

**Redescription of *Candezea dahlmani* Jacoby, 1899
from tropical Africa, transferred to
Panafrolepta n. gen.¹
(Coleoptera: Chrysomelidae: Galerucinae)**

Sabrina MERTGEN & Thomas WAGNER

Abstract: After revision of the speciose Afrotropical galerucine genera *Monolepta* Chevrolat, 1837, *Candezea* Chapuis, 1879 and *Barombiella* Laboissière, 1931, many described species remained which are not closely related to those taxa and need to be transferred to other genera. *Candezea dahlmani* Jacoby, 1899 represents such a phylogenetically isolated species. In particular the asymmetric aedoeagus, an unique character in Afrotropical Galerucinae with elongated basi-metatarsus, underline the necessity of describing a new genus *Panafrolepta* n. gen. *Luperodes circumcinctus* Laboissière, 1919, n. syn., and *Candezea bifrons* Laboissière, 1923, n. syn. are junior synonyms of *Candezea dahlmani* which is type species of *Panafrolepta* n. gen. by monotypy. A comprehensive re-description of the species and description of the new genus is given. The species is widely distributed and abundant throughout savannahs and semi-deserts of tropical Africa, but absent from dense rain forests and high mountains.

Key words: Coleoptera, Chrysomelidae, Galerucinae, *Candezea dahlmani*, *Panafrolepta* n. gen., Africa, Afrotropis, taxonomy, new genus, new synonyms, biogeography

Introduction

A revision on Afrotropical “Monoleptites” sensu the most recent catalogue of the Galerucinae (WILCOX 1973) was started some years ago

¹ 24th contribution to the taxonomy, phylogeny and biogeography of Afrotropical Galerucinae.

(cf. WAGNER 1999). The classification, generic delimitation and taxonomic status of most genera of this group was very unsatisfactory (Wagner 2003a). A major character of these leaf beetles is the elongated basi-metatarsus. After the species-rich groups *Monolepta* Chevrolat, 1837 (WAGNER 2000a, 2000b, 2001, 2002, 2003b, 2005), *Candezea* Chapuis, 1879 (WAGNER & KURTSCHIED 2005), and *Barombiella* Laboissière, 1931 (WAGNER & FREUND 2003) have been revised, many further species remained, which have been originally placed in those taxa, but are not con-generic. Consequently, several new genus names have been introduced recently, e.g. *Afromaculepta* Hasenkamp & Wagner, 2000, *Afromegalepta* Schmitz & Wagner, 2001, *Afrotizea* Stapel & Wagner, 2001, *Afrocandezea* Scherz & Wagner, 2002, and *Afronaumannia* Steiner & Wagner, 2005.

The studied material of Afrotropical Galerucinae includes numerous specimens of *Candezea dahlmani* Jacoby, 1899, which external and in particular genital morphology show many differences to the type species of *Candezea*, *Candezea occipitalis* (Reiche, 1857). Since this species is phylogenetically isolated and cannot be incorporated in any other described genus of Afrotropical Galerucinae, it need to be transferred to a new genus which is herein described. This paper includes a comprehensive re-description of *Candezea dahlmani* with figures, fotos of types including the originals labels, and a distribution map. The taxon is type species of *Panafrolepta* **n. gen.** by monotypy.

Material and methods

The re-description based on 769 labelled specimens from the following collections: The Natural History Museum, London (BMNH); Hungarian National History Museum (HNHM); Institute Royal des Sciences Naturelles de Belgique, Brussels (IRSN); Museo Civico di Storia Naturale, Genova (MSGD); Museo e Instituto di Zoologica Sistematica, Torino (MIZT); Musée National d'Histoire Naturelle, Paris (MNHN); Museum für Naturkunde der Humboldt Universität zu Berlin (MNHU); Musée Royal d'Afrique Centrale, Tervuren (MRAC); Musee Zoologico Barcelona (MZB); Museum of Zoology, Helsinki (MZHF); Naturhistorisches Museum Wien (NHMW); Naturhistoriska Riksmuseet, Stockholm (NHRS); Naturkundemuseum Erfurt (NME); National Museums of Kenya, Nairobi (NMK); National Museum of Namibia,

Windhoek (NMNW); Oxford University Museum of Natural History (OUMNH); South African Museum, Cape Town (SAMC); South African National Collection of Insects, Pretoria (SANC); Transvaal Museum, Pretoria (TMSA); Zoologisches Forschungsmuseum Alexander Koenig, Bonn (ZFMK); Zoological Institute, St. Petersburg (ZISP); Zoologisches Institut und Zoologisches Museum, Hamburg (ZMUH); private collection Ron BEENEN, Nieuwegein, The Netherlands (CBe); private collection Uwe HEINIG, Berlin (CHe); private collection Joachim MAUSER, Niddatal (CMA).

Morphometric measurements were made on the external characters of 15 specimens. Absolute measurements are: total length from labrum towards the apex of elytra, elytral length, maximal width of both elytra, and maximal pronotal width. Relative measurements are: maximal width of both elytra to length of elytron, pronotal length to width, length of second to third antennomere, length of third to fourth antennomere, length of basi-metatarsus to metatibia.

***Panafrolepta* n. gen.**

Table I – V (Figs. 1 – 13)

Type species: *Candezea dahlmani* Jacoby, 1899 (by monotypy)
= *Luperodes circumcinctus* Laboissière, 1919, **n. syn.**
= *Candezea bifrons* Laboissière, 1923, **n. syn.**

Etymology: The generic name is a combination of the greek prefix “pan” (throughout, everywhere), Africa, and *Monolepta*, referring to the characteristic elongated basi-metatarsus. Gender: female.

