Establishment of Eichlinia gen.n. for the Western hemisphere Melittiini (Lepidoptera: Sesiidae), with a catalogue of the genus

Установление Eichlinia gen.n. в Melittiini (Lepidoptera: Sesiidae)
Западного полушария с каталогом рода

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ABSTRACT. A new genus from the tribe Melittiini (Lepidoptera, Sesiidae) is erected from the Western hemisphere: Eichlinia gen.n. The new genus differs from the all known genera of the tribe in the combination of the characters of both male and female genitalia. A key for determination of all genera of the tribe Melittiini is presented. All Nearctic and some Neotropical species of Melittiini are transferred from the genus Melittia to the new one. A preliminary catalogue species of the new genus, which contains updated taxonomic information including the references to the original descriptions, information on name-bearing types, mostly complete bibliographies, data on host plants and current known distribution is provided.

KEY WORDS: Melittia, Eichlinia, Nearctic Region, Neotropical Region, systematic, taxonomy, new combinations.

Introduction

The genus Melittia Hübner, 1819 [“1816"] is the largest sesiid genus of the tribe Melittiini Le Cerf, 1917 [Arita, Gorbunov, 1996a, b; Gorbunov, Arita, 1996, 1997; Pühringer, Kallies, 2004, 2017; Gorbunov, 2014, 2015, 2017, 2020; Kallies, 2020]. It was originally erected by Hübner [1816–1826: 128] with the only species Melittia anthedoniformis Hübner, 1819 [“1816"], which was considered to be proposed as a replacement name for Sphinx bombiliformis Stoll, 1782 (= Sphinx bombyliformis Stoll, 1782) — a primary junior homonym of Sphinx bombyliformis Linnaeus, 1758 (Lepidoptera: Sphingidae) [Fletcher, Nye, 1982; Arita, Gorbunov, 1995; Gorbunov, 2017]. Further, M. anthedoniformis turned out to be the junior subjective synonym for Sesia chalciformis Fabricius, 1793 [Hampson, 1892]. Hence, Melittia anthedoniformis Hübner, 1819 [“1816"] (= Sphinx bombyliformis Stoll, 1782 [nec Sphinx bombyliformis Linnaeus, 1758]) = Sesia chalciformis Fabricius, 1793) is the type species and it was fixed by monotypy in accordance with Article 68.3 [ICZN, 1999]. The type locality of Melittia bombyliformis (Stoll, 1782) is “… op de Kust van Coromandel … (… sur la Côte de Coromandel …)” (Stoll, 1782: 242) or east coast of the Hindustan Peninsula south of the Krishna River Delta to Cape Komorn. The type locality of Sesia chalciformis Fabricius, 1793 was cited in the original description as “Habitat Tranquebariae …”, that is the town of Tharangambadi on the Coromandel Coast of India.

For a reason unclear to me, Hampson [1892: 202] indicates Melittia satyriniformis Hübner 1831 ["1825"] “from N. America” as the type species of the genus Melittia. His point of view was supported by Beutennüller [1901: 231] and Bartel [1912: 379]. But already in his work on Sesiidae of the Oriental and Afrotropical regions, Hampson [1919: 84] corrected his mistake and rightly indicated the type species of the genus Melittia. Perhaps this fact for a long time prevented the elucida-
tion of the actual generic position of the Melitini species of North America. Only in the mid-90s of the last century it was indicated that they all have clear differences in the structure of the male genitalia from *Melittia* from the Old World and all of them should be separated from it [Arita, Gorbunov, 1996b; Gorbunov, Arita, 1997].

In 1916–17 Le Cerf described three new genera of Melitini from South America, namely *Premelitina* Le Cerf, 1916 (type species: *Premelitina rufescens* Le Cerf, 1916), *Neosphacia* Le Cerf, 1916 (type species: *Neosphacia combusta* Le Cerf, 1916), and *Melittina* Le Cerf, 1917 (type species *Melittina nigra* Le Cerf, 1917) [Le Cerf, 1916; 1917].

