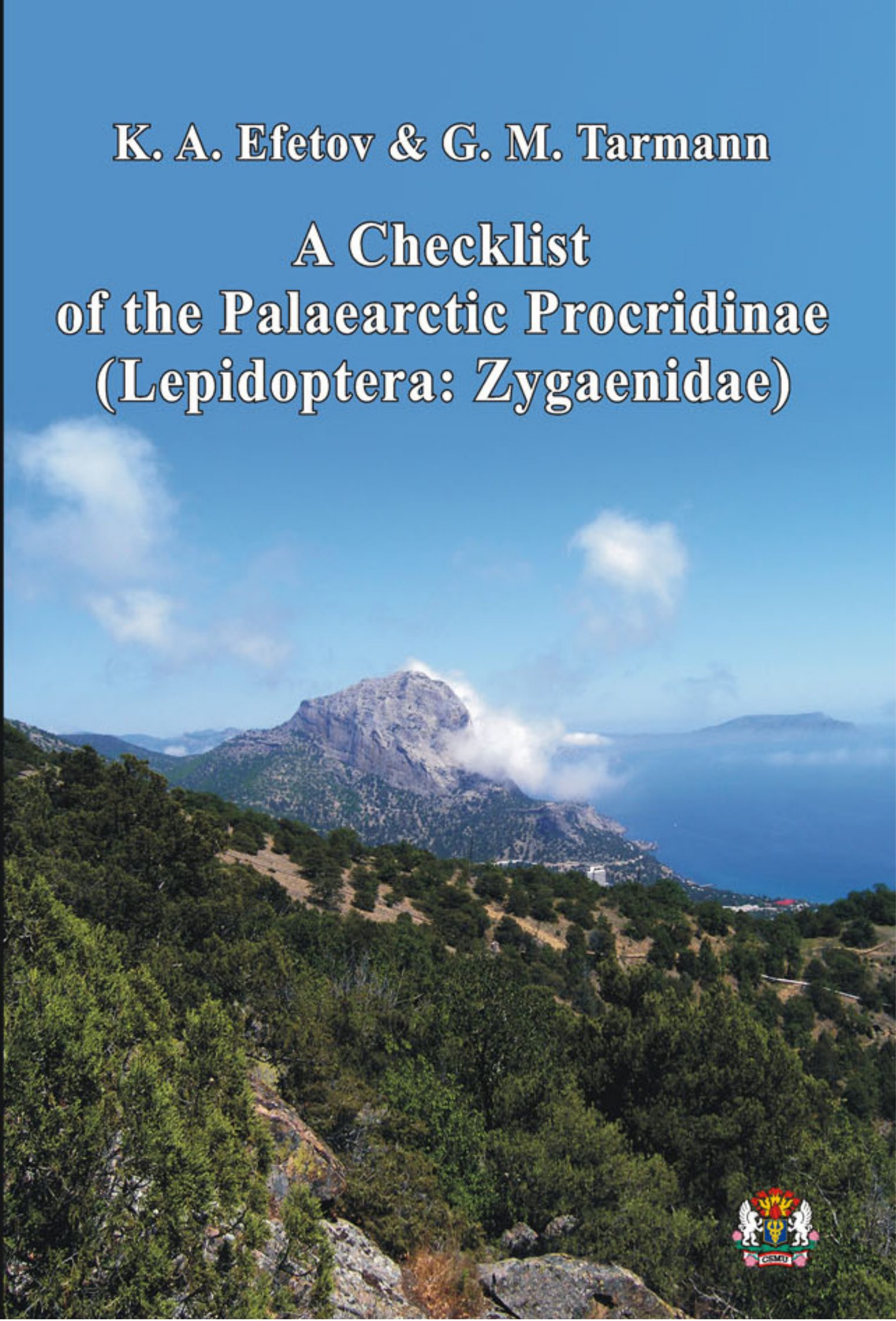
K. A. Efetov & G. M. Tarmann

A Checklist of the Palaearctic Procridinae (Lepidoptera: Zygaenidae)



A Checklist of the Palaearctic Procridinae

To the memory of
Professor Hiroshi Inoue
(8.07.1917 – 2.06.2008)
in recognition of his great contribution
to the study of the Zygaenidae

Professor Hiroshi Inoue

K. A. Efetov & G. M. Tarmann

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Front cover: Crimea, vic. Sudak, 17.05.2008.
Biotopes for *Theresimima ampellophaga* (Bayle-Barelle, 1808),
Rhagades (*Rhagades*) *pruni* ([Denis & Schiffermüller], 1775),
Adscita (*Adscita*) *geryon* (Hübner, 1813),
Jordanita (*Roccia*) *budensis* (Speyer & Speyer, 1858),
J. (*Jordanita*) *graeca* (Jordan, 1907),
J. (*J.*) *chloros* (Hübner, 1813),
J. (*Solaniterna*) *subsolana* (Staudinger, 1862).
Photo: K. A. Efetov.

Frontispiece: *Clelea esakii* Inoue, 1958. Female. 24.07.2004.
Japan, egg – 26.05.2004, leg. E. Hayashi.
E. p. 23.07.2004.
Photo: K. A. Efetov

Synopsis

A revised checklist of the Palaearctic Procridinae is given. The order of tribes, genera and species differs from that published in the previous checklists (Efetov & Tarmann, 1995b; 1999a). Artonini are placed at the beginning as they are considered to represent a more ancient group than Procridini. The '*Clelea*-group' as well as *Chrysartona*, *Hysteroscene*, *Tasema*, *Morionia*, and *Inope* are transferred to Artonini. *Funeralia* is transferred to Procridini. The order of the genera *Theresimima*, *Rhagades*, *Zygaenoprocris*, *Adscita*, *Jordanita* and their subgenera is in accordance with the latest phylogenetic investigations (Efetov, 2004a; 2005a) and new molecular data (Efetov *et al.*, 2010; 2011; 2012).

The following taxa are newly described: *Fuscartona* Efetov & Tarmann, **gen. n.**, *Striartona* Efetov & Tarmann, **gen. n.**, *Pseudoilliberis* Efetov & Tarmann, **gen. n.**, and *Nikilliberis* Efetov & Tarmann, **subgen. n.** In addition, *Hedina* Alberti, 1954, **stat. n.**, and *Zama* Herrich-Schäffer, 1855, **stat. rev.**, are raised from subgeneric to generic rank.

Key words: Zygaenidae, Procridinae, Palaearctis, checklist, taxonomy.

I found it and I named it, being versed
in taxonomic Latin; thus became
godfather to an insect and its first
describer – and I want no other fame.

V. V. Nabokov. A discovery.

Introduction

The last checklists of the Palaearctic Procridinae to be published (Efetov & Tarmann, 1995b; Efetov, 2001d) are now out of date but are still being used by various authors, as a more recent list is not available. Moreover, subsequent to these publications, the present authors had been working on a world revision of the Procridinae. Our experience has shown that comprehensive revisions are very time consuming; therefore, only certain parts have been finished so far, e.g. the Australian fauna (Tarmann, 2004), while those of other regions are still being revised. However, many important changes have already been done. Therefore, a new Palaearctic checklist is urgently needed and its publication cannot wait until all the revisions are completed. As a consequence, we have decided to provide an updated Palaearctic checklist now in order to reflect our present level of knowledge and to emphasize that further investigations are required. A final world checklist is still in preparation and will contain revisional, biological and distributional data and will also be accompanied by more comprehensive comments. However, it cannot be avoided to describe a few taxa now to correct some wrong combinations.

The order of tribes, genera and species follows recent publications (Efetov, 2001d; 2001f; 2004a; 2005a). The Artonini are placed at the beginning (Fig. 1). The '*Clelea*-group' of the previous checklist as well as *Chrysartona*, *Hysteroscene*, *Tasema*, *Morionia*, and *Inope* are transferred to the Artonini (see comments C 5, C 7, C 9, C 10) (Efetov & Tarmann, 1996; Efetov, 2005a; 2006; Efetov *et al.*, 2006; Efetov & Tarmann, 2008b). *Funeralia* is transferred to Procridini (see comment C 20). The genera *Theresimima*, *Rhagades*, *Zygaenoprocris*, *Adscita*, *Jordanita* and their subgenera (Fig. 2) are arranged in accordance with the latest phylogenetic investigations (Efetov, 2004a; 2005a) and new molecular data (Efetov *et al.*, 2010; 2011; 2012).

171 species are currently known from the Palaearctis (including the whole territories of China and Japan). This checklist includes also 30 extralimital species of Palaearctic genera if these genera are fully revised. They are marked with the symbol '+'. Most of them belong to the adjacent Indian or South-East Asian fauna. The limit between the Palaearctic and the Indo-Australian fauna is a difficult mosaic of biotopes and not a simple line. It can be seen that many mountain species of India and South-East Asia even if they are situated almost at the equator belong to Palaearctic genera. They inhabit biotopes with many connections to the Palaearctis in fauna and flora (e.g. high mountain areas of northern India, Myanmar (Burma), Thailand, Laos, Cambodia, Vietnam, Malaysia, Sumatra, Java etc.).

A checklist of the Palaearctic Procridinae (Lepidoptera: Zygaenidae)

C – Comments that follow immediately after the checklist.

* – All taxa whose systematic position differs from that published in Efetov & Tarmann (1995b) are marked with an asterisk.

Synonyms are given in chronological order, subspecies according to their distribution (from west to east and north to south).

R – Genera and subgenera that have already been revised.

+ – This list includes all genera that are distributed in the Palaearctis and all known species of a mentioned genus but only if it has recently been revised (including species that are extralimital). The list of species is based on our previous checklist (Efetov & Tarmann, 1995b), which includes the Palaearctis and the whole territory of China and Japan. Species of the already revised genera, which do not occur in the Palaearctis and China, are marked with the symbol '+'.

Family ZYGAENIDAE Latreille, 1809: 189, 211 (as Zygaenides)

[Type genus: *Zygaena* Fabricius, 1775: 550]

Subfamily PROCRIDINAE Boisduval, 1828: 38 (as Procridae)

[Type genus: *Procris* [Fabricius in Illiger], 1807, l. c.: 289 (see Taeger & Gaedike, 2001: 87).

Tribe Artonini Tarmann, 1994: 120

[Type genus: *Artona* Walker, 1854: 439]

Genus *Artona* Walker, 1854: 439 – (C 1)

[Type species: *Artona discivitta* Walker, 1854: 440, by monotypy]

Zeuxippa Herrich-Schäffer, 1855: 87
[Type species: *Sphinx pulchra* Drury, 1773: 52, by monotypy]

A. superba Alphéraky, 1897: 124

A. hainana Butler, 1876: 357
walkeri sensu auct. (nec Moore, 1859: 199)
fulvida sensu auct. (nec Butler, 1876: 356)

A. fulvida Butler, 1876: 356

A. flavipuncta Hampson, 1900: 225

A. cuneonotata Leech, 1898: 328

*Genus *Balataea* Walker, 1865: 110 – (R) (C 2)

(see Owada & Inada, 2005: 2)

[Type species: *Balataea aegerioides* Walker, 1865: 111, by monotypy]

Rhaphidognatha Felder & Felder, 1862: 31, a junior homonym of *Rhaphidognatha* Murray, 1857: 316 – Insecta: Coleoptera. There is no objective replacement name but the type species of *Rhaphidognatha* Felder & Felder, 1862, is considered to be conspecific with *Balataea aegerioides* Walker, 1865, the type species of *Balataea* Walker, 1865. The latter is therefore available for use as a subjective replacement name.
[Type species: *Rhaphidognatha sesiaeformis* Felder & Felder, 1862: 32, by monotypy]

Bintha Walker, 1865: 127
[Type species: *Bintha gracilis* Walker, 1865: 127, by monotypy]

Subgenus *Balataea* Walker, 1865: 110

[Type species: *Balataea aegerioides* Walker, 1865: 111, by monotypy]

Rhaphidognatha Felder & Felder, 1862: 31 [see above]
Bintha Walker, 1865: 127 [see above]

***B. (B.) octomaculata** (Bremer, 1861: 476) (*Euchromia*)
sesiaeformis (Felder & Felder, 1862: 32) (*Rhaphidognatha*)
aegerioides Walker, 1865: 111 (*Balataea*)
***B. (B.) gracilis** (Walker, 1865: 127) (*Bintha*)
***B. (B.) taiwana** (Wileman, 1911: 174) (*Artona* '(?)')
(see Owada & Inada, 2005: 5)
***B. (B.) kimurai** Owada & Inada, 2005: 2
***B. (B.) angusta** Alberti, 1954: 269
***B. (B.) intermediana** Alberti, 1954: 270
***B. (B.) elegantior** Alberti, 1954: 270

*Subgenus *Pseudosesidia* Alberti, 1954: 271 – (C 3)

