaniensis* BOUYER, 2008.

Remarks: this species is considered to be poorly defined in the original description and therfore is hardly identified in a series of specimens. There are at least genetic studies missing and figures of the 3 genitalia structures.

Weritz, Riekert & Naumann (2016) [04.i.2016] Entomofauna, 37 (2), pp. 333-352; presented an updated list of taxa of the genus *Dactyloceras* Mell, 1927 listed in chronological order, the type localities were included, as well as the actual geographic situation was added when necessary. No remarks on the taxonomic status including synonymies were made. *D. murphyi* BOUYER, 2012 (type locality: N. Malawi, Nyika N.P., km 30 Chiunda – Juniper rd., 2,440 m, 10°42'S 33°57'E) was included in this overview.

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 *murphyi* BOUYER, 2012 as species in the subgenus *Shinocksiceras* BOUYER, 2002 of the genus *Dactyloceras* [HERING] [sic], 1927.

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 04 SEP 2021]; [erroneously] recorded the type locality of *D. murphyi* BOUYER, 2012 from Malawi N, Nyika National Park, km 9 from Thazima Gate, 14.xii.2006.

Remarks: the $\[\beta \]$ holotype and both $\[\beta \]$ paratypes are from km 30 Chiunda-Juniper rd, 2,440 m, 10°42'S 33°57'E and were collected 19/21-XI-2011 as confirmed in the original description.

Remarks: A "Preliminary Checklist" of the names in the family Brahmaeidae, the "References" and the "Internet References", and the "Acknowledgements" are supposedly provided with the last issue of this series.

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– Part VE. The vingerhoedti-group of the genus Dactyloceras MELL, 1927

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