Description: Total length: 3.35–5.35 mm (mean: 4.46 mm). Usually females slightly longer and broader than males. Larvae and pupae unknown.

Head: Eyes convex, ovate. Labial and maxillary palps very slender (Fig. 2) yellow to brownish-yellow, mandible yellow, apically dark brown. Labrum, clypeus and frons yellow to brownish-yellow. Antenna with eleven slender and elongated antennomeres (Fig. 1) yellow, the apical two to three antennomers often slightly darker, brownish. Third antennomere longer than second (Fig. 5a), in particular in females (Fig. 5b) length of second to third antennomere 0.69–0.85 (mean: 0.78), length of third to fourth antennomere 0.62–0.76 (mean: 0.67).

Thorax: Pronotum pale yellow or brownish-yellow. Pronotal width 1.10–1.70 mm (mean: 1.49 mm), length to width of pronotum 0.54–0.62

(mean: 0.59). Pronotum sub-rectangular, posteriorly slightly extended in the middle (Figs 1, 3), coarsely punctuated. Procoxal cavities widely open, prosternal process very slender (Fig. 3). Ventral side entirely pale yellow to pale brownish-yellow. Mesosternum as broad as medially long, metasternum broad (Fig. 4). Elytra pale yellow to light yellowish-brown, outer margins and elytral suture usually dark brown to black. These fine lines very rarely lacking. Length of elytron 2.50–4.20 mm (mean: 3.25 mm), elongated, ovate, maximum width close to the middle. Maximum width of both elytra 1.55–3.30 mm (mean: 2.50 mm), maximum width of both elytra to length of elytron 0.67–0.77 (mean: 0.72). Alae fully developed (Fig. 7). Scutellum triangular, coloured like elytra. Legs pale yellow to light brownish-yellow throughout. Basi-metatarsus elongated and slender, about half as long as metatibia (Fig. 8c), length of basi-metatarsus to metatibia 0.41–0.48 (mean: 0.46).

Abdomen: Yellow. Five visible sternites, anal sternite in males apically with deep incisions (Fig. 6b), in females rounded (Fig. 6a).

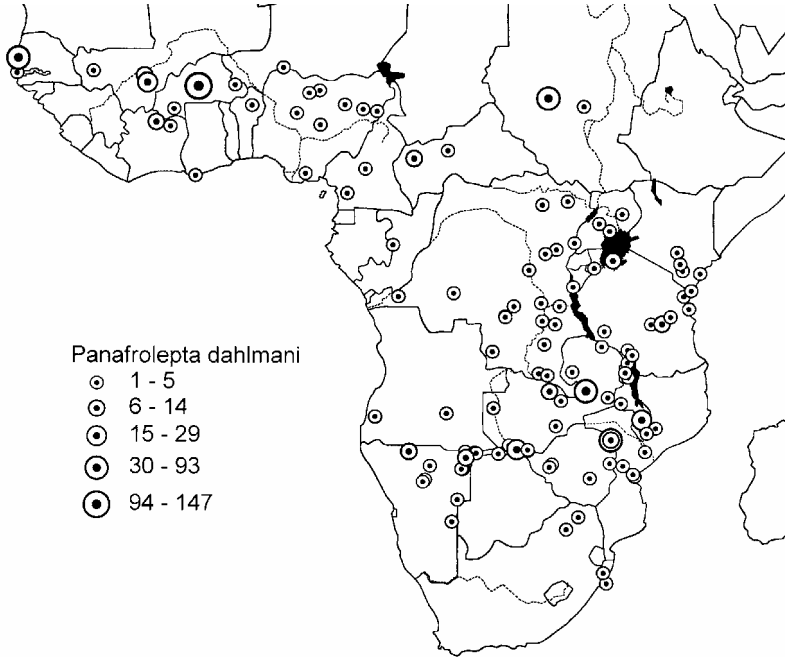
Female genitalia: Spermatheca of simple type with bent, comparatively short cornu and insignificantly enlarged nodulus (Fig. 9). Bursa sclerites insignificantly sclerotized.

Male genitalia: Aedeagus without parameres. Median lobe asymmetric, in dorsal view slightly bent towards the left, apex spoon-like, narrowed subapically. Tegmum, attached in the middle (Fig. 10a). Tectum elongate, very slender (Fig. 10b). Endophallus with rows of slender spiculae in the middle, two groups of short strong spiculae at the base of the tectum, and two longer and one short spiculae beyond the tectum (Figs 10a, b).

Distribution: Known mainly from savannahs of the Sudano-Zambesian vegetation zone throughout Africa from Senegal to Ethiopia in the North towards the Cape Region in the South. Few specimens also from dry savannahs and even deserts, but not known from dense tropical forests and high montane areas (map).

Diagnosis: A general overview of the generic characters of most other Afrotropical “Monoleptites” was given recently (WAGNER 2003a). *Barombiella* and *Bonesioides* Laboissière, 1925 can be easily distinguished from *Panafrolepta* **n. gen.** by metallic green or blue colouration, the trapezoidal pronotum and the short aedeagus which is deeply incised apically and has strong endophallic spiculae (FREUND & WAGNER 2003, WAGNER & FREUND 2003). Most species of *Galerudolphia* Hincks, 1949

are similar in size and colouration as *Panafrolepta* n. gen., including black margined elytra, but this genus is characterized by a trapezoidal pronotum, closed procoxal cavities, and a slender, apically incised aedeagus with a small, spine-less endophallus (BOLZ & WAGNER 2005).