In their publication regarding a classification of Sesiidae of America north of Mexico, Duckworth and Eichlin [1977] absolutely without any argument synonymized these three taxa with the genus *Melittia* Hübner, 1819 ["1816"]. In 2017 I confirmed that the representatives of the Neotropical taxa of Melitini “do not belong to *Melittia* and must be placed elsewhere” [Gorbunov, 2017: 128]. More recently, a review of the Neotropical genera of Melitini described by Le Cerf was published, which restored all of them from synonyms of the genus *Melittia* [Moreira et al., 2019]. And now it is completely clear to me that all Melitini species of North America as well as some of those from the Neotropical region belong to another genus that has not yet been described. Below I describe it as *Eichlinia* gen.n. In addition, I provide a preliminary catalogue of the genus *Eichlinia* gen.n., which contains updated taxonomic information including the references to the original descriptions, information on name-bearing types, mostly complete bibliographies, data on host plants and current known distribution. All syn-

The images of moths were taken with a Sony® α450 DSLR camera equipped with a Minolta® 50 f/2.8 Macro lens. The genitalia were photographed using a Keyence® BZ-9000 Biorevo Fluorescence Microscope. The processing of all illustrations was finalized with Adobe® Photoshop® CC 2020 software.

All images of dry specimens are labeled with a number consisting of letters and digits: name of the family, two consecutive digits separated by n-dash and a year following m-dash (e.g. SESIIADE Pictures №№ 0473-0474–2019). These letters and digit codes corre-

Female genitalia. 8th tergite narrow; lamella postvaginalis V-shaped, well scleritized, lamella antevaginalis undeveloped; ostium bursae at level of 8th tergite, membranous, slightly funnel-shaped membranous; antrum membranous, thin and long, about as long as ostium bursae; corpus bursae ovoid without or with a small signum of minute spines (Fig. 15).
DIFFERENTIAL DIAGNOSIS. Superficially, species of this new genus resemble certain species of genus *Melittia* with completely opaque forewings (*M. astarte* (Westwood, 1848) species-group and *M. aureosquamata* (Wallengren, 1863) species-group), and *Afromelittia caerulea* Bartsch, 2016. However, by the structure of the male genitalia *Eichlinia cucurbitae* (Harris, 1828), comb.n.: 1–4 — male, USA, Montana, Columbus, 21.VI–01.VII.1994, native collector. Sesiidae picture № 0473-0474–2019. Alar expanse 25.2 mm (COGM); 3–4 — female, USA, Montana, Columbus, 21.VI–01.VII.1994, native collector. Sesiidae picture № 0469-0470–2019. Alar expanse 26.0 mm (COGM); 5–8 — *Mellitia sangaica nipponica* Arita et Yata, 1987; 5–6 — male, Japan, Honshu, Aichi-ken, Toyota-shi, 07.I.2002, ex l., O. Gorbunov & B. Tanaka leg. Sesiidae picture № 0061-0062–2014. Alar expanse 41.5 mm (COGM); 7–8 — female, Japan, Honshu, Aichi-ken, Kasugai-shi, Takagi, 18.I.2002, ex l., O. Gorbunov & Y. Arita leg. Sesiidae picture № 0053-0054–2014. Alar expanse 42.0 mm (COGM).
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*Eichlinia* gen.n. seems to be the closest to *Afromelittia* Gorbunov & Arita, 1997 (type species: *Melittia occidentalis* Le Cerf, 1917), but they can be distinguished by both male and female genitalia (somewhat different shape of the tegumen-uncus complex and valva in the male, position of the ostium bursae, shape of the lamella postvaginalis, structure of the antrum and the shape of corpus bursae). Compare Figs 10–15 with Figs 43 and 44 in Gorbunov, Arita, 1997 or with Figs 13a–g in Eichlin, Duckworth, 1988. From the genus *Melititia*, the species of the genus *Eichlinia* gen.n. clearly differ also by the structure of both male and female genitalia [compare Figs 10–15 and Figs 13a–g in Eichlin, Duckworth, 1988 with numerous Figs in Arita, Gorbunov, 1995, 1996a, b; Gorbunov, Arita, 1996, 1997; Špatenka et al., 1999; Gorbunov, 2014, 2015, 2017, 2020; Bartsch, 2016].