[Type species: *Balataea (Pseudosesidia) aegeriaeformis* Alberti, 1954: 271, by original designation and monotypy]

***B. (P.) aegeriaeformis** Alberti, 1954: 271

*Genus *Fuscartona* Efetov & Tarmann, gen. n. – (R) (C 2)

[Type species: *Artona martini* Efetov, 1997a: 170, by present designation]

***F. martini** (Efetov, 1997a: 170) (*Artona*)
funeralis sensu Alberti (1954: 267) (*Balataea*) et sensu auct.
(nec Butler, 1879: 351) (see Efetov, 1997a: 166)
***F. funeralis** (Butler, 1879: 351) (*Procris*)
tokyonella (sensu Alberti, 1954: 267) (*Balataea*)
(nec Matsumura, 1927: 76) (see Efetov, 1997a: 166)
***F. uniformis** (Alberti, 1954: 268) (*Balataea*)
***F. parilis** (Efetov, 1997a: 175) (*Artona*)

Genus *Arachotia* Moore, 1879b: 14

[Type species: *Arachotia flaviplaga* Moore, 1879b: 14, by monotypy]

A. flaviplaga Moore, 1879b: 14
A. hyalina Hering, 1925a: 175
A. euglenia Jordan, 1908: 50

Genus *Amuria* Staudinger, 1887b: 172

[Type species: *Amuria cyclops* Staudinger, 1887b: 172, by monotypy]

Brachartona Hampson, 1891: 44
[Type species: *Artona quadrimaculata* Moore, 1879a: 390, by original designation]

A. cyclops Staudinger, 1887b: 172

*Genus *Striartona* Efetov & Tarmann, gen. n. – (R) (C 4)

[Type species: *Bintha clathrata* Poujade, 1886a: 117, by present designation and monotypy]

****S. clathrata*** (Poujade, 1886a: 117) (*Bintha*), **comb. n.**

Genus *Allobremeria* Alberti, 1954: 277 – (R)

[Type species: *Allobremeria plurilineata* Alberti, 1954: 277, by original designation and monotypy]

A. plurilineata Alberti, 1954: 277

Genus *Thibetana* Efetov & Tarmann, 1995b: 74 – (R)

[Type species: *Artona sieversi* Alphéraky, 1892: 5, by original designation]

Th. sieversi (Alphéraky, 1892: 5) (*Artona*)
dejeani (Oberthür, 1894: 29) (*Artona*)
gephyra (Hering, 1936: 1) (*Artona*)
Th. delavayi (Oberthür, 1894: 29) (*Artona*)
****Th. witti*** Efetov, 1997c: 509

Genus *Bremeria* Alphéraky, 1892: 7

[Type species: *Bremeria manza* Alphéraky, 1892: 7, by monotypy]

Subclelea Alberti, 1954: 292 (*Clelea* subgen.)
[Type species: *Clelea (Subclelea) parabella* Alberti, 1954: 293, by original designation]

B. manza Alphéraky, 1892: 7
B. albomacula (Leech, 1898: 329) (*Artona*)
B. parabella (Alberti, 1954: 293) (*Clelea*)
B. aurulenta (Poujade, 1886a: 116) (*Bintha*)
B. aurulenta aurulenta (Poujade, 1886a: 116) (*Bintha*)
B. aurulenta bella (Alberti, 1954: 292) (*Clelea*)
B. sinica Alphéraky, 1897: 122
****B. cyanicornis*** (Poujade, 1886a: 116) (*Bintha*)
(see Efetov, 2000a: 23)

*Genus *Chrysartona* Swinhoe, 1892: 57 – (R) (C 5)

(see Efetov, 2006: 23)

[Type species: *Procris stipata* Walker, 1854: 114, by original designation and monotypy]

*Subgenus *Chrysartona* Swinhoe, 1892: 57

[Type species: *Procris stipata* Walker, 1854: 114, by original designation and monotypy]

+*Ch.* (*Ch.*) *stipata* (Walker, 1854: 114) (*Procris*) **– (C 6)**
+*Ch.* (*Ch.*) *efetovi Parshkova, 2007: 143
+*Ch.* (*Ch.*) *hausmanni Efetov, 2006: 27
****Ch.* (*Ch.*) *stueningi*** Efetov, 2006: 29
**stipata* partim (sensu Alberti, 1954: 294) (*Clelea*) (nec Walker, 1854: 114)
+*Ch.* (*Ch.*) *tremewani Efetov, 2006: 31
****Ch.* (*Ch.*) *sinevi*** Efetov, 2006: 33
**stipata* partim (sensu Alberti, 1954: 294, 411, pl. 28, figs 9a–9c) (*Clelea*) (nec Walker, 1854: 114)

*Subgenus *Chrystremewana* Efetov, 2006: 36

[Type species: *Chrysartona birmana* Efetov, 2006: 37, by original designation]

+*Ch.* (*Chrystrem.*) *birmana Efetov, 2006: 37
+*Ch.* (*Chrystrem.*) *honeyi Efetov, 2006: 39

*Subgenus *Chrystarmanna* Efetov, 2006: 41

[Type species: *Chrysartona sikkima* Efetov, 2006: 42, by original designation]

*+***Ch. (Chrystarm.) sikkima** Efetov, 2006: 42
**stipata* (sensu Wang, 1995: 23) (*Clelea*) (nec Walker, 1854: 114)

*+***Ch. (Chrystarm.) meyi** Efetov, 2006: 44
**stipata* partim (sensu Alberti, 1954: 294) (*Clelea*) (nec Walker, 1854: 114)

*+***Ch. (Chrystarm.) margarita** Efetov, 2006: 47

*+***Ch. (Chrystarm.) pravata** (Moore, 1860: 326) (*Syntomis*)

*+***Ch. (Chrystarm.) variata** (Swinhoe, 1892: 58) (*Phacusa*)
*****Ch. (Chrystarm.) variata variata** (Swinhoe, 1892: 58) (*Phacusa*)
*****Ch. (Chrystarm.) variata fumosa** (Jordan, 1908: 46) (*Clelea*)
*****Ch. (Chrystarm.) variata separata** (Jordan, 1908: 46) (*Clelea*)
*****Ch. (Chrystarm.) variata amboinensis** (Jordan, 1908: 46) (*Clelea*)
*****Ch. (Chrystarm.) variata guttigera** (Jordan, 1908: 46) (*Clelea*)

*+***Ch. (Chrystarm.) explorata** (Hering, 1925a: 175) (*Clelea*)

*Genus *Clelea* Walker, 1854: 465 – (R) (C 7)

[Type species: *Clelea sapphirina* Walker, 1854: 465, by monotypy]

C. sapphirina Walker, 1854: 465

*+***C. discriminis** Swinhoe, 1891: 474

*+***C. simplex** Jordan, 1908: 45

*+***C. nigroviridis** Elwes, 1890: 380

C. cyanescens Alberti, 1954: 289
C. cyanescens cyanescens Alberti, 1954: 289
C. cyanescens monotona Alberti, 1954: 289

C. formosana Strand, 1915: 119 (as *nigroviridis* v. *formosana*)
simplicior Strand, 1915: 119

C. melli Hering, 1925a: 174

C. esakii Inoue, 1958: 238

C. yuennana Alberti, 1954: 290 (as *yünnana*)

*+***C. chala** (Moore, 1859: 311) (*Procris*)
*+***C. refulgens** Hampson, 1905: 193
*+***C. metacyanea** Hampson, 1896: 467
*+***C. plumbeola** Hampson, 1893: 240
C. albofascia (Leech, 1898: 340) (*Arbudas*)
albifascia [sic] Bryk, 1936: 247, misspelling

*Genus *Platyzygaena* Swinhoe, 1892: 57

[Type species: *Soritia moelleri* Elwes, 1890: 385, by original designation and monotypy]

*+***P. moelleri** (Elwes, 1890: 385) (*Soritia*)
***P. melaleuca** (Jordan, 1907: 17) (*Clelea*), **comb. n. – (C 8)**

*Genus *Hysteroscene* Hering, 1925a: 176 – (C 9)

[Type species: *Hysteroscene extravagans* Hering, 1925a: 177, by original designation]

H. hyalina (Leech, 1889: 123) (*Arachotia*)
univittata (Strand, 1915: 122) (*Piarosoma hyalina* ab.) (unavailable)
univittata Hering, 1925a: 178
thibetana Oberthür, 1894 (*Phacusa* sp.)
H. melli Hering, 1925a: 82
H. extravagans Hering, 1925a: 177
annulatissima (Strand, 1915: 122) (*Piarosoma hyalina* ab.) (unavailable)

*Genus *Tasema* Walker, 1856: 1597 – (C 9)

[Type species: *Tasema bipars* Walker, 1856: 1597, by monotypy]

T. bipars Walker, 1856: 1597
T. viridescens Alberti, 1954: 282

*Genus *Morionia* Jordan, 1910: 256 (R) – (C 9)

[Type species: *Morionia sciara* Jordan, 1910: 256, by monotypy]

M. sciara Jordan, 1910: 256
**sciaria* [sic] Efetov & Tarmann, 1995b: 76, misspelling

*Genus *Pseudoinope* Efetov & Tarmann, 1999b: 165 – (R)

[Type species: *Procris fusca* Leech, 1889: 595, by original designation and monotypy]

P. fusca (Leech, 1889: 595) (*Procris*)
**syriaca* (Hampson, 1920: 275) (*Clelea*) (synonymised by Efetov & Tarmann, 1999b: 167)
**albicilia* (Inoue, 1976a: 159) (*Clelea*) (synonymised by Efetov & Tarmann, 1999b: 167)

*Genus *Inope* Staudinger, 1887b: 170 – (C 10) (see Efetov & Tarmann, 1996: 203)

[Type species: *Inope heterogyna* Staudinger, 1887b: 170, by monotypy]

Aglaino Staudinger, 1887b; 171
[Type species: *Aglaino maerens* Staudinger, 1887b: 171, by monotypy]
Pollanista Strand, 1915: 118
[Type species: *Pollanista inconspicua* Strand, 1915: 118, by original designation]

I. heterogyna Staudinger, 1887b: 170
impellucida Graeser, 1888: 108
I. maerens (Staudinger, 1887b: 171) (*Aglaino*)
**microphaea* (Hampson, 1920: 275) (*Clelea*) (synonymised by Efetov & Tarmann, 1999b: 167)
**tokyonella* (Matsumura, 1927: 76) (*Artona*) (synonymised by Efetov, 1997a: 166)
**sachalinensis* (Matsumura, 1927: 77) (*Artona*) (synonymised by Efetov, [1999a]: 235)
**fusca* (sensu Inoue, 1976a: 160) (*Clelea*) (nec Leech, 1889: 595) (synonymised by Efetov & Tarmann, 1999b:167)
moerens [sic] (Jordan, 1907: pl. 3) (*Artona*), misspelling
I. inconspicua (Strand, 1915: 118) (*Pollanista*)

Genus *Alloprocris* Hering, 1925b: 84 – (C 11)

[Type species: *Alloprocris draesekei* Hering, 1925b: 84; by original designation]

A. adusta Draeseke, 1926: 44
A. draesekei Hering, 1925b: 84
A. draesekei draesekei Hering, 1925b: 84)
A. draesekei ellenae Alberti, 1954: 286
A. draesekei hoenei Alberti, 1954: 286 (as *hönei*)
A. augustae Alberti, 1940: 99
A. spielhagenae Alberti, 1954: 286

Tribe Procridini Boisduval, 1828: 38 (as Procridae)

[Type genus: *Procris* [Fabricius in Illiger], 1807, l. c.: 289 (see Taeger & Gaedike, 2001: 87).