Map: Distribution of *Panafrolepta dahlmani* (Jacoby, 1899).

Taxa with nearly rectangular pronotum can be distinguished as follows: *Candezea* are bulged and much larger (total length: 5.7 to 8.1 mm), elytra are much more bulged and on average more slender (width of both elytra to maximal length of elytron 0.59–0.73), the median lobe is symmetric, very slender, has three pairs of strong, long endophallic spiculae, and the spermatheca has a long, bent cornu (WAGNER & KURTSCHIED 2005). Species of *Afrocandezea* are also much more bulged, the elytra are on average shorter (width of both elytra to maximal length of elytron 0.65–0.85), third antennomere is longer (length of second to third antennomere: 0.53–0.80), median lobe with characteristic fixed spiculae and the spermatheca is of typical shape with significant nodulus

and bent cornu (SCHERZ & WAGNER 2002). *Afrocrania* Hincks, 1949 are characterized by very slender elytra (width of both elytra to maximal length of elytron: 0.57–0.62) and slender median lobe with symmetric spiculae (MIDDELHAUVE & WAGNER 2001). Finally, *Monolepta*, which comprise about 100 Afrotropical species of a wide morphological range, can be distinguished clearly by genitalic characters in both sexes (cf. WAGNER 2003). The colouration of *Panafrolepta* n. gen. with yellow elytra having narrow black margins, does not occur in any African *Monolepta* species.

Considering external characters, *Panafrolepta* n. gen. are dorso-ventrally compressed, overall yellow Galerucinae with narrow black margined elytra, broad pronotum and course punctuation in particular of the pronotum. This combination of characters does not occur in any other Afrotropical galerucine beetle with elongated basi-metatarsus. If there is any doubt about the generic allocation, *Panafrolepta dahlmani* can clearly be distinguished by the asymmetric median lobe and its peculiar endophallic armature from all other Afrotropical Galerucinae.

Type material

***Candezea dahlmani* Jacoby, 1899:** Lectotype: ♀ “Africa Kurazor / Jacoby coll. 1909–28a / *Candezea dahlmani* Jac. / Type / Lectotypus *Candezea dahlmani* Jac. / *Panafrolepta dahlmani* (Jacoby, 1899) Mertgen & Wagner det. 2005” (BMNH; Figs 11a, b), examined. Type locality: locality unknown, presumably in West Africa. Martin JACOBY (1899) mentioned three specimens in his original description, “...of which two are simply labelled “Africa” and the other has the above mentioned locality, which is unknown to me.” To fix the species on one primary type, a lectotype is herein designated.

***Luperodes circumcinctus* Laboissière, 1919:** Lectotype: ♂ “Côte d’ Afrique or. angl., Shimoni, Alluaud et Jeannel Nov. 1911, St. 9 / Coll. R. I. Sc. N. B. / Muséum Paris Coll. Générale / Type / *Luperodes circumcinctus* m, V. Laboissière – Dét. 1919 / Lectotypus *Luperodes circumcinctus* Th. Wagner desig. 2005 / *Panafrolepta dahlmani* (Jacoby, 1899) Mertgen & Wagner det. 2005” (MNHN; Figs 12a, b), examined. Type locality: Kenya, 4.40S/39.37E. – Paralectotypes: 1 ex. (IRSN), 2 ex. (ZMUH) with same data as lectotype. Victor LABOISSIÈRE mentioned at least two specimens in his description (“Muséum de Paris et coll. Laboissière”) without designation of a holotype. Consequently a lectotype is herein designated.

***Candezea bifrons* Laboissière, 1923:** Lectotype: ♀ “Ht. Sénégal Badoumbé Dr. Nodier I à V.1882 / Type / Museum Paris ex. Dr. Nodier Coll. Générale / C. *bifrons* Laboissière / Lectotypus *Candezea bifrons* Th. Wagner desig. 2005 / *Panafrolepta dahlmani* (Jacoby, 1899) Mertgen & Wagner det. 2005” (MNHN; Figs 13a, b), examined. Type locality: Mali, 13.41N/10.13E. Paralectotype: 1 ex. (ZMUH) with same data as lectotype. Victor LABOISSIÈRE mentioned at least two

specimens in his description ("Muséum de Paris et coll. Laboissière") without designation of a holotype. Consequently, a lectotype is herein designated.