All genera of the tribe Melittiini can be determined by the following key compiled by the combinations of external features, morphology of both male and female genitalia and zoogeographical affiliation. I exclude from this key a completely unstudied monotypical genus *Desmopoda* Felder et Felder, 1874 (type species: *Desmopoda bombiformis* Felder et Felder, 1874), which is still known by a single holotype (♀) originated from the island of Ambon, Maluku, Indonesia. Highly likely, *Desmopoda* is a junior synonym of *Melittia* [Arita, Gorbunov, 1995; Gorbunov, 2020].

1 Proboscis undeveloped ................................................ 2
   — Proboscis well-developed ............................................ 3
2 Vertex covered with hair-like scales; forewing with veins R₄ and R₅ separate basally; Neotropical .................. *Neosphecia* Le Cerf, 1916
   — Vertex smoothly scaled; forewing with veins R₄ and R₅ short stalked; Neotropical .... *Premelittia* Le Cerf, 1916
3 Head broad, distance between external margins of eyes larger than maximum width of protorax; anal lobe of hindwing transparent; Oriental .......................................................... *Cephalomelittia* Gorbunov & Arita, 1995
   — Head normal, distance between external margins of eyes less than maximum width of protorax; anal lobe of the hindwing opaque or undeveloped ............. 4
4 Forewing with veins R₄ and R₅ short stalked ............... 5
   — Forewing with veins R₄ and R₅ separate basally ........ 6
5 Forewing with transparent areas very small or completely undeveloped; male genitalia with uncus bilobed, broadened and rounded distally, with a large plate of short but strong setae on each side internally, valva rounded or pointed ventro-apically, with straight ventral margin [see Figs 44a, 44d in Gorbunov; Arita, 1997 or Figs 11–13 in Bartsch, 2016]; female genitalia with lamella postvaginalis well-developed, antrum slightly funnel-shaped, well-sclerotized medially [see Fig. 43 in Gorbunov, Arita, 1997]; Afrotropical .......... *Afromelittia* Gorbunov & Arita, 1997
   — Forewing with transparent areas undeveloped; male genitalia with uncus bilobed and pointed apically, with a few teeth at tip internally, valva narrowed medially, with a small rounded appendix distally [see Figs 30, 40, 41 in Gorbunov, Arita, 1997]; female genitalia with lamella postvaginalis undeveloped, antrum tube-shaped, well-sclerotized posteriorly [see Fig. 42 in Gorbunov, Arita, 1997]; Afrotropical .......... *Agriomelissa* Meyrick, 1931
6 Male .............................................................................. 7
   — Female .......................................................................... 9
7 Genitalia with uncus distally without a plate of strong, short, pointed setae internally on each side, valva narrowly elongated dorso-apically, sometimes with a finger-
shaped appendix medio-ventrally, covered with sparse setae at dorsal margin [see figs 7a, 7b in Gorbunov, Arita, 1995 or fig. 10 in Kallies et al., 2016]; East Palaearctic, Oriental ...................... Macroscelesia Hampson, 1919
— Genitalia with uncus distally with a plate of strong, short, pointed setae internally, valva, oval, elongate-oval or rectangular with 1–3 groups of dense setae distally ........... 8
8 Antenna with well-defined hook distally; uncus narrowed distally, gnathos present, valva oval, elongate-oval or rectangular with 3 groups of dense setae; Afrotropical, East Palaearctic, Oriental, Australasian ...................... Melittia Hübner, 1819 [“1816”]
— Antenna with poorly defined hook distally; uncus broadened distally, gnathos undeveloped, valva oval or elongate-oval with a group of dense setae; Nearctical, Neotropical ...................... Eichlinia O. Gorbunov, gen.n.
9 Legs with hind tibia and tarsus with slightly elongated scales, not forming a well defined hindleg tuft; hindwing with anal lobe undeveloped; Neotropical ........................................ Melittina Le Cerf, 1917
— Legs with hind tibia and tarsus with elongated scales, forming a well defined hindleg tuft; hindwing with anal lobe present ........................................... 10
10 Ostium bursae at level of 8th tergite (Fig. 15); Nearctical, Neotropical ...................... Eichlinia O. Gorbunov, gen.n.
— Ostium bursae at 7th sternite .......................................... 11
11 Ostium bursae opening at posterior half of 7th sternite, funnel-shaped, slightly sclerotized; corpus bursae ovoid or pear-shaped with a more or less developed signum, forming from rows of minute spinules [see figs 312–315 in Špatenka et al., 1999]; Afrotropical, East Palaearctic, Oriental, Australasia ...................... Melittia Hübner, 1819 [“1816”]