*Genus *Pseudoilliberis* Efetov & Tarmann, gen. n. – (C 12)

[Type species: *Illiberis kuprijanovi* Efetov, 1995a: 237, by present designation and monotypy]

****Ps. kuprijanovi*** (Efetov, 1995a: 237) (*Illiberis*), **comb. n.**

Genus *Illiberis* Walker, 1854: 280

[Type species: *Illiberis sinensis* Walker, 1854: 280, by monotypy]

*Subgenus *Nikilliberis* Efetov & Tarmann, subgen. n. – (C 13)

[Type species: *Illiberis kardakoffi* Alberti, 1951: 143, by present designation and monotypy]

****I.* (*N.*) *kardakoffi*** (Alberti, 1951: 143) (*Illiberis*)

Subgenus *Primilliberis* Alberti, 1954: 230 – (R)

[Type species: *Illiberis laeva* Püngeler, 1914: 53, by original designation]

I.* (*P.*) *laeva Püngeler, 1914: 53

glaucosquamata Strand, 1915: 120

I.* (*P.*) *yeni* Efetov, 1997b: 231

I.* (*P.*) *rotundata Jordan, 1907: 15

fujisana Matsumura, 1927: 78

**fumata* Alberti, 1954: 231 (synonymised by Efetov, 2005a: 200)

**kaszabi* Alberti, 1970b: 194 (synonymised by Efetov, 2005a: 200)

**ononica* Dubatolov, 2002: 109 (synonymised by Efetov, 2005a: 200)

psychina sensu Alberti, 1951: 134 (nec Oberthür, 1880: 28)

**rotundifolia* [sic] Hofmann & Kia-Hofmann, 2011: 66, misspelling

I.* (*P.*) *pruni Dyar, 1905: 954

I.* (*P.*) *pruni pruni Dyar, 1905: 954

aomoriensis Matsumura, 1927: 77

japonica Alberti 1951: 140 (*Illiberis pseudopsychina* subsp.)

elegans (sensu Jordan, 1907: 7) (*Procris*) (nec Poujade, 1886: 143) (see Alberti, 1954: 232)

nigra sensu auct. (nec Leech, 1889: 595)

I.* (*P.*) *pruni pseudopsychina Alberti, 1951: 139

sinensis sensu auct. (nec Walker, 1854: 280)

Subgenus *Illiberis* Walker, 1854: 280 – (R)

[Type species: *Illiberis sinensis* Walker, 1854: 280, by monotypy]

I.* (*I.*) *sinensis Walker, 1854: 280

formosana* (Matsumura, 1927: 76) (*Procris*), **syn. n. (C 14)

I.* (*I.*) *assimilis Jordan, 1907: 15

I.* (*I.*) *hoenei Alberti, 1954: 234 (as *hönei*)

I.* (*I.*) *ellenae Alberti, 1954: 235

Subgenus *Euphacusa* Matsumura, 1927: 79 – (C 15)

[Type species: *Euphacusa taikozana* Matsumura, 1927: 79, 80 by original designation and monotypy]

******silvestris*-group

I.* (*E.*) *silvestris (Strand, 1915: 121) (*Phacusa*)
taikozana Matsumura, 1927: 79

******cybele*-group

******I.* (*E.*) *phacusana*** Strand, 1915: 120
******I.* (*E.*) *dirce*** (Leech, 1889: 596) (*Northia*)
******I.* (*E.*) *formosensis*** Strand, 1915: 120
horishana Matsumura, 1927: 78
******I.* (*E.*) *inermis*** Alberti, 1954: 238
******I.* (*E.*) *cybele*** (Leech, 1889: 596) (*Northia*)
contraria Alberti, 1954: 239 (synonymised by Efetov, 2005a: 201)
******I.* (*E.*) *paracybele*** Alberti, 1954: 239

Subgenus *Alterasvenia* Alberti, 1971a: 239 – (R)

[Type species: *Northia ulmivora* Graeser, 1888: 107, by original designation]

Svenia Alberti, 1954: 246 (a junior homonym of *Svenia* Brotzen, 1937: 66 – Protozoa. The objective replacement name is *Alterasvenia* Alberti, 1971a: 239)
[Type species: *Northia ulmivora* Graeser, 1888: 107, by original designation]

******ulmivora*-group

I.* (*A.*) *ulmivora (Graeser, 1888: 107) (*Northia*)
pekinensis (Draeseke, 1926: 44) (*Procris*)
I.* (*A.*) *yuennanensis Alberti, 1951: 139 (as *yünnanensis*)
I.* (*A.*) *ochracea Leech, 1898: 335

******paradistincta*-group

I.* (*A.*) *paradistincta Alberti, 1954: 246

*Genus *Hedina* Alberti, 1954: 249, stat. n. – (R) (C 16)

[Type species: *Northia tenuis* Butler, 1877: 394, by original designation]

Thyrina Poujade, 1886b: 143
[Type species: *Thyrina elegans* Poujade, 1886b: 143, by monotypy]

*__H. nigra__ (Leech, 1889: 595) (*Procris*), **comb. n. – (C 17)**
*__H. taiwana__ (Efetov, 1997b: 236) (*Illiberis* (*Hedina*)), **comb. n.**
*__H. vietnama__ (Efetov, 1997b: 240) (*Illiberis* (*Hedina*)), **comb. n.**
*__H. psychina__ (Oberthür, 1880: 28) (*Procris*), **comb. n.**
sinensis partim (sensu Kirby, 1892: 88) (*Illiberis*) (nec Walker, 1854: 280)
ussuriensis (Alberti, 1951: 137) (*Illiberis*)
*__H. consimilis__ (Leech, 1898: 334) (*Illiberis*), **comb. n.**
hyalina partim (sensu Jordan, 1907: 15) (*Illiberis*) (nec Staudinger, 1887b: 169)
distinctus (Kardakoff, 1928: 415) (*Illiberis*)
*__H. hyalina__ (Staudinger, 1887b: 169) (*Northia* (*Ino*)), **comb. n.**
transvena (Jordan, 1907: 16) (*Illiberis*)
coreana (Matsumura, 1927: 77) (*Illiberis*)
*__H. tenuis__ (Butler, 1877: 394) (*Northia*), **comb. n.**
khasiana (Moore, 1879b: 12) (*Northia*)
*__H. elegans__ (Poujade, 1886: 143) (*Thyrina*) **– (C 18)**, **comb. n.**
*__H. serrata__ **(**Alberti, 1954: 254) (*Illiberis* (*Hedina*)), **comb. n.**
*__H. albiventris__ (Alberti, 1954: 254) (*Illiberis* (*Hedina*)), **comb. n.**
*__H. louisi__ (Efetov, 2010: 235) (*Illiberis* (*Hedina*)), **comb. n.**
*__H. translucida__ (Poujade, 1884: 136) (*Procris*), **comb. n.**

Genus *Dubernardia* Alberti, 1954: 257 – (R)

[Type species: *Phacusa djreuma* Oberthür, 1893: 21, by original designation and monotypy]

__D. djreuma__ (Oberthür, 1893: 21) (*Phacusa*)

*Genus *Goe* Hampson, 1893: 242 (as *Goë*) – (R)

(see Efetov, 1998a: 50)

[Type species: *Goe diaphana* Hampson, 1893: 242, by original designation and monotypy]

Kublaia Alberti, 1954: 255 (*Illiberis* subgen.) (synonymised by Efetov, 1998a: 60)

[Type species: *Illiberis heringi* Draeseke, 1926: 45, by original designation and monotypy]

*__G. tarmanni__ Efetov, 1998a: 52

*__G. heringi__ (Draeseke, 1926: 45) (*Illiberis*)

*__G. diaphana__ Hampson, 1893: 242 (*Goë*)

*__G. dentata__ Efetov, 1998a: 57

**heringi* partim (sensu Alberti, 1954: 256) (*Illiberis* (*Kublaia*)) (nec Draeseke, 1926: 45)

*Genus *Zama* Herrich-Schäffer, 1855: 87, stat. rev. – (C 15)

[Type species: *Zama cyanecula* Herrich-Schäffer, 1855: 87, by monotypy]

Northia Walker, 1854:141 (a junior homonym of *Northia* Gray, 1847: 140 – Mollusca).

[Type species: *Glaucopis nigrigemma* Walker, 1854: 141, by monotypy]

*__Z. shensiensis__ (Alberti, 1954; 242) (*Illiberis* (*Zama*)), **comb. n.**

*__Z. nigrigemma__ (Walker, 1854: 141) (*Glaucopis*), **comb. n.**

cyanecula Herrich-Schäffer, 1855: 87

*__Z. horni__ (Strand, 1915: 121) (*Phacusa*), **comb. n.**

*__Z. arisana__ (Matsumura, 1927: 79) (*Phacusa*), **comb. n.**

*+__Z. endocyanea__ (Hampson, 1920: 273) (*Illiberis*), **comb. n.**

*+__Z. cyanocera__ (Hampson, 1893: 241) (*Phacusa*), **comb. n.**

**ignea* (Oberthür, 1894: 29) (*Northia*)

Genus *Phacusa* Walker, 1854: 150 – (R) (C 19)

[Type species: *Glaucopis tenebrosa* Walker, 1854: 150, by monotypy]

Notioptera Butler, 1876: 355
[Type species: *Syntomis dolosa* Walker, 1856: 1594]

*+***Ph. tenebrosa** (Walker, 1854: 150) (*Glaucopis*)
*+*siamensis* Oberthür, 1894: 31
*+*nicobarica* Hampson, 1920: 272, **syn. n.**
*+***Ph. crawfurdi** (Moore, 1859: 327) (*Syntomis*)
(see Holloway, 2011: 16)
*+*subtilis* Hering, 1925a: 176, **syn. n.**
Ph. birmana (Oberthür, 1894: 30) (*Northia*)
*+***Ph. discoidalis** (Swinhoe, 1903: 500) (*Illiberis*)
*+*tonkinensis* Alberti, 1954: 259, **syn. n.**
*+***Ph. chalcobasis** Hampson, 1920: 272
*+***Ph. dolosa** (Walker, 1856: 1594) (*Syntomis*)
*+***Ph. properta** (Swinhoe, 1890: 400) (*Notioptera*)
*+*dohertyi* (Oberthür, 1894: 36) (*Northia*)
*+***Ph. manilensis** Hampson, 1920: 272
*+***Ph. strigosa** (Walker, 1864: 69) (*Syntomis*)

*Genus *Funeralia* Alberti, 1954: 264 – (R) (C 20)

[Type species: *Funeralia transiens* Alberti, 1954: 264, by original designation and monotypy]

F. transiens Alberti, 1954: 264

*Genus *Erythroclelea* Efetov & Tarmann, 1995b: 70 – (R)

[Type species: *Laurion syfanicum* Oberthür, 1894: 25, by original designation and monotypy]

E. syfanicum (Oberthür, 1894: 25) (*Laurion*)

*Genus *Praeprocris* Alberti, 1954: 315 (*Rhagades* subgen.) – (R)

(see Efetov & Tarmann, 1999: 17)

[Type species: *Rhagades (Praeprocris) pseudomaerens* Alberti, 1954: 315, by original designation and monotypy]

P. pseudomaerens (Alberti, 1954: 315) (*Rhagades*)

Genus *Theresimima* Strand, 1917: 137 – (R)

[Type species: *Zygaena ampellophaga* Bayle-Barelle, 1808: 40, by monotypy (of *Theresia* Spuler, 1906)]

Theresia Spuler, 1906: 165 (a junior homonym of *Theresia* Robineau-Desvoidy, 1830: 325 – Insecta, Diptera. The objective replacement name is *Theresimima* Strand, 1917)
[Type species: *Zygaena ampellophaga* Bayle-Barelle, 1808: 40, by monotypy]

Th. ampellophaga (Bayle-Barelle, 1808: 40) (*Zygaena*)
vitis (Freyer, 1834: 48) (*Sphinx*)
astrapta (Dannehl, 1933: 147) (*Ino ampelophaga* [sic] 'ab (?) rasse (?)')

Genus *Rhagades* Wallengren, 1863: 110 – (R)

[Type species: *Sphinx pruni* [Denis & Schiffermüller], 1775: 308, by monotypy]

Subgenus *Naufockia* Alberti, 1954: 317

[Type species: *Procris brandti* Alberti, 1938b: 398, by original designation and monotypy]

Rh.* (*N.*) *brandti (Alberti, 1938b: 398) (*Procris*)

Subgenus *Wiegelia* Efetov & Tarmann, 1995b: 66

[Type species: *Procris amasina* Herrich-Schäffer, 1851: 42, by original designation]

Rh.* (*W.*) *amasina (Herrich-Schäffer, 1851: 42) (*Procris*)
Rh.* (*W.*) *predotae (Naufock, 1930: 107) (*Procris*)
****Rh.* (*W.*) *tarmanni*** Keil, 1999: 73

Subgenus *Rhagades* Wallengren, 1863: 110

[Type species: *Sphinx pruni* [Denis & Schiffermüller], 1775: 308, by monotypy]

Rh.* (*Rh.*) *pruni ([Denis & Schiffermüller], 1775: 308) (*Sphinx*)
spinosae (Dannehl, 1929: 62) (*Ino pruni* 'Form')

Rh.* (*Rh.*) *pruni pruni ([Denis & Schiffermüller], 1775: 308) (*Sphinx*)
callunae* Spuler, 1906: 166 (*Rhagades pruni* 'v.?'), **syn. n. – (C 21)
Rh.* (*Rh.*) *pruni chinensis (Felder & Felder, 1862: 31) (*Ino* sp.)
tristis (Bremer, 1865: 97) (*Procris* sp.)
Rh.* (*Rh.*) *pruni esmeralda (Butler, 1877: 394) (*Procris* sp.)