Further material examined

Angola: 1 ex., 76 28 (BMNH); 3 ex., Kasinga, VII., Miss. Sc. Suisse (ZMUH); 1 ex., Bruco, 15.07S/13.11E, II.–III.1972 (BMNH); 1 ex., Capangombe, 5 km E. Angola, 15.05S/13.10E, XI.1974 (NMNW). – **Benin:** 1 ex. Zambbara, 10.28N/3.33E, VIII.1970, G. PIERRARD (MRAC). – **Botswana:** 28 ex., Kubulabula, Chobe River, 17.50S/24.55E, VII.1930, V.–L. Kal. Exp. (TMSA). – **Burkina Faso:** 1 ex., Nagbange, II.1964, sur *Anacardium* (BMNH); 147 ex., Ouagadougou, 12.21N/1.31W, XI.1970, I.–II.1971, P. C. FERNANDEZ (MRAC); 2 ex., Kantchari, 12.29N/1.31E, XI.1973, R. LINNAVUORI (MZHF); 1 ex., Upper Volta, Massili, XI.1973, R. LINNAVUORI (MZHF); 4 ex., Nariore (Boulkiemdè), VII.1996, 310 m, D. GIANASSO (MIZT). – **Burundi:** 1 ex., Usumbura, 1.13S/28.10E, I.1926, Dr. H. SCHOUTEDEN (MRAC). – **Cameroon:** 3 ex., TESSMANN (MNHU); 1 ex., Joko, 5.29N/12.19E (MNHU); 1 ex., Mogue, 3.28N/10.49E, XI.1906, SEINER (MNHU); 1 ex., 7° nördl. Breite, Galeriewald, 3.II.1913, HOUY (MNHU); 1 ex., Weg n. Bosum, Carnot, III.1914 TESSMANN (MNHU); 22 ex., Uamgebiet, Bosum, 6.19N/16.22E, IV., VI.1914, TESSMANN (MNHU). – **Congo (Zaire):** 1 ex., Tavares (MNHU); 1 ex., Kisantu, 5.07S/15.05E, P. GOOSSENS (MRAC); 2 ex., Elisabethville, 11.40S/27.28E, IX.1911, Miss. Agric. (MRAC); 3 ex., Congo da Lemba, 4.50S/19.4E, IV.1911, R. MAYNE (MRAC); 2 ex., Lusindoi, 7.25S/28.06E, VIII.1911, L. BURGEON (MRAC); 1 ex., Kindu, 2.57S/25.56E, XI.1913, L. BURGEON (MRAC); 1 ex., Lukunga, r. Niemba, 5.57S/28.26E, XI.1917/I.1918, Dr. PONS (MRAC); 1 ex., Niembo-Kalembe Lembe, 1.34S/27.16E, VII.1918, R. MAYNE (MRAC); 3 ex., E. Tanganyika, Kigoma, 0.40S/29.36E, IX.1918, R. MAYNÉ (MRAC); 11 ex., Kidada (Kitobola), 0.57N/31.43E, II.1922, Dr. H. SCHOUTEDEN (MRAC); 1 ex., Stanleyville, 2.30N/27.0E, V.1926, Lt. J. GHESQUIERE (MRAC); 1 ex., Sandoa, 9.41S/22.53E, IX.1930, F. G. OVERLAET (MRAC); 1 ex., Kigoma, V.1930, Dr. P. GÉRARD (MRAC); 1 ex., Lulua, Kapanga, 11.30S/26.45E, XII.1932, F. G. OVERLAET (MRAC); 2 ex., Lac Tanganyka, Nyanza, I.1933, L. BURGEON (MRAC); 4 ex., Tanganyka-Moero, Nyunzu, 4.20S/29.35E, I.–II.1934, DE SAEGER (MRAC); 1 ex., Bassin Lukuga, 5.40S/26.55E, IV.–VII.1934, DE SAEGER (MRAC); 1 ex., P. N. Upemba, Kiamakoto entre Masombwe-Mukana, 9.05S/27.12E, 1070 m, X. 1948, Miss. G. F. DE WITTE (MRAC); 1 ex., P. N. Upemba, Kaziba, 7.09S/27.01E, 1140 m, II.1948, Miss. G. F. DE WITTE (MRAC); 1 ex., P. N. Upemba, Kanonga, 700 m, 5.55S/24.04E, II.1949, Miss. G. F. DE WITTE (MRAC); 1 ex., Elisabethville Ruashi, 11.40S/27.28E, X.1949, CHR. SEYDEL (MRAC); 39 ex., P. N. Garamba, Miss. H. DE SAEGER, 4.20N/29.30E, IV.–XI.1950, G. DEMOULIN (13 ex. IRSN, 26 ex. MRAC); 54 ex., P. N. Garamba, Miss. H. DE SAEGER, 4.20N/29.30E, IV.–XI.1950, IV.–XII.1951, III.–VIII.1952, H. DE SAEGER (3 ex. IRSN, 51 ex. MRAC); 3 ex., Gandajika, 6.45S/23.57E, V.1959, J. DECELLE (MRAC); 1 ex., M'Pemba Zeo, Sankuru, 6.49S/23.58E, III.1960, Don R. MARECHAL (MRAC); 1 ex., 180 km W from Bukavu, rainforest, Hung. Sci. Africa Exp. "Teleki", 17.III.1988, No. 202, A. VOJNITS (HNHM). – **Congo-Brazzaville:** 3 ex., Fort-