Figs 10–15. Genitalia of Eichlinia cucurbitae (Harris, 1828), comb.n.: 10–14 — male, USA, Montana, Columbus, 21.VI–1.VII.1994, local collector (COGM). Genital preparation № OG–059-2018; 10 — tegumen-uncus complex; 11 — valva; 12 — saccus; 13 — aedeagus; 14 — vesica; 15 — female, USA, Montana, Columbus, 21.VI–1.VII.1994, local collector (COGM). Genital preparation № OG–060-2018; Scale bar 0.5 mm, 1.0 mm for 15.

Рис. 10–15. Гениталии Eichlinia cucurbitae (Harris, 1828), comb.n.: 10–14 — самец, США, Монтана, Колумбус, 21.VI–1.VII.1994, местный сборщик (COGM). Препарат гениталий № OG–059-2018; 10 — тегумен-ункус комплекс; 11 — вальва; 12 — саксус; 13 — адеагус; 14 — везика; 15 — особь, США, Монтана, Колумбус, 21.VI–1.VII.1994, местный сборщик (COGM). Препарат гениталий № OG–060-2018; масштаб: 0.5 мм, 1.0 мм для 15.
— Ostium bursae opening at anterior margin of 7th sternite, cup-shaped, well-sclerotized; corpus bursae globose without sigma [see figs 11, 12 in Kallies et al., 2016]; East Palearctic, Oriental. ... Macroselesia Hampson, 1919

LIFE HISTORY. Due to the fact that some species of Eichlinia gen. n. are serious pests of pumpkins (Cucurbitaceae), the features of their biology are well known and described in detail. In accordance with the Western hemisphere investigations [Engelhardt, 1946; Eichlin, 1973; Eichlin, Duckworth, 1988; Canhilal et al., 2006] the larval host plants are species of the family Cucurbitaceae, including cultivars. Larvae are stem borers. They live in the lower part of vine where sometimes form a gall-like broadening. The fully grown larva burrows into the topsoil, where it makes a cocoon. The larva overwinters in this earthen cocoon and pupates in early summer of the following year. There are one or two generations, depending on the natural conditions.

COMPOSITION. I am currently including 11 species in this new genus. The most important information about all these types is presented in the catalog below.

RANGE. Neartic and Neotropical regions from NE Canada (Ontario) in the north to Argentina (Buenos Aires) in the south.

ETYMOLOGY. The new genus is dedicated to the late Dr. Thomas D. Eichlin (21.09.1938–19.09.2013), a major authority on the family Sesidae of the Western Hemisphere. The gender is feminine.

Preliminary catalogue of the genus Eichlinia O. Gorbunov, gen. n.

Eichlinia calabaza (Duckworth et Eichlin, 1973), comb.n.

"Melitta calabaza n. sp." — Duckworth, Eichlin, 1973b: 151, figs 3a, 6; map. 1. Type locality: "Mexico: Mex., Teotihuacan, ..." — Harris, 1828: 33. Type locality: "... das Vaterland ... Georgien ist." [= USA: Georgia]. Holotype ♀ (USNM).

Eichlinia cucurbatae (Harris, 1828), comb.n.

"Aegeria Cucurbitae." — Harris, 1828: 33. Type locality: not stated [USA]. Holotype ♂ (MCZC).

="Melitta Satyriformis." — Hübner, 1831 ["1825"]: 17, figs 453, 454. Type locality: "... das Vaterland ... Georgien ist." [= USA: Georgia]. Type material: lost.

="Trochilium ceto. Westw." — Westwood, 1848: 62, pl. 30, fig. 6. Type locality: "North America". Holotype ♂ (BMNH).

="Melitta Amoena. n. sp." — Edwards, 1882: 53. Type locality: "Douglas Co., Kansas, 900 feet, ..." [= USA: Kansas, Douglas County]. Type material: lost.

Aegeria cucurbatae — Engelhardt, 1946: 182; Duckworth, Eichlin, 1973a: 9.