*Genus *Zygaenoprocris* Hampson, 1900: 225 – (R)

(see Efetov, 2001b: 41)

[Type species: *Zygaenoprocris chalcochlora* Hampson, 1900: 225, by original designation and monotypy]

*Subgenus *Zygaenoprocris* Hampson, 1900: 225

[Type species: *Zygaenoprocris chalcochlora* Hampson, 1900: 225, by original designation and monotypy]

****Z.* (*Z.*) *chalcochlora*** Hampson, 1900: 225 (comb.: Efetov, 2001b: 44)
mystrocera (Püngeler, 1914: 52) (*Ino*) **(C 22)**
****Z.* (*Z.*) *khorassana*** (Alberti, 1939a: 3) (*Procris*), **stat. rev. – (C 22)**
****Z.* (*Z.*) *hofmanni*** Mollet & Tarmann, 2007: 71
****Z.* (*Z.*) *efetovi*** Mollet & Tarmann, 2007: 69
****Z.* (*Z.*) *rjabovi*** (Alberti, 1938c: 94) (*Procris*) (comb.: Efetov, 2001b: 44)
****Z.* (*Z.*) *eberti*** (Alberti, 1968: 249) (*Procris*) (comb.: Efetov, 2001b: 44)

*Subgenus *Efetovia* Mollet, 2001: 51

[Type species: *Procris fredi* Alberti, 1939a: 4, by original designation and monotypy]

****Z.* (*E.*) *fredi*** (Alberti, 1939a: 4) (*Procris*)

*Subgenus *Keilia* Efetov, 2001b: 47

[Type species: *Adscita minna* Efetov, 1991b: 155, by original designation]

*__Z. (K.) minna__ (Efetov, 1991b: 155) (*Adscita*) (comb.: Efetov, 2001b: 47)

*__Z. (K.) albertii__ (Efetov, 1991b: 157) (*Adscita*) (comb.: Efetov, 2001b: 47)

*__Z. (K.) naumanni__ (Efetov, 1994a: 53) (*Adscita* (*Zygaenoprocris*)) (comb.: Efetov, 2001b: 47)

*Subgenus *Molletia* Efetov, 2001b: 45

[Type species: *Procris taftana* Alberti, 1939a: 4, by original designation]

*__Z. (M.) taftana__ (Alberti, 1939a: 4) (*Procris*) (comb.: Efetov, 2001b: 46)

*__Z. (M.) persepolis__ (Alberti, 1938b: 399) (*Procris*) (comb.: Efetov, 2001b: 46)

*__Z. (M.) duskei__ (Grum-Grshimailo, 1902: 197) (*Ino*) (comb.: Efetov, 2001b: 46)

*__Z. (M.) duskei kliri__ Keil, 2002: 55 (*Zygaenoprocris* sp.) (see Efetov, 2004a: 113)

*__Z. (M.) duskei kermana__ (Alberti, 1967: 99) (*Procris* sp.) (see Efetov, 2001d: 154)

*__Z. (M.) duskei duskei__ (Grum-Grshimailo, 1902: 197) (*Ino*)

sengana (Alberti, 1939a: 28) (*Procris* sp.) (synonymised by Efetov, 1992b: 147)

*__Z. (M.) duskei aerea__ (Grum-Grshimailo, 1902: 198) (*Ino duskei* var.) (see Efetov & Tarmann, 1999a: 32, 71)

**mekrana* (Alberti, 1939a: 29) (*Procris* 'sp.?') (see Efetov & Tarmann, 1999a: 32)

Genus *Adscita* Retzius, 1783: 35 – (R)

[Type species: *Adscita turcosa* Retzius, 1783: 35, by subsequent designation by Kirby, 1892: 84]

Chrysaor Hübner, 1806: [1] (included in a work rejected for nomenclatural purposes by the International Commission on Zoological Nomenclature, 1926, Opinion 97: 19)
[Type species: *Sphinx statices* Linnaeus, 1758: 495, by monotypy]
Procris [Fabricius in Illiger], 1807, l. c.: 289 (see Taeger & Gaedike, 2001: 87)
[Type species: *Sphinx statices* Linnaeus, 1758: 495, by subsequent designation by Latreille, 1810: 441]
Atychia Ochsenheimer, 1808: [9], [10], 11
[Type species: *Sphinx statices* Linnaeus, 1758: 495, by subsequent designation by Tremewan, 1973: 119]
Ino Leach, 1815: 131
[Type species: *Sphinx statices* Linnaeus, 1758: 495, by monotypy]
Bradyptesis Sodoffsky, 1837: 83 (unnecessary objective replacement name for *Atychia* Ochsenheimer, 1808)

*Subgenus *Procriterna* Efetov & Tarmann, 2004a: 184 – (C 23)

[Type species: *Ino subtristis* Staudinger, 1887a: 68, by original designation]

Procrita Efetov & Tarmann, 1999a: 31, 63 (a junior homonym of *Procrita* Hendel, 1908: 59 – Insecta, Diptera. The objective replacement name is *Procriterna* Efetov & Tarmann, 2004a: 184)
[Type species: *Ino subtristis* Staudinger, 1887a: 68, by original designation]

A.* (*P.*) *subtristis (Staudinger, 1887a: 68) (*Ino*)
**dolosa* (Staudinger, 1887a: 69) (*Ino*) (synonymised by Efetov & Tarmann, 1999a: 31, 64)
A.* (*P.*) *amaura (Staudinger, 1887a: 70) (*Ino*)
**banghaasi* (Alberti, 1938a: 119) (*Procris amaura* subsp.) (synonymised by Efetov & Tarmann, 1999a: 31, 66)
A.* (*P.*) *subdolosa (Staudinger, 1887a: 70) (*Ino dolosa* var.)
pamirensis (Hampson, 1920: 433) (*Procris*)
A.* (*P.*) *pligori Efetov, 2012: 99

Subgenus *Adscita* Retzius, 1783: 35

[Type species: *Adscita turcosa* Retzius, 1783: 35, by subsequent designation by Kirby, 1892: 84]

Chrysaor Hübner, 1806: [1] (see above)
Procris [Fabricius in Illiger], 1807, l. c.: 289 (see above)
Atychia Ochsenheimer, 1808: [9], [10], 11 (see above)
Ino Leach, 1815: 131 (see above)
Bradyptesis Sodoffsky, 1837: 83 (see above)

****mauretanica*-group** (see Efetov & Tarmann, 1999a: 29; Efetov *et al*., 2011: 50) – **(C 24)**

A*. (*A*.) *mauretanica (Naufock, 1932: 77) (*Procris*)
A*. (*A*.) *mauretanica mauretanica (Naufock, 1932: 77) (*Procris*)
bohigasi (Agenjo, 1940: 105) (*Procris mauretanica* var.)
meson Dujardin, 1973: 160
A*. (*A*.) *mauretanica wiegeli (Alberti, 1973a: 12) (*Procris*)
atlasica Dujardin, 1973: 159

****jordani*-group** (see Efetov & Tarmann, 2003b: 68)

A*. (*A*.) *jordani (Naufock, 1921: 63) (*Procris*)

****statices*-group**

A*. (*A*.) *krymensis Efetov, 1994b: 267
A*. (*A*.) *schmidti (Naufock, 1933b: 61) (*Procris*)
ariasae (Agenjo, 1975: 9) (*Procris schmidti* subsp.)
A*. (*A*.) *alpina (Alberti, 1937a: 435) (*Procris*)
oblita (Rocci, 1937: 146) (*Procris* sp.)
viridis Verity, 1946: 148 (*Adscita alpina* 'forma')
caerulea Verity, 1946: 148 (*Adscita alpina* 'forma')
minuscula Verity, 1946: 151 (*Adscita alpina alpina* 'sottorazza') (see Efetov, 2001c: 128)
bellissima Verity, 1946: 151 (*Adscita alpina* 'razza')
****A*. (*A*.) *italica*** (Alberti, 1937a: 438) (*Procris*) (see Efetov & Tarmann, 2000: 166)
****A*. (*A*.) *italica italica*** (Alberti, 1937a: 438) (*Procris*)
****A*. (*A*.) *italica storaiae*** (Tarmann, 1977a: 97) (*Procris*) (see Efetov & Tarmann, 2000: 166)

A.* (*A.*) *statices (Linnaeus, 1758: 495) (*Sphinx*)

A.* (*A.*) *statices statices (Linnaeus, 1758: 495) (*Sphinx*)

turcosa Retzius, 1783: 8 (*Adscita* sp.) (unnecessary objective replacement name for *Sphinx statices* Linnaeus, 1758)

micans (Freyer, 1833: 27) (*Sphinx* sp.)

uralensis (Grum-Grshimailo, 1893: 385) (*Ino statices* var.)

viridis Tutt, 1899: 390 (*Adscita statices* 'ab.')

**griseonigra* (Hoffmann & Klos, 1923: 44) (*Ino statices* f.) (synonymised by Efetov & Tarmann, 1999a: 30)

**grisea* (Niepelt, 1924: 50) (*Procris statices* f.) (synonymised by Efetov & Tarmann, 1999a: 30)

extensa (Alberti, 1937b: 100) (*Procris*)

anomala Verity, 1946: 152 (*Adscita statices* 'razza')

lutrinensis (Heuser, 1960: 28) (*Procris* sp.)

heuseri (Reichl, 1964: 100) (*Procris* sp.)

albis (Heuser, 1964: 68) (*Procris* sp.)

palatis (Heuser, 1964: 68) (*Procris* sp.)

talis (Heuser, 1964: 68) (*Procris* sp.)

A.* (*A.*) *statices drenowskii (Alberti, 1939b: 43) (*Procris* sp.)

**obscura*-group

A.* (*A.*) *obscura (Zeller, 1847a: 15) (*Procris*)

A.* (*A.*) *obscura obscura (Zeller, 1847a: 15) (*Procris*)

anceps (Staudinger, 1862: 355) (*Ino* sp.)

balcanica* (Staudinger, 1862: 356) (*Ino obscura* 'Localform'), **syn. n. – (C 25)

pallida* (Alberti, 1938a: 122) (*Procris*), **syn. n. – (C 25)

A.* (*A.*) *obscura maxima (Alberti, 1938a: 122) (*Procris*)

**geryon*-group

A.* (*A.*) *capitalis (Staudinger, 1879: 317) (*Ino*)

A.* (*A.*) *geryon (Hübner, 1813: pl. 28, figs 130, 131) (*Sphinx*)

minor (sensu Jordan, 1907: 9) (*Procris*) (nec Eversmann, 1844: 91) (see Efetov & Tarmann, 1999a: 25)

A.* (*A.*) *geryon geryon (Hübner, 1813: pl. 28, figs 130, 131) (*Sphinx*)
caerulea Tutt, 1899: 401 (*Adscita geryon* 'ab.')
viridis Tutt, 1899: 401 (*Adscita geryon* 'ab.')
virescens (Agenjo, 1937: 311) (*Procris geryon* 'forma')
aeris Verity, 1946: 154 (*Adscita geryon* 'razza')
A.* (*A.*) *geryon chrysocephala (Nickerl, 1845: 93) (*Atychia* sp.)
A.* (*A.*) *geryon acutafibra* Verity, 1946: 149 (*Adscita alpina* 'forma') (see Efetov, 2001c: 128)
A.* (*A.*) *geryon orientalis (Alberti, 1938d: 54) (*Procris*)
**hyalicolor* Verity, 1946: 150 (*Adscita alpina* 'razza') (synonymised by Efetov, 2001c: 128)

***albanica*-group**

A.* (*A.*) *albanica (Naufock, 1926: (126)) (*Procris*)
jegorowi (Alberti, 1971b: 76) (*Procris*) [nomen nudum]

*Subgenus *Tarmannita* Efetov, 2000f: 169

[Type species: *Ino mannii* Lederer, 1853: 103, by original designation]

A.* (*T.*) *mannii (Lederer, 1853: 103) (*Ino*)
heydenreichii (Lederer, 1853: 103) (*Ino* sp.)
crassicornis (Staudinger, 1862: 358) (*Ino heydenreichii* 'v.')
prasina (Rothschild, 1917: 345) (*Procris bellieri* subsp.)
atlantica* (Alberti, 1937b: 98) (*Procris mannii* subsp.), **syn. n. – (C 26)
denticulata Verity, 1946: 140 (*Adscita mannii* 'forma')
caerulea Verity, 1946: 143 (*Adscita mannii bellieri* 'forma')
glauca Verity, 1946: 144 (*Adscita mannii* 'razza')
gracilis Verity, 1946: 145 (*Adscita mannii crassicornis* 'sottorazza')
pseudostatices Verity, 1946: 146 (*Adscita mannii* 'razza')
heliocausta Dujardin, 1975: 39
micans (sensu Jordan, 1907: 9) (*Procris*) (nec Freyer, 1833: 27)
A.* (*T.*) *bolivari (Agenjo, 1937: 314) (*Procris*)

Genus *Jordanita* Verity, 1946: 134 – (R)

[Type species: *Sphinx chloros* Hübner, 1813: pl. 28, figs 128, 129; by original designation, name made available by designation of type species]

Jordanita Agenjo, 1940: 46 (without designation of type species; unavailable under Code, Article 13.3)

Subgenus *Roccia* Alberti, 1954: 326

[Type species: *Ino budensis* Speyer & Speyer, 1858: 466, by original designation]

****budensis*-group**

J.* (*R.*) *budensis (Speyer & Speyer, 1858: 466) (*Ino*)
cuprea (Rambur, 1866: 186) (*Procris*)
J.* (*R.*) *budensis budensis (Speyer & Speyer, 1858: 466) (*Ino*)
J.* (*R.*) *budensis centralasiae (Alberti, 1937c: 87) (*Procris*)
J.* (*R.*) *paupera (Christoph, 1887: 162) (*Ino*)
mollis (Grum-Grshimailo, 1893: 385) (*Ino budensis* var.)
hamifera (Jordan, 1907: 8) (*Procris*)
tamerlana (Alberti, 1937c: 86) (*Procris hamifera* subsp.)
minor (Alberti, 1937c: 87) (*Procris hamifera* 'f. (ssp. ?)')