Crampel, Le Moutl vend., 7.00N/19.10E, I.1957, via REINBEK (IRSN, ZMUH); 1 ex., N'Gami, 0.49S/14.37E, J. WAHLBERG (NHRS). – **Gambia**: 4 ex., Bathurst (= Bajul), 13.27N/16.34 W, I.1968, T. E. LEILER (NHRS). – **Ghana**: 1 ex., Takoradi, 4.55N/1.45W, ex coll. BREUNING (MRAC). – **Ivory Coast**: 6 ex., Ferkessedougou, 9.20N/5.00W, V.1964, J. DECELLE (MRAC); 1 ex., Comoe NP, 9.00N/3.50W, VI.–VII.1997, C. MODY (ZFMK). – **Kenya**: 1 ex., Malindi, Aerbuko Forest, 3.13S/40.07E, V.1940, T. H. E. JACKSON (NMK); 1 ex., Tsavo, 3.00S/38.40E, VIII.1948, A. F. J. GEDYE (NMK); 1 ex., Thua, 1.28S/38.12E, VII.1937, MAC ARTHUR (NMK); 1 ex., Tiva River, Tsavo West, 2.26S/38.27E, VII.1980, M. GRIFFIN, J. U. M. JARVIS (NMNW). – **Malawi**: 2 ex., Zomba, 15.22S/35.22E, H. S. STANNUS (BMNH); 1 ex., 1910, Dr. J. E. S. OLD (BMNH); 2 ex., Mlanje, 16.05S/36.29E, IV.1913, S. A. NEAVE (BMNH); 1 ex., Chintech, 11.49S/34.10E, IV.1978, R. JOCQUE (MRAC); 29 ex., South Region, 50 km N Zomba, Liwonde, 470 m, 15.22S/35.19E, VIII.2000, L. SCHMIDT (ZFMK); 1 ex., Central Region, 30 km S Lilongwe, Bunda, 1100 m, 14.00S/33.34E, VII.2000, L. SCHMIDT (ZFMK); 3 ex., North Region, U. Livingstonia, 800–1200 m, 10.36S/34.07E, VII.2000, L. SCHMIDT (ZFMK); 1 ex., North Region, 50 km SE Mzuzu, Nkhata Bay, 11.26S/33.55E, VII.2000, L. SCHMIDT (ZFMK). – **Mali**: 26 ex., I. R. C. T.–M'Pesoba, 12.40N/5.43W, VIII.–X.1969, VIII.–IX.1970, G. PIERRARD (MRAC); 2 ex., Fana, 10.45N/2.55E, IX.–X.1969, VIII.1970, G. PIERRARD (MRAC); 11 ex., Kassarola, X.1969, VIII.–IX.1970, G. PIERRARD (MRAC); 14 ex., Cinzana, 13.15N/5.58W, IX.–X.1969, IX.1970, G. PIERRARD (MRAC). – **Mozambique**: 12 ex., Massikessi, Port Manica, 20.04S/34.44E, X.1897, G. A. K. MARSHALL (BMNH); 1 ex., Manini, X.1897, G. A. K. MARSHALL (BMNH); 1 ex., Amatongas, 19.10S/33.45E, I.1905, P. A. SHEPPARD (BMNH); 1 ex., Chibababa, Lower Buzi River, 19.32S/34.45E, XII.1906, C. F. M. SWYNNERTON (BMNH); 3 ex., Caia, 17.49S/35.23E, VIII.1911, H. SWALE (BMNH); 1 ex., Valley of Kola River, nr. Mt. Chiperone, 16.30S/35.44E, IV.1913, S. A. NEAVE (BMNH); 2 ex., Lourenzo Marques, 28.58S/32.25E, 1968, on Cashew, C.I.E.A. (BMNH); 1 ex., Cabora Bassa, VIII.1979, S. A. KRISTE (BMNH); 1 ex., Chupanga, 18.02S/35.36E, TAVARES (MNHU). – **Namibia**: 59 ex., D. Sambesi Gebt., 12.58S/30.40E, X.1906, F. SEINER (MNHU); 1 ex., Leeupan, Kaudom Game Reserve, 19.03S/20.39E, II.1952, M. PUSCH & E. MARAIS (NMNW); 1 ex., Kantimo Mulilo, E. Caprivi, 17.28S/24.18E, X.1970, A. STRYDOM (TMSA); 8 ex., Ruacana Falls, Owambo, 18.00S/16.00E, VIII.1973 (NMNW); 2 ex., Roedtan, 24.46S/29.06E, X.1975, S. A. STEYNBERG (SANC); 1 ex., Otjiwarongo, 23.49S/19.34E, VI.1978, S. LOUW, M.-D. PENRITH (NMNW); 3 ex., Waterberg, Plateau, 20.30S/17.12E, VII.1978, Rhino dung, ENDRÖDY-YOUNGA (TMSA); 1 ex., Hereroland East Reserve Farm 855, 21.59S/20.02E, VI.–VII.1978, pitfall traps (NMNW); 1 ex., Okarukondovi 117 SE 2118 Ba Okahandja, 21.59S/16.58E, VII.–VIII.1978, pitfall traps (NMNW); 1 ex., Katima Mulilo, 17.28S/24.18E, Caprivi, S.W.A., X.1987, E. MARAIS (NMNW); 1 ex., Nyangana/Okavango, 18.00S/20.40E, IV.1988, H. ROER (ZFMK); 1 ex., Gelukkie: Okavango, West Caprivi Park, 18.03S/21.27E, IV.1990, E. MARAIS (NMNW); 3 ex., Tsumeb Res. Station Tsumeb Distr., 19.10S/17.44E, IV.1991, C. ROBERTS & M. PUSCH (2 ex. NMNW, 1 ex. SANC); 1 ex., Waterberg Platopark