Melitta amoena — Beutenmüller, 1896: 113; Duckworth, Eichlin, 1973a: 3.

Melitta cucurbatae — Beutenmüller, 1896: 113; Dalla Torre, Strand, 1925: 140; Zukowsky, 1936: 1248, pl. 179, row b; McDunnough, 1939: 86; Engelhardt, 1946: 182, 183, 216, pl. 3, fig. 23; pl. 12, fig. 54, 54a, pl. 16, fig. 84; Howe, 1956: 480, 483; Howe, Rhodes, 1973: 266; Heppner, Duckworth, 1981: 26; Eichlin, Duckworth, 1988: 52, text-figs 12a, 12b, 12c, 12d, 13b, pl. 2, fig. 4; Kluhn et al., 1990: 64; Brown, Mizel, 1993: 6, 8, 16, pl. 2, figs 12a–b; Becker, Duckworth, 1984: 13, 14, Friedlander, 1986: 283; Eichlin, 1995: 48; Pühringer, Kallies, 2004: 17; Jackson et al., 2005: 27; Canhilal et al., 2006: 1; Capinera, 2008: 3533; Krinski, 2015: 1; Pohl et al., 2016: 206; Middleton, 2018: 1; Moreira et al., 2019: 42, 43.

Eichlinia satyriformis — Druce, 1883: 32; Druce, 1896: 324; Beutenmüller, 1899: 149; Beutenmüller, 1901: 228, 229, 232, fig. 8, pl. 29, fig. i; Dyar, 1902: 364; Walsingham, 1913: 192; Dalla Torre, Strand, 1925: 148; Zukowsky, 1936: 1249, pl. 179, row b; McDunnough, 1939: 86; Duckworth, Eichlin, 1977: 52; Solomon, Dix, 1979: 16; Becker, Duckworth, 1984: 13, 14.

Melitta ceto — Walker, 1856: 66; Druce, 1883: 32; Engelhardt, 1946: 182.

Trochilium ceto — Engelhardt, 1946: 182; Duckworth, Eichlin, 1973a: 7.

HOST PLANT. Cucurbita andreana Naudin, C. argyrosperma K. Koch, C. ecuadorensis Cutler et Whitaker, C. ficifolius Bouché, C. maxima Duchesne, C. moschatu Duchesne, C. okeechobeensis (Small) L.H. Bailey, C. pepo L., Echinocystis lobata (Michx.) Torr. et A. Gray (Cucurbitaceae).

DISTRIBUTION. Canada: Ontario; USA: Montana, Minnesota, Wisconsin, Michigan, New York, Vermont, Maine, South Dakota, Nebraska, Iowa, Illinois, Indiana, Ohio, Pennsylvania, New Jersey, Connecticut, Kansas, Missouri, Kentucky, West Virginia, Virginia, Oklahoma, Arkansas, Tennessee, North Carolina, Texas, Louisiana, Mississippi, Alabama, Georgia, South Carolina, Florida; Mexico: Coahuila, Durango, Jalisco, Mexico, Veracruz, Guerrero, Yucatan; Guatemala: Baja Verapaz; Panama: Chiriquí; Colombia; Venezuela; Peru; Brazil: Amazonas, Pará, São Paulo; Argentina: Buenos Aires.

Eichlinia eichlini (Friedlander, 1986), comb.n.

"Melitta eichlini new species Friedlander" — Friedlander, 1986: 278, figs 1, 2, 4, 7, 8, 11–16. Type locality: "... Jalisco, 5 km w. Atenguiqui, ..." [= Mexico: Jalisco, Atenguiqui]. Holotype ♀ (NMNH).

Melitta eichlini — Eichlin, 1995: 48; Pühringer, Kallies, 2004: 15.

HOST PLANT. Cucurbita argyrosperma K. Koch (Friedlander [1986: 281, 283]) cited as C. sororia Bailey (Cucurbitaceae).

DISTRIBUTION. Mexico: Jalisco, Colima, Michoacan.

Eichlinia faulkneri (Eichlin, 1992), comb.n.

"Melitta faulkneri, new sp." — Eichlin, 1992: 141, figs 11, 29. Type locality: "Mexico.— Baja California: 49 mi. S Cataviña, ..." [= Mexico: Baja California, Ensenada, 78.9 km S Cataviña]. Holotype ♀ (USNM).