****volgensis*-group**

J.* (*R.*) *volgensis (Möschler, 1862: 139) (*Ino*)
J.* (*R.*) *volgensis volgensis (Möschler, 1862: 139) (*Ino*)
J.* (*R.*) *volgensis muelleri (Alberti, 1973b: 387) (*Procris*)
J.* (*R.*) *volgensis grandis (Alberti, 1974: 49) (*Procris*)
monotona (Alberti, 1937c: 91) (*Procris volgensis* subsp. *hector* f.)
J.* (*R.*) *suspecta (Staudinger, 1887a: 71) (*Ino cognata* 'var.?')
globulariae partim (sensu Jordan, 1907: 8) (*Procris*) (nec Hübner, 1793: pl. 67)

****naufocki*-group**

J.* (*R.*) *tianshanica (Efetov, 1990: 8) (*Adscita*)
J.* (*R.*) *naufocki (Alberti, 1937c: 88) (*Procris*)

*__J.__ (__R.__) __almatiensis__ Mollet, 2008: 57
__J.__ (__R.__) __kurdica__ (Tarmann, 1987: 1) (*Adscita*)

***hector-group**

__J.__ (__R.__) __hector__ (Jordan, 1907: 8) (*Procris*)
staudingeri (Alberti, 1954: 328) (*Procris*)

Subgenus *Lucasiterna* Alberti, 1961: 59

[Type species: *Procris cirtana* Lucas, 1849: 374, by original designation]

Lucasia Alberti, 1954: 319 (a junior homonym of *Lucasia* Robineau-Desvoidy, 1863: 409 – Insecta, Diptera. The objective replacement name is *Lucasiterna* Alberti, 1961: 59)
[Type species: *Procris cirtana* Lucas, 1849: 374, by original designation]

__J.__ (__L.__) __cirtana__ (Lucas, 1849: 374) (*Procris*)
orana (Austaut, 1880: 284) (*Ino*)
orana (Bethune-Baker, 1888: 117) (*Ino*) (a junior primary homonym of *Ino orana* Austaut, 1880: 284)
bakeri (Kirby, 1892: 82) (*Adscita*) (objective replacement name for *Ino orana* Bethune-Baker, 1888: 117)

*Subgenus *Tremewania* Efetov & Tarmann, 1999a: 42

[Type species: *Atychia notata* Zeller, 1847b: 294, by original designation]

*__J.__ (__T.__) __notata__ (Zeller, 1847b: 294) (*Atychia*)
soror (Rambur, 1866: 187) (*Procris*)
chlorotica (Agenjo, 1937: 291) (*Procris globulariae* var.)
cyanotica (Agenjo, 1937: 291) (*Procris globulariae* var.)
superior (Rocci, 1937: 130) (*Rhagades notata* 'f. p.')
globulariae partim (sensu Jordan, 1907: 8) (*Procris*) (nec Hübner, 1793: pl. 67)
globulariae (sensu Agenjo, 1937: 291) (*Procris*) (nec Hübner, 1793: pl. 67)
globulariae (sensu Verity, 1946: 130) (*Procris*) (nec Hübner, 1793: pl. 67)

*__J. (T.) splendens__ (Staudinger, 1887a: 68) (*Ino*)
*__incerta__ (Staudinger, 1887a: 72) (*Ino*), **syn. n. – (C 27)**
*__heringi__ (Alberti, 1937c: 78) (*Procris splendens* subsp.), **syn. n. – (C 27)**
globulariae suspecta (sensu Jordan, 1907: 8) (*Procris*) (nec Staudinger, 1887a: 71)
*__acroptilon__ (Stshetkin & Stshetkin, 1993: 139) (*Procris*) [nomen nudum: unavailable under Code, Article 13.1] – **(C 28)**
*__J. (T.) ambigua__ (Staudinger, 1887a: 71) (*Ino*)
*__J__. (__T__.) __ambigua ambigua__ (Staudinger, 1887a: 71) (*Ino*)
*__J. (T.) ambigua asiatica__ (Staudinger, 1887a: 73) (*Ino budensis* var.)
*__J__. (__T__.) __ambigua schakuhensis__ (Alberti, 1954: 328) (*Procris*)
*__J. (T.) ambigua omotoi__ (Alberti, 1965: 1) (*Procris* sp.)

Subgenus *Gregorita* Povolný & Šmelhaus, 1951: 159

[Type species: *Procris hispanica* Alberti, 1937b: 87, by original designation]

*__hispanica__-group

__J. (G.) hispanica__ (Alberti, 1937b: 87) (*Procris*)
danieli (Alberti, 1937b: 89) (*Procris hispanica* subsp.)
soror (sensu Agenjo, 1937: 295) (*Procris*) (nec Rambur, 1866: 187)
soror (sensu Povolný & Šmelhaus, 1951: 187) (*Procris*) (nec Rambur, 1866: 187)

*__algirica__-group

__J. (G.) algirica__ (Rothschild, 1917: 345) (*Procris orana* subsp.)
reisseri (Naufock, 1932: 75) (*Procris*)
azrouica (Barragué, 1986: 324) (*Adscita algirica* subsp.)
taon (Barragué, 1986: 324) (*Adscita algirica* subsp.)
stena (Barragué, 1986: 325) (*Adscita algirica* subsp.)
intermedia (Barragué, 1986: 325) (*Adscita algirica* subsp.)
__J. (G.) minutissima__ (Oberthür, 1916: 240) (*Procris tenuicornis* ‘morphe’)

J.* (*G.*) *carolae (Dujardin, 1973: 157) (*Adscita rungsi* subsp.)
J.* (*G.*) *rungsi (Dujardin, 1973: 155) (*Adscita*)

******cognata*-group**

J.* (*G.*) *cognata (Herrich-Schäffer, 1847: pl. 13, figs 94, 95) (*Procris*)
cognata (Lucas, 1849: 373) (*Procris*) (a junior primary homonym)
gigantea (Naufock, 1933a: 96) (*Procris*)
J.* (*G.*) *benderi (Tarmann, 1985: 17) (*Adscita*)
koriflana (Rungs, 1980: 140) (*Adscita cognata* subsp.) [nomen nudum: unavailable under Code, Article 13.1]
J.* (*G.*) *maroccana (Naufock, 1937: 30) (*Procris*)

Subgenus *Jordanita* Verity, 1946: 134

[Type species: *Sphinx chloros* Hübner, 1813: pl. 28, figs 128, 129; by original designation]

******graeca*-group**

J.* (*J.*) *syriaca (Alberti, 1937c: 94) (*Procris*)
J.* (*J.*) *graeca (Jordan, 1907: 9) (*Procris*)
J.* (*J.*) *graeca graeca (Jordan, 1907: 9) (*Procris*)
**sultana* (Alberti, 1937c: 96) (*Procris*) (synonymised by Efetov, 2001d: 156, 161)
J.* (*J.*) *graeca persica (Alberti, 1938a: 125) (*Procris* 'ssp.?')

******chloros*-group**

J.* (*J.*) *chloros (Hübner, 1813: pl. 28, figs 128, 129) (*Sphinx*)
J.* (*J.*) *chloros chloros (Hübner, 1813: pl. 28, figs 128, 129) (*Sphinx*)
sepium (Boisduval, 1834: 81) (*Procris* sp.)
**minor* (Eversmann, 1844: 91) (*Atychia statices* var.) (synonymised by Efetov & Tarmann, 1999a: 25, 53)
haegeri* (Alberti, 1973b: 386) (*Procris chloros* subsp.), **syn. n. – (C 29)
J.* (*J.*) *chloros hades (Alberti, 1970a: 82) (*Procris*)

J.* (*J.*) *chloronota (Staudinger, 1871: 100) (*Ino chloros* var.)
minima (Alberti, 1937c: 93) (*Procris chloronota* f.)

****globulariae*-group**

J.* (*J.*) *tenuicornis (Zeller, 1847b: 293) (*Atychia*)
J.* (*J.*) *tenuicornis tenuicornis (Zeller, 1847b: 293) (*Atychia*)
bellieri (Rambur, 1866: 184) (*Procris* sp.)
J.* (*J.*) *tenuicornis turatii (Bartel, 1906: 178) (*Ino* sp.)
translucens Verity, 1946: 136 (*Jordanita tenuicornis* 'razza')
J.* (*J.*) *globulariae (Hübner, 1793: pl. 67) (*Sphinx*)
caerulea (Tutt, 1899: 408) (*Rhagades globulariae* var.)
viridis (Tutt, 1899: 408) (*Rhagades globulariae* 'ab.')
**azurea* (Vorbrodt, 1914: 248) (*Procris globulariae* 'Form')
(synonymised by Efetov & Tarmann, 1999a: 26)
acanthophora (Agenjo, 1937: 302) (*Procris*)
bosniaca (Alberti, 1937b: 99) (*Procris globulariae* subsp.)
stricta (Verity, 1946: 134) (*Procris cognata* 'forma')
aureoviridis (Verity, 1946: 134) (*Procris cognata* 'forma')
caerulea (Verity, 1946: 134) (*Procris cognata* 'forma')
urbis (Verity, 1946: 134) (*Procris cognata* 'razza')
cognata (sensu Jordan, 1907: 8) (*Procris*)
(nec Herrich-Schäffer, 1847: pl. 13)
cognata (sensu Agenjo, 1940: 48) (*Procris*)
(nec Herrich-Schäffer, 1847: pl. 13)
cognata (sensu Verity, 1946: 132) (*Procris*)
(nec Herrich-Schäffer, 1847: pl. 13)
J.* (*J.*) *fazekasi Efetov, 1998b: 183
J.* (*J.*) *vartianae (Malicky, 1961: 216) (*Procris*)

Subgenus *Praviela* Alberti, 1954: 329

[Type species: *Procris anatolica* Naufock, 1929: 94, by original designation]
J.* (*P.*) *anatolica (Naufock, 1929: 94) (*Procris*)
J.* (*P.*) *anatolica anatolica (Naufock, 1929: 94) (*Procris*)
levantina (Jordan, 1931: 277) (*Procris* sp.)
pfeifferi (Naufock, 1935: 7) (*Procris* sp.)
J.* (*P.*) *anatolica kruegeri (Turati, 1930: 50) (*Ino* sp.)
J.* (*P.*) *anatolica christinae Keil, 1998: 113
(see Efetov, 2004a: 118)

*Subgenus *Solaniterna* Efetov, 2004a: 33, 119

[Type species: *Ino subsolana* Staudinger, 1862: 352, by original designation]

J.* (*S.*) *subsolana (Staudinger, 1862: 352) (*Ino cognata* 'var.?')

cognata (Rambur, 1858: pl. 3, fig. 1) (*Procris*) (a junior primary homonym of *Procris cognata* Herrich-Schäffer, 1847: pl. 13, figs 94, 95)

incognita (Staudinger, 1862: 359) (*Ino cognata* 'fragliche Varietät') [nomen nudum]

ramburi (Praviel, 1938: 113) (*Procris subsolana* subsp.)

schuetzei (Alberti, 1940: 313) (*Procris subsolana* subsp.)

modesta (Verity, 1946: 129) (*Procris subsolana* 'razza')

venusta (Verity, 1946: 129) (*Procris subsolana* 'razza')

globulariae partim (sensu Jordan, 1907: 8) (*Procris*) (nec Hübner, 1793: pl. 67)

J.* (*S.*) *solana (Staudinger, 1887a: 72) (*Ino subsolana* 'var.?')