(sweeping on the plateau), 20.25S/17.15E, IV.1991, E. HOLM & S. GUSSMANN (NMNW); 3 ex., Otjiwarongo, Waterberg Pl. Park, 20.19S/17.20E, VI.–VII.1991, M. PUSCH (NMNW); 2 ex., Waterberg Pl. Park Otjiwarongo Distr., 20.19S/17.20E, VI.–VII.1991, M. PUSCH (NMNW); 2 ex., Hereroland West, 20.27S/17.34E, VI.–VII.1991, M. PUSCH (NMNW); 1 ex., b. Grootfontain, Farm Hurisib, X.1991, U. GÖLLNER (MNHU); 3 ex., Kaudom Camp, Kaudom Game Reserve, 18.30S/20.44E, II.1992, M. PUSCH & E. MARAIS (NMNW); 2 ex., ZMB 1992, Bushmanland, Klein Dobe, 19.25S/20.21E, lux II.1992, M. UHLIG & U. GÖLLNER (MNHU); 1 ex., Klein Dobe Bushmanland, 19.26S/20.30E, II.1992, M. PUSCH & E. MARAIS (NMNW); 13 ex., ZMB 1992, Kavango: Kaudom Camp & Buffalo Camp & Popa Falls, 18.31S/20.43E & 18.09S/21.42E & 18.07S/21.35E, lux II.–III.1992, M. UHLIG & U. GÖLLNER (MNHU); 1 ex., ZMB 1992, East Caprivi: Mudumu NP, Nakatwa, 18.10S/23.26E, III.1992 lux, M. UHLIG (MNHU); 3 ex., Katima Mulilo, 17.29S/24.17E, III.1992, R. OBERPRIELER (SANC); 2 ex., Kavango: Mahango Game Reserve, 18.14S/21.43E, X.1993, F. KOCH (MNHU); 2 ex., Popa Falls, 18.07S/21.35E, III.1994, F. KOCH & J. DECKERT (MNHU); 2 ex., Rundu Distr., Mile 46 Agric. Research Center 18.18S/19.15E, III.2002, light collecting, Northern Kalahari woodland, V. RICHTER & M. UHLIG (MNHU). – **Niger**: 1 ex., Niger b. Niamey, 2.47N/29.06E, III. 1973 (coll. MAUSER); 1 ex., Malbaza, 13.56N/5.31E, XI.1973, R. LINNAVUORI (MZHF); 1 ex., Africa Or. Ingi, Port Hall, 2.47N/29.06E (MCSG). – **Nigeria**: 1 ex., N. Nigeria, Azare, 10.26N/12.07E, 1925, Dr. LI. LLOYD (NMK); 3 ex., S. E. Kano, Azare, 10.26N/12.07E, 1925, Dr. LI. LLOYD (BMNH); 1 ex., Gombe, Bassa, 10.06N/6.37E, I.1929, Dr. LI. LLOYD (BMNH); 1 ex., Gombe, Matzoro Lakes, 10.55N/10.45E, I.1929, Dr. LI. LLOYD (BMNH); 1 ex., Aba, 5.06N/7.21E, VIII.1938, P. LEFEVRE (MRAC); 1 ex., Kano, 12.00N/8.31E, X.1940, R. A. HOWE (BMNH); 5 ex., 60 km N Kano, Teich mit Schilf, 12.0N/8.31E, III.1973 (Cma); 1 ex., Malumfashi, 11.48N/7.39E, VII.1973, R. LINNAVUORI (MZHF); 1 ex., Gumi-Anka, 9.07N/8.33E, VII.1973, R. LINNAVUORI (MZHF); 2 ex., Mubi, Gongola St., 10.16N/13.16E, XI.–XII.1979, WYPR. (BMNH). – **Senegal**: 1 ex., coll. CLAVAREAU (MRAC); 4 ex., DEYROLLE 900 (ZISP); 2 ex., M'Bambey, 14.40N/16.28W, IV.1939, IV.–V.1939, M. RISBEC (MRAC); 51 ex., Bambey, 14.40N/16.28W, II.1940–1944, III.1946, 1946, J. RISBEC (BMNH); 1 ex., Aurrange, X.1967, SALA (MZB). – **Sudan**: 1 ex., I. Krongo, N.M.P., II.1927, J. W. COWLAND, on Kharub(?) pest of leaf, Sudan Govt., MTRL / Ent. Coll. C3088 (BMNH); 2 ex., Talodi, 10.40N/30.25E, IV.1930, I.1931, F. G. S. WHITEFIELD, on senna (BMNH); 1 ex., Equatoria. Mwolo- Mundi, 9.16S/31.58E, II.1963, LINNAVUORI (MZHF). – **South Africa**: 1 ex., Dr. PENTHER (NHMW); 2 ex., Zoutpansberg, Shilouvane, 28.10S/32.15E, JUNOD, coll. CLAVAREAU (MRAC); 4 ex., Transvaal, Roedtan, 24.46S/29.06E, X.1975, S. A. STEYNBERG (SANC); 1 ex., Westfalia Estate, Tzaneen, 23.44S/30.07E, I.1993, C. ERICHSEN (SANC). – **Tanzania**: 1 ex., Langenburg, 9.33S/34.07E, XII.1897–III.1898, FÜLLEBORN (MNHU); 2 ex., Magila, 5.05S/38.47E, V.1898 (BMNH); 1 ex., Westabh. Makonde Hochland, 9.59S/34.30E, XI.1910, METHNER (MNHU); 1 ex., Vy. Ruaha R., 7.25S/36.03E, XII.1910, S. A. NEAVE (BMNH); 1 ex., Uha, X.1912 (MNHU); 3 ex., Tanga, 5.07S/29.05E, II.1915, METHNER (MNHU); 1 ex., Rukwa,