Melitta faulkneri — Eichlin, 1995: 48; Brown, 2004: 102; Pühringer, Kallies, 2004: 15.

HOST PLANT. Cucurbita palmata S. Watson (Cucurbitaceae).

DISTRIBUTION. Mexico: Baja California.

Eichlinia giberti (Eichlin, 1992), comb.n.

=C. argyrosperma K. Koch, C. ecuadorensis Cutler et Whitaker, C. ficifolius Bouché, C. maxima Duchesne, C. moschatu Duchesne, C. okeechobeensis (Small) L.H. Bailey, C. pepo L., Echinocystis lobata (Michx.) Torr. et A. Gray (Cucurbitaceae).

DISTRIBUTION. Mexico: Baja California.

Eichlinia gloriosa (Hy Edwards, 1880), comb.n.

="Melitta Gloriosa, n. sp." — Edwards, 1880: 71. Type locality: "... in San Leonardo, Cal., ..." [= USA: California, Alameda County, San Leandro]. Holotype ♀ (AMNH).
Melittia chmer — Hampson, 1919: 93. 
HOST PLANT. Unknown.  
DISTRIBUTION. North America (?).  
Eichlinia magnifica (Beutenmüller, 1899), comb.n.  
"Melittia magnifica, sp. nov." — Beutenmüller, 1899: 151.  
Type locality: "Austin, Texas." [= USA: Texas, Austin]. Holotype ♀ (AMNH).  
Eichlinia magnifica — Beutenmüller, 1901: 236, pl. 29, fig. 5.  
Dyar, 1902: 364; Dalla Torre, Strand, 1925: 146; Zukowsky, 1936: 1250, pl. 179, row c; McDunnough, 1939: 87; Engelhardt, 1946: 182, 191; Duckworth, Eichlin, 1973a: 16; Duckworth, Eichlin, 1977: 52; Solomon, Dix, 1981: 27; Duckworth, Eichlin, 1988: 52, pl. 2, fig. 12; Brown, 2004: 102; Pühringer, Kallies, 2004: 17; Pohl et al., 2016: 206.  
HOST PLANT. Cucurbita argyrosperma Huber (Cucurbitaceae).  
DISTRIBUTION. USA: Texas; Mexico: Baja California.  
Eichlinia pulchripes (Walker, 1856), comb.n.  
"Melittia pulchripes." — Walker, 1856: 67.  
Type locality: "Venezuela.". Lectotype ♀ (FMNH), designated by Duckworth, Eichlin 1978: 21.  
Eichlinia pulchripes — Walker, 1856: 67; Dalla Torre, Strand, 1925: 147; Zukowsky, 1936: 1249, pl. 179, row b; Duckworth, Eichlin, 1978a: 21; Heppner, Duckworth, 1981: 27; Becker, Eichlin, 1984: 14; Pühringer, Kallies, 2004: 15.  
Eichlinia pulchripes d’angelio — Köhler, 1941: 10.  
Type locality: "Corrientes,..." [= Argentina: Corrientes]. Lectotype ♀ (IML), designated by Duckworth, Eichlin 1978a: 21.  
Eichlinia sauriniformis auct., nec Melittia sauriniformis Hübner, 1831 ["1825"].  
Eichlinia pulchripes — Walker, 1856: 67; Dalla Torre, Strand, 1925: 147; Zukowsky, 1936: 1249, pl. 179, row b; Duckworth, Eichlin, 1978a: 21; Heppner, Duckworth, 1981: 27; Becker, Eichlin, 1984: 14; Pühringer, Kallies, 2004: 15.  
Eichlinia pulchripes d’angelio — Duckworth, Eichlin, 1978a: 21.  
Eichlinia roigandensis — Zukowsky, 1936: 1253; Becker, Eichlin, 1984: 13, 14.  
HOST PLANT. Unknown.  
DISTRIBUTION. Guatemala; Honduras; Venezuela; Colombia; Brazil: Pará.  
Eichlinia snowii (Hy Edwards, 1882), comb.n.  
"Melittia Snowii. n. s." — Edwards, 1882: 53.  
Type locality: "Kansas,..." [= USA: Kansas]. Lectotype ♀ (AMNH), designated by Duckworth, Eichlin, 1973a: 27.  