**gouldschaensis* (Alberti, 1937c: 81) (*Procris solana* subsp.) (synonymised by Efetov & Tarmann, 1999a: 25, 51)

Subgenus *Rjabovia* Efetov & Tarmann, 1995b: 70

[Type species: *Procris horni* Alberti, 1937c: 93, by original designation and monotypy]

J.* (*Rjab.*) *horni (Alberti, 1937c: 93) (*Procris*)

armena (Alberti, 1970a: 79) (*Procris*) [nomen nudum]

Comments

C 1 The genus *Artona* as treated by Efetov & Tarmann (1995b: 85) is now divided into three genera. However, the taxonomic situation at species level has not changed significantly. *Artona* s.str. needs revising, based on type material. A number of undescribed species are already known to the authors. The descriptions are postponed until this genus is fully revised.

C 2 We accept the opinion of Owada & Inada (2005) who reinstated *Balataea* Walker, 1865, as a valid genus. After excluding *Balataea* from *Artona* the latter is polyphyletic and forming two well-separated groups: (1) species with yellow spots on the forewings, mainly opaque yellow hindwings and a black and yellow abdomen; (2) species with unicolorous blackish brown forewings and abdomen and hindwings with translucent basal and discal areas. The first group (1) includes the type species of *Artona*, while the second (2) was provisionally left in *Artona* by Owada & Inada. Based on our revisional studies it is necessary to describe a new genus to accommodate the four species of the second group.

Genus *Fuscartona* Efetov & Tarmann, gen. n.

Type species: *Artona martini* Efetov, 1997a: 170, by present designation.

Description

Habitus (Efetov, 1997a: figs 1, 4, 7, 9, 13, 17; 2005a: pl. 59, figs 3.1, 3.2; 2005b: fig. 100.3) of male and female similar (male only slightly smaller than female). Head, thorax, forewings and abdomen unicolorous blackish brown. Hindwings transparent or semitransparent in basal and discal areas, marginal areas blackish brown. Antenna bipectinate with last segments biserrate in male and slightly biserrate (almost filiform) in female. Proboscis well developed. Foreleg with long tibial epiphysis; hindtibia with three spurs (one medial and two apical).

Genitalia male (Efetov, 1997a: figs 5, 11, 15; 2005a: pl. 47, fig. 15; 2005b: figs 105.5 – 105.7). Apex of sacculus with well-developed, finger-like process that is equal in length to or longer than uncus. There is no tuft of setae at the base of this process; the distal hairbrush is only slightly developed or absent. Apex of sacculus without lateral pointed process. Sacculus with tuft of long setae laterally. Vesica of aedeagus with one long fixed heavily sclerotized cornutus and a bundle of loose, less sclerotized, eversible, rod-shaped cornuti of same length (which can often be found in the praebursa of the female).

Genitalia female (Efetov, 1997a: figs 6, 12, 16, 19; 2005a: pl. 55, fig. 15; 2005b: figs 105.8, 105.9). Antrum tubular with slightly sclerotized walls, remainder of ductus bursae dilated, forming an ovoid praebursa with a double row of short tooth-like sclerotizations.

Differential diagnosis. Differs from *Artona* by unicolorous forewing and semitranslucent base of hindwings (*Artona*: yellow pattern on forewing, hindwing not semitranslucent) and from *Balataea* (Efetov, 2005a: pl. 48, fig. 16; pl. 49, fig. 17; pl. 56, figs 16, 17; pl. 59, figs 4, 5) not only by the absence of forewing spots but also in the male genitalia (presence of a bundle of loose cornuti and absence of pointed process at apex of sacculus).

Derivatio nominis: *fuscus* (*a*, *um*) (Latin) – dark, blackish, blackish brown.

C 3 *Pseudosesidia* Alberti, 1954, was described as a subgenus of *Balataea* Walker, 1865, based on the single species *Balataea* (*Pseudosesidia*) *aegeriaeformis* Alberti, 1954, of which only the male holotype is known. For the time being we leave this taxon as a subgenus of *Balataea*. According to Alberti (1954: 271) there are significant differences in wing venation compared to all other *Balataea* species. However, variation in wing venation is common in Procridinae and there are no significant differences in genitalic characters. Moreover, based on one male only it is not possible to find sufficient evidence to change the position of *Pseudosesidia*.

C 4 Efetov & Tarmann (1999a: 89) stated that the accommodation of *Bintha clathrata* Poujade, 1886a, into one of the described genera was not possible. However, in 1999 the description of a new genus was postponed until the examination of type material. Investigation of the female holotype (Figs 3–5) deposited in Muséum National d'Histoire Naturelle, Paris, showed that this species belongs to the tribe Artonini. Although only the female holotype is known we see no other possibility as to describe a new genus to accommodate *Bintha clathrata*.

Genus *Striartona* Efetov & Tarmann, gen. n.

Type species: *Bintha clathrata* Poujade, 1886a: 117, by present designation and monotypy.

Description

Head capsule dorsoventrally compressed, frons rounded, vertex flat, antenna (female holotype) slightly serrated (almost filiform), tapering towards and pointed at apex; proboscis well developed, brown, labial palpus long (slightly longer than length of head in lateral view), chaetosema triangular, strongly extended anteriorly between ocellus and compound eye. Wing venation at forewing with complete set of veins, all veins free from cell, medial stem only distally present as a short fold, short longitudinal additional vein situated in the anterior distal part of cell connecting the bases of R_1 and R_4; hindwing with M_2 absent, M_3 and CuA_1 arising at one point from cell, medial stem present. Foretibia with epiphysis, hindtibia with three spurs (one medial

and two apical). Abdomen with a pair of small, lateral, bulb-like evaginations on segments 2 and 7 (evagination on segment 2 larger than on segment 7).

Genitalia female (Fig. 5). Central part of ductus bursae strongly dilated, forming a praebursa with pointed apex ('triangular' in shape), with a few short spines inside and a double row of long spines near the beginning of distal part of ductus bursae; corpus bursae small, translucent, without signa.

Differential diagnosis. The new genus is characterized by a unique wing pattern where the forewing and the hindwing form a unit (hindwing with pattern similar to that of the forewing). The externally nearest genus is *Allobremeria* Alberti, 1954 (type species *Allobremeria plurilineata* Alberti, 1954), but latter has uniclolorous dark brown central and distal parts of the hindwing and the third spur on the hindtibia is absent. Moreover, *Allobremeria plurilineata* has a yellow proboscis (brown in *Striartona clathrata*).

Derivatio nominis. The name reflects the wing pattern of the type species (wings with stripes) and that this genus belongs to Artonini (following the tradition as in *Chrysartona, Fuscartona*).

Redescription of the habitus of *Bintha clathrata* (Fig. 3).

Length of body 8.5 mm; length of forewing 11.1 mm, breadth 4.5 mm; length of hindwing 8.1 mm, breadth 4.5 mm. Frons yellow with brown centre (brown area heart-shaped with broader part directed ventrally); vertex brown, edged with yellow. Antenna brown with basal segment yellow ventrally, slightly biserrate, strongly covered with scales, number of segments not clearly visible without maceration (approximately 45), ratio of breadth of 4th segment from apex to breadth of 15th segment nearly 0.8. Proboscis brown, well developed. Labial palpus with segments 1 and 2 yellow, 3 brown. Compound eye black, ocellus small, black, chaetosema yellow. Tegulae and patagia brown dorsally with yellow stripe dorso-laterally. Thorax brown dorsally with yellow edging laterally and white ventrally. Forewing upper- and underside yellow with brown veins, two brown transverse stripes and brown edging. Fringe dark brown. Hindwing upper- and underside yellow with brown veins and two brown transverse stripes, proximal stripe not complete, only present anteriorly, edges of hindwing brown; apical part of fringe brown, anal part yellow. Legs: coxa and femur white, tibia and tarsus brown with a few white scales. Abdomen in dorsal view with segment 1 yellow with brown lateral margins, segments 2–4 with brown anterior half and yellow posterior half, segments 5–7 yellow with brown anterior margin, distal end of segment 7 with small yellow hair tuft; abdomen in ventral view white with distal end light brown.

MATERIAL EXAMINED

The holotype female of *B. clathrata* (Figs 3, 4) has the following pin-labels: printed red paper 'TYPE'; printed, yellowish paper with black frame 'MUS.HIST.NAT. / A. DAVID / Moupin (*Thibet*) / 1871'; handwritten (hand of G.-A. Poujade?), yellowish paper 'Bintha / clathrata Pouj. / Ann. Soc Ent. ♀ / 1886 Bullet CXVII' (symbol '/' denotes the end of a line).

C 5 *Chrysartona* Swinhoe, 1892, was transferred to the Artonini in accordance with the last revisions of the group (Efetov, 2006; Efetov & Tarmann, 2008a; 2008b).

C 6 *Chrysartona stipata* (Walker, 1854) was included in the Palaearctic checklist (Efetov & Tarmann, 1995b). However, a revision of this genus (Efetov, 2006; Efetov & Tarmann, 2008) showed that in earlier times several species were mentioned in the literature under the name '*stipata*'. The distribution of the true *Ch. stipata* is restricted to northern and north-eastern India and Myanmar (Burma).

C 7 As shown by Efetov *et al*. (2006: 232), the presence of only one dorsal seta on the first abdominal segment of the first instar larva proves that the genus *Clelea* Walker, 1854, belongs to the tribe Artonini. This is supported by the presence of a single medial spur on the hind tibia in most species and it has also been confirmed by Nakamura (2006: 165), based on a study of the pupal morphology. In Efetov & Tarmann (1995b: 84), *Clelea exiguitata* Inoue, 1976 (as *C. 'exiguata'* [sic]), was included into *Clelea*. Based on a study of the genitalia structure of this species (especially the double uncus) Efetov (1999b: 91) excluded this species from the Procridinae and described a new genus *Inouela* Efetov, 1999b, of the subfamily Chalcosiinae to accommodate two species: *I. formosensis* Efetov, 1999b, and *Clelea exiguitata* Inoue, 1976.

C 8 In our previous checklist (Efetov & Tarmann, 1995b) we stated that *Clelea melaleuca* Jordan, 1907, does not belong to the genus *Clelea* Walker, 1854. Now, based on details of the wing-pattern, we found that *C. melaleuca* is congeneric with *Platyzygaena moelleri* (Elwes, 1890), type species of the genus *Platyzygaena* Swinhoe, 1892.

C 9 The genera *Hysteroscene* Hering, 1925, *Tasema* Walker, 1856, and *Morionia* Jordan, 1910, are transferred to the Artonini, as the species that represent them have one single medial spur on the hindtibia, while in all known species of Procridini a medial spur is absent.

C 10 In our paper on the genus *Inope* (Efetov & Tarmann, 1996), we included two species: *I. heterogyna* and *I. maerens*; as both have a single medial spur present on the hind tibia, *Inope* was transferred to the Artonini. Alberti (1954: 223–226) included four species: *I. heterogyna*, *I. maerens*, *I. inconspicua*, and *I. fuliginosa*, the last two lacking the medial spur on the hind tibia. Alberti stated that *I. inconspicua* is congeneric with *I. heterogyna*, the type species of *Inope* Staudinger, 1887b, supported by similarities in the male genitalia structures (typical transtilla with two processes). After intensive studies of the 'medial spur' on the hind tibia (a basic character of the Artonini), we now know that it can be secondarily reduced in some species of certain groups

(e.g. *Clelea* Walker, 1854). Therefore we now follow Alberti's opinion that the taxon *Inope inconspicua* belongs to the genus *Inope*. The status of *Inope fuliginosa* Moore, 1879, from India is still unclear.

C 11 Species of the genus *Alloprocris* Hering, 1925b, lack the epiphysis on the foretibia and the single medial spur on the hindtibia. However, the shape of the chaetosema looks like that of the Artonini. Therefore, we place this genus provisionally as the last genus in the Artonini, just before the Procridini, but its systematic position needs to be confirmed.

C 12 *Illiberis kuprijanovi* Efetov, 1995a (Figs 6–9), was provisionally included into the subgenus *Primilliberis* Alberti, 1954, of the genus *Illiberis* Walker, 1854, based on the absence of the foretibial epiphysis. At that time this character in the genus *Illiberis* was only present in two species of *Primilliberis* (i.e. *I. pruni*, *I. kardakoffi*). The discovery of the biology of *I. kuprijanovi* (Efetov, 2000b; 2003a) showed that the larva feeds on *Quercus mongolica* Fisch. ex Ledeb. (Fagaceae) while typical representatives of *Primilliberis* (e.g. *I.* (*P.*) *rotundata*, *I.* (*P.*) *yeni* and *I.* (*P.*) *pruni*) are known as Rosaceae-feeding species (Efetov, 1997b; 2005a). Recently a unique character was discovered in *I. kuprijanovi*. Although there is no doubt of its close relationship to *Illiberis* (also confirmed by molecular results) this species has the characteristic lateral evaginaions on the abdominal segments 2 and 7 present that were in adults only known in the tribe Artonini so far. Because of this and the differences in habitus, genitalia structure (Figs 6, 8, 9) and biology a new genus is described to accommodate the taxon *Illiberis kuprijanovi*.