8.00S/32.10E, IV.1938, D.G. MAC INNES (NMK); 1 ex., Magila, 5.07S/38.46E, V.1998 (BMNH); 2 ex., O-Tanganyika, Konsi Uvinsa, X.–XI.1899, GLAUNING (MNHU); 13 ex., Mikumi Umg., 7.24S/36.58E, 19.IX.2002, U. HEINIG (CHe); 1 ex., Morogoro, 6.49S/37.40E, Nachl. SCHMITT (NHMW); 1 ex., Zanzibar, 6.10S/39.12E, RAFFRAY (MSGD); 7 ex., Ukerewe, 2.09S/32.52E, CONRADS (NMK). – **Uganda**: 1 ex., Soroti, 1.43N/33.37E, I.1921, H. HARGREAVES (NMK); 1 ex., Kabarole Kibale Nat. Park, 25 km SE Fort Portal, U. Kanyawara (MUBFS), 1600m, 2.46S/31.19E, VII.–VIII.1998, L. SCHMIDT (ZFMK); 1 ex., Kampala-Kigoma, 0.19N/32.35E, 4.52S/29.36E, Dr. NÄGELE (MNHU). – **Zambia**: 1 ex., Sambesiufer v. Sescheter, Hatima Malilo, 14.23S/23.0E, VII.–VIII.1905, SEINER (MNHU); 1 ex., L. Bangweolo, E. shore of, 3800 f., 11.22S/29.32E, pres. 1909, S. A. NEAVE (OUMNH); 1 ex., Mid Luangwa Valley, 1700 f., 14.49S/19.06E, pres. 1909, S. A. NEAVE (OUMNH); 1 ex., Upper Luangwa River, VII.–VIII.1910, S. A. NEAVE (BMNH); 2 ex., Livingstone, Zambesi R., II.1913, H. C. DOLLMAN (BMNH); 8 ex., Mwangwa, 13.00S/27.40E, VII.1913, H. C. DOLLMAN (BMNH); 1 ex., Lukanga, 13.47S/28.38E, VIII.1915, H. C. Dollman (BMNH); 2 ex., Victoria Falls, 17.55S/25.51E, IX.1939, J. OGILVIE (BMNH); 1 ex., N. Rhodesia, Victoria Falls, 17.55S/25.51E, IX.1931, J. OGILVIE (NMK); 1 ex., Chinganganka lux Hills., 15.53S/28.11E, III.1963, M. UHLIG (MNHU); 1 ex., Chingangauka, 15.53S/28.11E, III.1993, E. MARAIS (NMNW); 1 ex., 29 km NW Chipata, Kamanga, 825 m catcher, 13.30S/32.29E, III.1993, M. UHLIG (MNHU); 1 ex., Zambesi, M. WILMAN (SAMC). – **Zimbabwe**: 3 ex., Victoria Falls, 17.56S/25.52E, VIII.1929, G. A. K. MARSHALL (BMNH); 4 ex., Salisbury, 17.53S/31.03E, II.1921, C. E. GODMAN (BMNH); 4 ex., Gwaii River, 19.19S/27.31E, II.1921, C. E. GODMAN (BMNH); 44 ex., Umgebung Kotwa Broken Causeway, 17.03S/32.45E, VIII.1986, Driftnetz, M. LILLIG, S. POTEL (NME); 9 ex., Umgebung Kotwa Broken Causeway, 17.03S/32.46E, VIII.1986, Tuchfalle, M. LILLIG, S. POTEL (NME); 10 ex., Umgebung Kotwa Broken Causeway, 17.03S/32.45E, VIII.1986, Tuchfalle, M. LILLIG, S. POTEL (NME); 2 ex., VII.1990, E. HOLZER (CBe); 1 ex., Kyle Recr. Park at Lake Mutirikwi, 20.13S/31.00E, XII.1993, F. KOCH (MNHU); 1 ex., Leslies, nr. Umtali, Manica B.S.A., 18.58S/32.40E, X.1997, G. A. K. MARSHALL (BMNH); 1 ex., Straße Bulawayo–Victoria Falls, ca. 130 km von Bulawayo Bushcamp, 19.03S/27.52E, III.2000, U. GÖLLNER (MNHU).

Acknowledgements

We cordially thank all curators and other colleagues who made material available to us: S. SHUTE (BMNH, London); R. BEENEN (Nieuwegein, Netherlands); O. MERKL (HNHM, Budapest); M. CLUDTS, D. DRUGMAND (IRSN, Brussels); M. DACCORDI (MIZT, Torino); N. BERTI (MNHN, Paris); J. FRISCH, M. UHLIG, H. WENDT (MNHU, Berlin); M. DE MEYER (MRAC, Tervuren); R. POGGI (MSGD, Genova); G. MASO

(MZB, Barcelona); H. SILFVERBERG (MZHF, Helsinki); H. SCHÖNMANN (NHMW, Wien); B. VIKLUND (NHRS, Stockholm); M. HARTMANN (NME, Erfurt); W. KINUTHIA, K. MAES (NMK, Nairobi); E. MARAIS (NMNW, Windhoek); G. MCGAVIN (OUMNH, Oxford); B. GROBBELAAR (SANC, Pretoria); M. COCHRANE (SAMC, Cape Town); R. MÜLLER (TMSA, Pretoria); K. ULMEN, M. SCHMITT (ZFMK, Bonn); A. KIREJSHUK (ZISP, St. Petersburg); R. ABRAHAM, H. RIEFENSTAHL (ZMUH, Hamburg). This study was supported by Deutsche Forschungsgemeinschaft (grant no. Wa 1393/3–2).