Eichlinia snowii — Beutenmüller, 1896: 113; Beutenmüller, 1901: 235, pl. 29, fig. 4; Dyar, 1902: 364; Walsingham, 1913: 193; Dalla Torre, Strand, 1925: 144; Zukowsky, 1936: 1249, pl. 179, row c; McDunnough, 1939: 87; Engelhardt, 1946: 182, 184; Duckworth, Eichlin, 1977: 52; Duckworth, Eichlin, 1973a: 13, 15; McDunnough, 1939: 87; Stallings, Turner, 1944: 30, 31; Duckworth, Eichlin, 1973a: 15, 28.  
Eichlinia roigandensis — Zukowsky, 1936: 1249; McDunnough, 1939: 87; Stallings, Turner, 1944: 30, 31; Duckworth, Eichlin, 1973a: 15, 28.  
HOST PLANT. Cucurbita foetidissima Kunth, C. patula S. Watson, Marah fabaceus (Naudin) Greene (Cucurbitaceae).  
DISTRIBUTION. USA: Oregon, California, Kansas, Arizona, New Mexico, Texas, Colorado, Oklahoma. Mexico: Sonora, Baja California.  
Eichlinia grandis (Strecker, 1881), comb.n.  
“Trocchilium Grande, n. sp.” — Strecker 1881: 156.  
Type locality: "Hab. Texas." [= USA: Texas]. Holotype ♀ (FMNH).  
Eichlinia Beckeri, sp. n. — Druce, 1896: 272.  
Type locality: "Hab. Mexico, near Durango city ..." [= Mexico: Durango, Durango]. Holotype ♀ (BMNH).  
Eichlinia grandis hermosa, new variety — Engelhardt, 1946: 186, pl. 31, fig. 177.  
Type locality: "Arizona." [= USA: Arizona]. Holotype ♀ (NMNH).  
Eichlinia beckeri — Druce, 1896: 325; Druce, 1897: pl. 69, fig. 18; Duckworth, Eichlin 1978a: 5.  
Eichlinia grandis — Beutenmüller, 1886: 113; Beutenmüller, 1899: 149, 151; Beutenmüller, 1901: 235, pl. 29, fig. 4; Dyar, 1902: 364; Walsingham, 1913: 193; Dalla Torre, Strand, 1925: 144; Zukowsky, 1936: 1249, pl. 179, row c; McDunnough, 1939: 87; Engelhardt, 1946: 182, 184; Duckworth, Eichlin, 1977: 52; Duckworth, Eichlin, 1973b: 5; 26, fig. 22, pl. 2; Solomon, Dix, 1979: 16; Heppner, Duckworth, 1981: 26; Friedlander, 1986: 278, 279, 281–284; Duckworth, Eichlin, 1988: 52, 56, text-fig. 13e, pl. 2, figs 6, 8, 10, pl. A, fig. 9; Pühringer, Kallies, 2004: 17; Taft, Schaper, 2014: 58, 60; Pohl et al., 2016: 206; Moreira et al., 2019: 42, 43.  
Eichlinia grandis var. hermosa — Duckworth, Eichlin, 1973a: 13.  
Eichlinia Grande — Duckworth, Eichlin, 1973a: 3.  
HOST PLANT. Cucurbita foetidissima Kunth (Cucurbitaceae).  
DISTRIBUTION. USA: Kansas, California, Arizona, New Mexico, Texas, Oklahoma; Mexico: Durango.  
Eichlinia khmer (Le Cerf, 1917), comb.n.  
“Melittia Khmer n. sp.” — Le Cerf, 1917: 161, pl. 475, fig. 3916.  
Type locality: "Cambodge, Angkor,...". Obviously, this type locality is wrong due to mislabeling. It must be located somewhere in North or Central America [Arita, Gorbonov, 1996 b]. Holotype ♀ (MNHP).  
Eichlinia khmer — Dalla Torre, Strand, 1925: 145; Gaede, 1933: 791, pl. 95, row f; Heppner, Duckworth, 1981: 27; Arita, Gorbonov, 1996b: 184, figs 39, 40, 58a–d; Pühringer, Kallies, 2004: 17.
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