Genus *Pseudoilliberis* Efetov & Tarmann, gen. n.

Type species: *Illiberis kuprijanovi* Efetov, 1995a: 237, by present designation and monotypy.

Description

Wings less translucent than in *Illiberis*. Epiphysis of foretibia absent. Abdomen with translucent lateral evaginations on segments 2 and 7 (like in Artonini).

Genitalia male (Fig. 8). Transtilla without dorsal process, distal part of aedeagus not dilated.

Genitalia female (Fig. 9). Ductus bursae tubular with strong sclerotization.

Differential diagnosis. The new genus differs from all Palaearctic Procridini by the presence of the Artonoid lateral evaginations on abdominal segments 2 and 7 in the adults. It also differs from *Illiberis* species by less

translucent wings and by the absence (except *I*. (*Nikilliberis*) *kardakoffi* and *I*. (*Primilliberis*) *pruni*) of a foretibial epiphysis. Moreover, all *Primilliberis* species have a transtilla with a dorsal process (which is absent in *Pseudoilliberis*), a dilated distal part of the aedeagus, a lack of cornuti in the vesica (Fig. 12) (in *Pseudoilliberis* there is a cornutus of very characteristic shape with the proximal part slightly sclerotized, folded and the distal part strongly sclerotized, smooth and cone-shaped), a cone-shaped ductus bursae, only with spots of sclerotization (Fig. 13) (in *Pseudoilliberis* the ductus bursae is tubular and strongly sclerotized).

C 13 *Illiberis kardakoffi* (Figs 10, 11) was described by Alberti (1951) before his division of the genus *Illiberis* Walker, 1854, into subgenera. However, when he proposed (Alberti, 1954) the subgeneric division of *Illiberis* he provisionally placed *I. kardakoffi* in the subgenus *Primilliberis* Alberti, 1954, with the comment that it has a special position. *Illiberis kardakoffi* lacks a main autapomorphy of *Primilliberis* (e.g. dorsal process of transtilla) and the larva feeds on Fagaceae and Corylaceae (Efetov, 2000b; 2003a; 2005a; 2005b) (not on Rosaceae as in *Primilliberis*). Therefore it is necessary to describe a new subgenus to accommodate this species.

Subgenus *Nikilliberis* Efetov & Tarmann, subgen. n.

Type species: *Illiberis kardakoffi* Alberti, 1951: 143, by present designation and monotypy.

Description

Wings translucent (as in most of *Illiberis* species). Epiphysis of foretibia absent.

Male genitalia (Fig. 10). Uncus short, apex of valva without process, transtilla simple, lacking dorsal process, aedeagus without cornuti.

Female genitalia (Fig. 11). Antrum with typical spine-shaped sclerotization, praebursa absent, corpus bursae rounded, translucent.

Differential diagnosis. All species of the subgenera *Nikilliberis, Primilliberis* and *Illiberis* differ from species of all other subgenera of the genus *Illiberis* by the absence of cornuti. *Nikilliberis* differs from the subgenus *Primilliberis* (Figs 12, 13) by the absence of the pointed process at the apex of valva, the absence of the dorsal process on the transtilla and the presence of the typical spine-shaped sclerotization in the antrum. *Nikilliberis* from the subgenus *Illiberis* can easily be distinguished by the absence of the foretibial epiphysis.

Derivatio nominis. The subgenus is named in honour of the Russian lepidopterist Nikolay Ivanovich Kardakoff (1885–1973).

C 14 Examination of a photograph of the genitalia preparation of the holotype female of *Procris formosana* Matsumura, 1927 (Fig. 14) (deposited in Hokkaido University) showed that this specimen is conspecific with *Illiberis sinensis* Walker, 1854 (Fig. 15). The photograph was kindly provided by Professor Dr Shen-Horn Yen, Kaohsiung, Taiwan.

C 15 Alberti (1954) placed *Zama* Herrich-Schäffer, 1855, as a subgenus of the genus *Illiberis* Walker, 1854, and included 12 species. However, the latter consist of two well-separated species-groups that differ in habitus and genitalia structure. As the type species of *Zama* is *Z. cyanecula* Herrich-Schäffer, 1855 (= *Glaucopis nigrigemma* Walker, 1854) and the characters are well differentiated from other *Illiberis* species, we reinstate *Zama* Herrich-Schäffer, 1855, as a genus to include all species of the *nigrigemma*-group. All species of the *phacusana*-group are here transferred to the subgenus *Euphacusa* Matsumura, 1927, of the genus *Illiberis*. *Euphacusa* was originally described as a genus by Matsumura (1927: 79), based on the single species *E. taikozana* Matsumura, 1927. The main character of this genus is the outstanding antennal structure: pectination present in male and female, with the length of the pectinations increasing distally. Alberti (1954) synonymized *E. taikozana* with *Phacusa silverstris* Strand, 1915, and recognized *Euphacusa* Matsumura, 1927, as a subgenus of *Illiberis*. As the genitalia characters of the six species of the *phacusana*-group correspond with those of the type species of *Euphacusa*, but not with the type species of *Zama* (*Z. cyanecula* Herrich-Schäffer, 1855 (= *Glaucopis nigrigemma* Walker, 1854)), we here transfer these taxa to *Euphacusa*, although their antennal characters (the pectination of antenna is not so long in the distal part of the antenna) differ from those of the type species.

Description of *Zama*

Species with long elongate forewings and with very small rounded hindwings. Body, antennae and posterior parts of forewings covered with metallic shiny scales. As already mentioned by Alberti (1954: 236), vein R_2 in forewing arises more posterior than that found in *Illiberis* species, closer to the base of R_3. CuP in forewing wave-like, curved, providing a space for a strongly scaled ovoid spot on the wing posteriorly, which bears intensely metallic scales (of different colours in different species). A similar spot of intensely shiny scales is present on the hindwing underside anterior of the medial stem. Antenna very long (usually comprising more than 60 segments), pectinated in both sexes (pectinations longer in male), the longest pectination of the antenna being situated distad of its middle part. Moreover, *Zama* is also characterized by the presence of a hair tuft at the end of the abdomen in the female (in most cases bright yellow), a character that is absent in all known *Illiberis* species. Such an abdominal hair tuft in the female is also

present in three Australian genera of Artonini (viz. *Pollanisus* Walker, 1854, *Onceropyga* Turner, 1906, and *Hestiochora* Meyrick, 1886). In these genera this character is combined with the reduction of Petersen's gland (a pair of translucent bulb-shaped glands close to the ooporus, which are present in the zygaenid subfamilies Zygaeninae and Procridinae) (Epstein *et al*., 1999; Yen, 2003; Tarmann, 2004). In *Zama*, Petersen's gland is fully developed as in all other Procridini.

Male genitalia. Tegumen with strongly sclerotized evagination dorsad of base of uncus, resembling a high collar. Apex of sacculus with a large strongly sclerotized process. Aedeagus long and broad with two very large cornuti.

Female genitalia. Antrum very strongly sclerotized, broadly open, bowl-shaped, with very characteristic, strongly sclerotized bottle-shaped appendix below translucent tubular part of the very slender ductus bursae; opening of ductus bursae into antrum star-shaped; corpus bursae translucent, without signum.

C 16 *Hedina* was described by Alberti (1954) as a subgenus of *Illiberis* Walker, 1854, to accommodate 9 species that have very characteristic genitalia. Now this group includes 12 species (Efetov, 1997b; 2010). As the genitalic structures in *Hedina* differ so strongly from all other *Illiberis* species we raise *Hedina* from subgenus to genus level (**stat. n.**). The great distance from *Illiberis* has also been confirmed by molecular data (Efetov *et al*., in press) and larval morphology (Efetov, 2008a).

Diagnosis

In some species the wings are translucent, as in *Illiberis*. However, there are also species that have a wing pattern (e.g. *H. hyalina* (Efetov, 2005a: pl. 58, fig.10)*, H. translucida*). Three species even have uniformly dark grey wings (viz. *H. taiwana, H. vietnama, H. nigra* (Efetov, 1997b: figs 11, 13, 17, 20).

Male genitalia (Efetov, 1997b: figs 15, 19, 21; 2005a: pls 45, 46; 2010: figs 2, 3). Pulvinus situated on a long process forming a structure that resembles a tooth-brush, with the setae transformed into strongly sclerotized spines. Valva simple, without a process. Aedeagus very large and stout, vesica not only with cornuti present but also covered with many small spicules.

Female genitalia (Efetov, 1997b: figs 16, 22; 2005a: pls 53, 54). Praebursa large, with many strongly sclerotized spines situated separately or arranged together on long sclerotized areas resembling the blade of a saw. Corpus bursae not spherical, asymmetrical (rounded-triangular) with slightly pointed apex.

C 17 Numerous data published before the revision by Inoue (1976b) on the presence of *Hedina nigra* in Japan are based on misidentified specimens of

Illiberis (*Primilliberis*) *pruni* Dyar, 1905. For example, Saitoh (1960) studied Japanese material of species determined by him as '*Illiberis nigra*'. However, he cited the Japanese name for *H. nigra* as 'Ringo-hamaki-kuroba', but this is the vernacular name for *I.* (*P.*) *pruni*, that was also confirmed by the late Professor H. Inoue (Efetov, Parshkova & Koshio, 2004: 167). The holotype of *H. nigra* originates from 'Ohoyama'. Dr. K. Horie (2012) rediscovered this species in Japan. The presence of *H. nigra* in Korea is doubtful (Kim, Sohn & Cho, 2004).

C 18 Literature data on the presence of *H. elegans* in the Russian Far East (e.g. Xue & Han, 2003: 262), are based on a misidentification of *Illiberis* (*Primilliberis*) *pruni* Dyar, 1905, by Jordan (1907: 7) (see Alberti, 1954: 232, 252)

C 19 The treatment of *Phacusa* Walker, 1854, follows an unpublished revision of this genus based on the study of type material by G. M. Tarmann.

C 20 The genus *Funeralia* Alberti, 1954: 264 is here transferred to the Procridini as there is no medial spur present on the hindtibia of specimens in this group.

C 21 Recent investigations show that *Rhagades pruni* 'v.?'*callunae* Spuler, 1906, cannot be treated as a valid subspecies of *Rh. pruni* ([Denis & Schiffermüller], 1775). This is confirmed by the results of DNA analysis.

C 22 *Ino mystrocera* Püngeler, 1914, and *Procris khorassana* Alberti, 1939, were synonymised under *Zygaenoprocris chalcochlora* Hampson, 1900, by Efetov & Tarmann (1994b: 87) with the following comment:

'Only one specimen (holotype ♂) of *Ino mystrocera* Püngeler, 1914, is known. It has the same habitus as *A. (Z.) chalcochlora* and corresponding genitalia structures. Specimens of the type-series of *Procris khorassana* Alberti, 1939, show no differences in habitus and male genitalia to *A. (Z.) chalcochlora*; their female genitalia have the same characters but the papillae anales are larger, the apophyses posteriors are shorter and the appendix of the ductus bursae is slightly more sclerotized. These slight differences in female genitalia are within the wide range of variability of genitalia and habitus in *A. (Z.) chalcochlora* and are not a reason to recognize *khorassana* as a different species or subspecies. Such variation can be explained by the isolation of populations in northern Iran compared to those of Afghanistan and Pakistan.'

However, not far ago two new *Zygaenoprocris* species of the *chalcochlora*-group (*Z. efetovi* Mollet & Tarmann, 2007, and *Z. hofmanni* Mollet & Tarmann, 2007) were described, based on a different habitus to that of *Z. chalcochlora* (absence of shiny metallic scales), and slight differences in genitalia structures including larger papillae anales and shorter apophyses posteriores. Recent DNA studies support this decision (Efetov *et. al.*, 2010;

2011). Moreover, they show that *Zygaenoprocris chalcochlora* possibly represents a species complex. Populations of *Z. mystrocera* and *Z. khorassana* (both with shiny metallic scales) in northern Iran are isolated from the populations of *Z. chalcochlora* in Pakistan (including the type locality of *Z. chalcochlora*) and Afghanistan (all specimens with small papillae anales and long apophyses posteriores). Such knowledge allows us to suppose that the above-mentioned characters of the papillae anales are much more important than we thought earlier. Therefore we now follow Alberti's conclusion that *Procris khorassana* and *Zygaenoprocris chalcochlora* are different species. We therefore reinstate *Procris khorassana* as a valid species: *Zygaenoprocris khorassana* (Alberti, 1939), **stat. rev.** The populations from the Elburz (Mazandaran) and the northern Kuh Rud (Esfahan) are much closer to *Z. chacochlora* from Afghanistan than *P. khorassana* according to the DNA results. For them the name *Ino mystrocera* Püngeler, 1914, is available. For the time being we consider these populations to belong to *Z. chalcochlora* and leave *Ino mystrocera* as a synonym of *Z. chalcochlora*. Several more isolated populations are known from central and southern Iran also belonging to the *Zygaenoprocris chalcochlora* species complex. Their taxonomic status must be clarified following further investigations.