References

- FREUND, W. & WAGNER, Th. (2003): Revision of *Bonesioides* Laboissiere, 1925 (Coleoptera, Chrysomelidae, Galerucinae) from continental Africa. – Journal of Natural History **37**:1915–1976.
- BOLZ, H. & WAGNER, Th. (2005): Revision of *Galerudolphia* Hincks, 1949 (Coleoptera: Chrysomelidae). – Insect Systematics and Evolution **35**:361–400.
- HASENKAMP, R. & WAGNER, Th. (2000): Revision of *Afromaculepta* gen. n., a monophyletic group of Afrotropical galerucinae leaf beetles (Coleoptera: Chrysomelidae). – Insect Systematics and Evolution **31**:3–26.
- JACOBY, M. (1899): Additions to the knowledge of the Phytophagous Coleoptera of Africa. Part II. – Proceedings of the Zoological Society of London **1899**: 339–380.
- LABOISSIÈRE, V. (1919): Diagnoses de Galerucini (Col.) nouveaux d’Afrique. – Bulletin de la Société Entomologique de France **24**:302–305.
- LABOISSIÈRE, V. (1923): Descriptions de Galerucini nouveaux d’Afrique. – Annales de la Société Entomologique de Belgique **62**:183–192.
- MIDDELHAUVE, J. & WAGNER, Th. (2001): Revision of *Afrocrania* (Coleoptera: Chrysomelidae, Galerucinae). Part I: Species in which the males have head cavities or extended elytral extrusions. – European Journal of Entomology **98**:511–531.
- SCHMITZ, J. & WAGNER, Th. (2001): *Afromegalepta* gen. nov. from tropical Africa (Coleoptera: Chrysomelidae, Galerucinae). – Entomologische Zeitschrift **111**: 283–286.
- STAPEL, H. & WAGNER, Th. (2001): *Afrotizea* gen. nov. from tropical Africa. – Beiträge zur Entomologie **51**:365–373.
- STEINER, I. & WAGNER, Th. (2005): *Afronaumannia* gen. nov., a new monophyletic group of leaf beetles from Africa (Coleoptera: Chrysomelidae, Galerucinae). – Entomologische Zeitschrift **115**:15–24.
- WAGNER, Th. (1999): An introduction to the revision of Afrotropical *Monolepta* and related taxa (Chrysomelidae, Coleoptera). – In WALOBEEK, D. (ed.): Systematik im Aufbruch. Tagungsband zur ersten Jahrestagung der Gesell-

- schaft für Biologische Systematik in Bonn vom 17.–19. September 1998. – Courier Forschungsinstitut Senckenberg **215**: 215–220.
- WAGNER, Th. (2000a): New *Monolepta* species (Coleoptera: Chrysomelidae) from Eastern Africa. – Entomologische Zeitschrift **110**:34–40.
- WAGNER, Th. (2000b): Revision of Afrotropical *Monolepta* species (Coleoptera, Chrysomelidae, Galerucinae). Part I: Species with red and black coloured elytra, pronotum and head, with description of new species. Entomologische Zeitschrift, **110**: 226–237.
- WAGNER, Th. (2001): Revision of Afrotropical *Monolepta* Chevrolat, 1837 (Coleoptera: Chrysomelidae, Galerucinae). Part II: Species with red elytra, pronotum and elytra, with descriptions of new species. – Bonner Zoologische Beiträge **50**:49–65.
- WAGNER, Th. (2002): Revision of Afrotropical *Monolepta* species (Coleoptera, Chrysomelidae, Galerucinae). Part III: Species with red elytra and yellow prothorax, including description of new species. – Deutsche Entomologische Zeitschrift **49**:27–45.
- WAGNER, Th. (2003a): Present status of a taxonomic revision of Afrotropical *Monolepta* and related groups (Galerucinae). – In Furth, D. G. (ed.): Special Topics in Leaf Beetle Biology. Proceedings V. International Symposium on the Chrysomelidae, Foz do Iguacu 2000 (Sofia & Moscow: Pensoft), pp. 133–146.
- WAGNER, Th. (2003b): Revision of Afrotropical *Monolepta* Chevrolat, 1837 (Coleoptera, Chrysomelidae, Galerucinae) – Part IV: Species with red head and thorax and black elytra or black elytra with red apex, with description of new species. – Annales Sciences Zoologiques, Miscellanea **49**:37–89.
- WAGNER, Th. (2005): Revision of the *vincta* species-group of *Monolepta* Chevrolat, 1837 from Africa, Arabia and the Near East (Coleoptera, Chrysomelidae, Galerucinae). – Bonner Zoologische Beiträge **53**:255–282.
- WAGNER, Th. & FREUND, W. (2003): Revision of *Barombiella violacea* (Jacoby, 1894) (Coleoptera: Chrysomelidae, Galerucinae). – Entomologische Zeitschrift **113**:258–262.
- WAGNER, Th. & KURTSCHIED, A. (005): Revision of *Candezea* CHAPUIS, 1879 (Coleoptera, Chrysomelidae, Galerucinae) from continental Africa. – Journal of Natural History **39**:2591–2641.
- WAGNER, Th. & SCHERZ, X. (2002): *Afrocandezea* gen. nov. from tropical Africa (Coleoptera: Chrysomelidae, Galerucinae). – Entomologische Zeitschrift **112**:357–362.
- WILCOX, J. A. (1973): Chrysomelidae: Galerucinae, Luperini: Luperina. – In Junk, W. (ed.) Coleopterorum Catalogus, Supplementa **78**(3) ('s-Gravenhage: Junk), pp. 433–664.
- Korresponding author:
 Dr. Thomas WAGNER, Universität Koblenz-Landau, Institut für Integrierte Naturwissenschaften – Biologie, Universitätsstraße 1, D-56070 Koblenz, Germany. e-mail: thwagner@uni-koblenz.de

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Mitteilungen des Internationalen Entomologischen Vereins](#)

Jahr/Year: 2006

Band/Volume: [31_2006](#)

Autor(en)/Author(s): Mertgen Sabrina, Wagner Thomas

Artikel/Article: [Redescription of *Candezea dahlmani* Jacoby, 1899 from tropical Africa, transferred to *Panafrolepta* n. gen. 1 \(Coleoptera: Chrysomelidae: Galerucinae\) 11-22](#)