C 23 *Procriterna* Efetov & Tarmann, 2004, is now represented by four species that have an isolated position within the genus *Adscita* Retzius, 1783, based on morphology (very short club of antenna, very well-developed, pointed ventral process on valva in males), geographical distribution (restricted to Central Asia where other *Adscita* species are absent) and on DNA data.

C 24 The isolated position of *Adscita mauretanica* (Naufock, 1932), has been known for a long time. It is the only *Adscita* species that occurs in north-west Africa (Morocco, Algeria) and the male and female genitalia differ significantly from all other species in the genus. This isolated position is now strongly supported by molecular results (Efetov *et al*., 2011: 50).

C 25 Extensive examination of material showed that the characters of populations from the Balkans, Rhodos (type locality of *Ino obscura* Staudinger, 1862) (see Tarmann & Tremewan, 1995: 51), western and southern Turkey, Syria, Lebanon, Israel, Jordan and Egypt are variable and overlap. As a consequence we synonymise *A*. (*A*.) *obscura balcanica* (Staudinger, 1862) and *A*. (*A*.) *obscura pallida* (Alberti, 1938) under the nominotypical *A*. (*A*.) *obscura obscura* (Zeller, 1847).

C 26 The characters of *Adscita mannii atlantica* (Alberti, 1947), described from western France, overlap with the variability of those of *A*. (*T*.) *mannii* (Lederer, 1853) from the rest of Europe. We therefore here synonymise *Adscita mannii atlantica* (Alberti, 1947) (**syn. n.**) under *A*. (*T*.) *mannii* (Lederer, 1853).

C 27 Investigation of *Jordanita* (*Tremewania*) *splendens* (Staudinger, 1887) from different localities shows a large variability in habitus, characters that overlap. Field observations by K. A. Efetov in Uzbekistan in 1996 showed that even specimens from one locality can be strongly shiny or matt. Subspecies that are based only on the external morphology of adult specimens such as size, colour and sheen can be simply synonymised with nominotypical *J.* (*T.*) *splendens.*

C 28 Specimens determined as '*P. acroptilon*' from the collection of Yu. L. Stshetkin (now in collection of B. Mollet) belong to *J.* (*T.*) *splendens* (B. Mollet, pers. comm.)

C 29 *Jordanita chloros haegeri* (Alberti, 1973b) was described from material originating from the Northern Caucasus (Teberda, 1200 m). The main reason why Alberti described this population as a subspecies is their greenish brown colour, strong sheen on the forewing upperside and the more translucent wings compared to the populations from Hungary and the Balkans. However, based on material from a wide range of localities in Europe and Turkey we do not consider that these characters are so exceptional that they justify the description of a separate subspecies, as *J.* (*J.*) *chloros* exhibits extreme variation in its wide distributional range. Only the populations that occur between southern Macedonia and northern Greece seem to have more or less constant habitual characters (brownish bronze forewing upperside, very dark opaque hindwing) that might justify the recognition of a subspecies (described as *P. chloros hades* Alberti, 1970a).

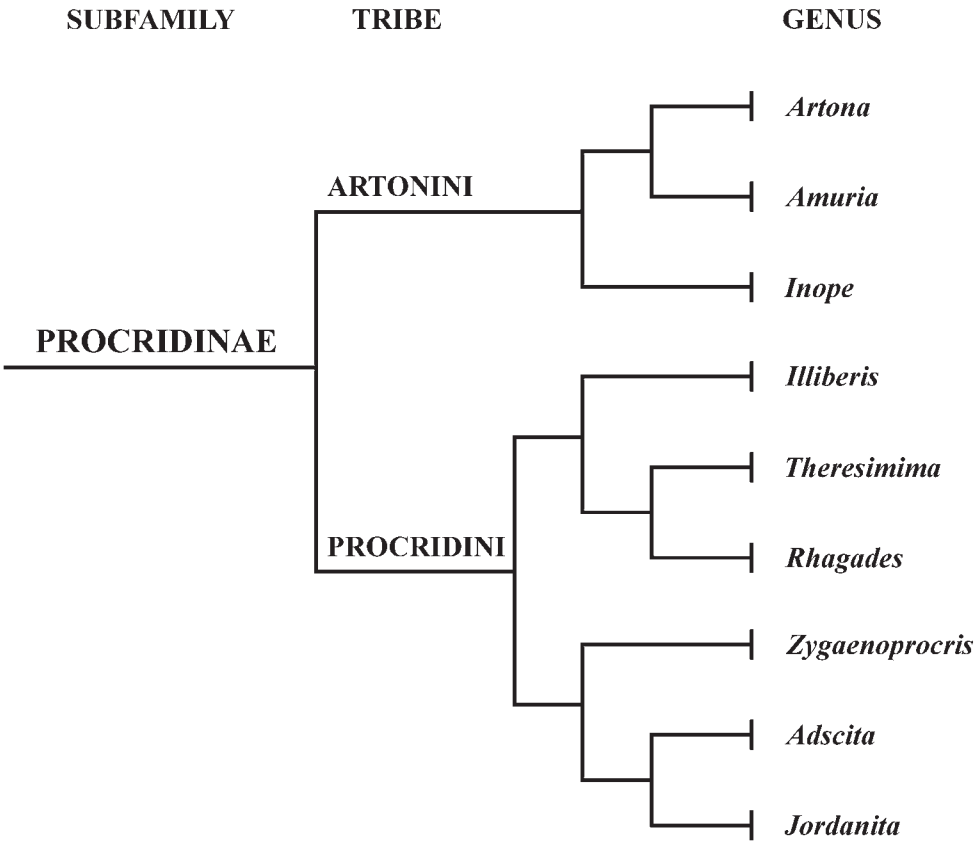


Fig. 1. A scheme reflecting possible phylogenetic relationships of some genera of the Procridinae (after Efetov, 2005a: 57).

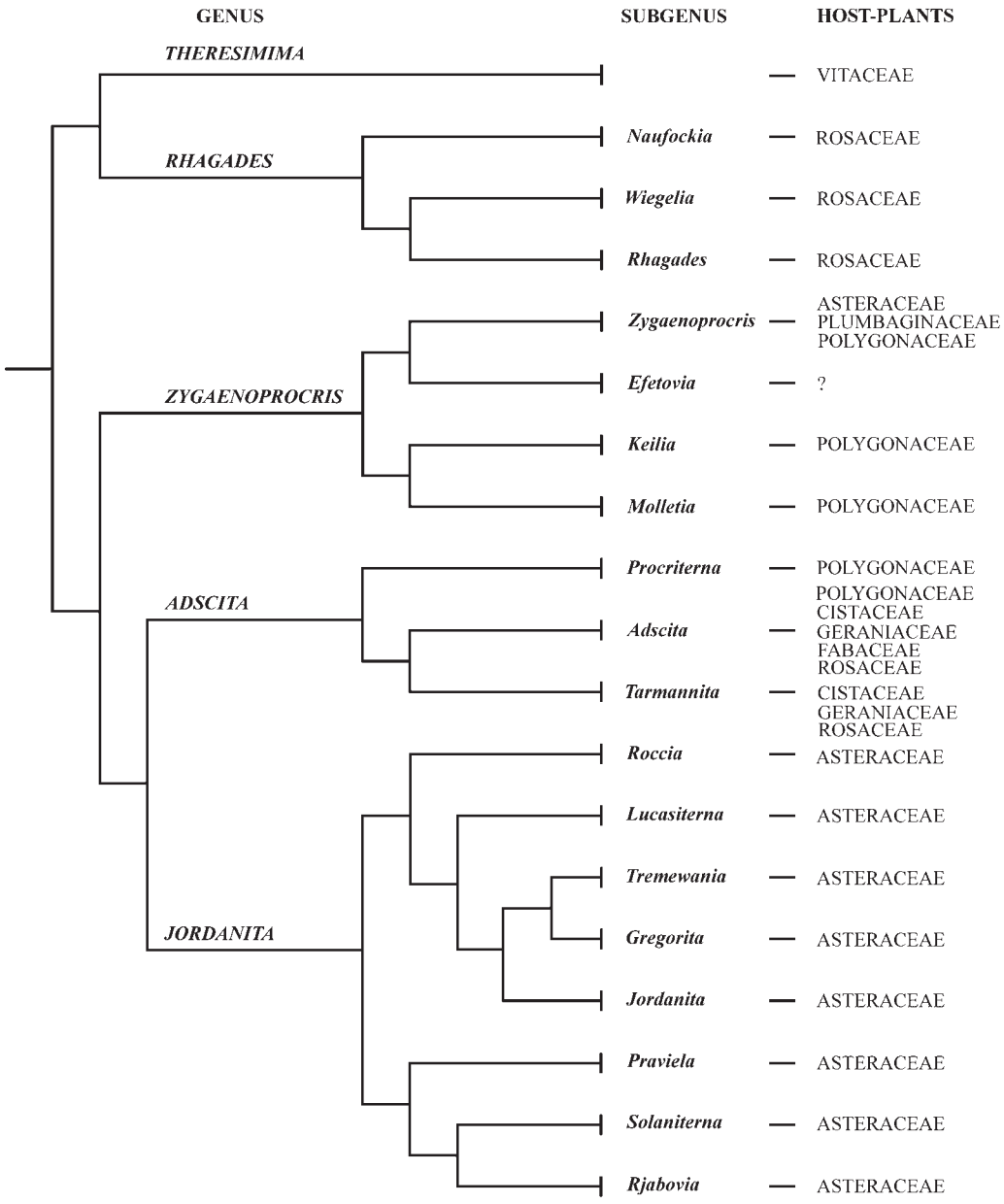


Fig. 2. A scheme reflecting possible phylogenetic relationships of genera and subgenera of Forester moths (after Efetov, 2001d: 158; 2001f: 9; 2005a: 65, with amendments and additions).

Figs 3, 4. *Striartona clathrata* (Poujade, 1886). 3, holotype female of *Bintha clathrata* Poujade, 1886. China; 4, pin-labels of holotype.

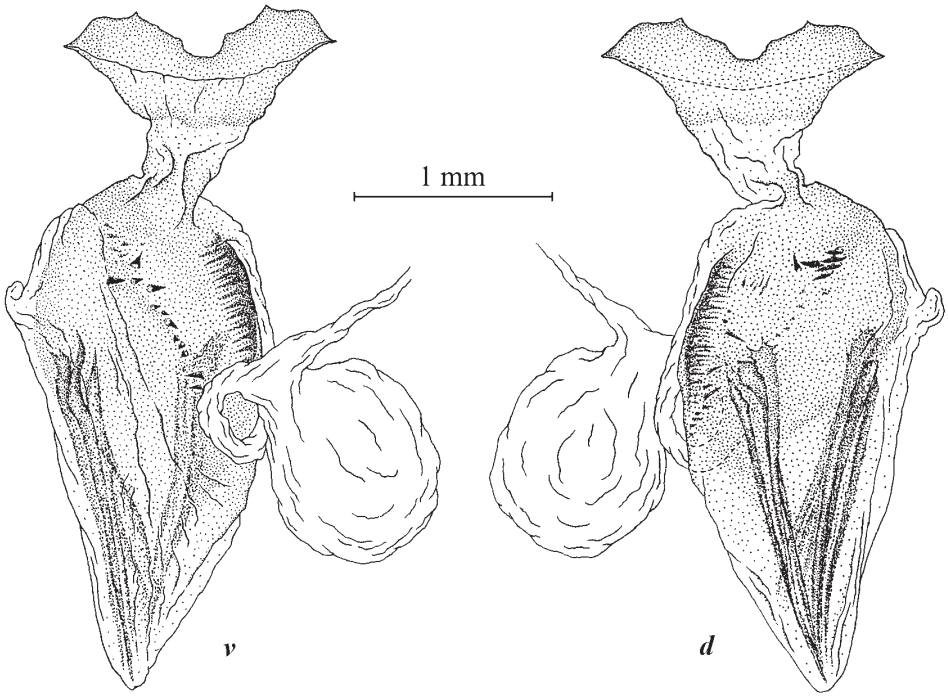
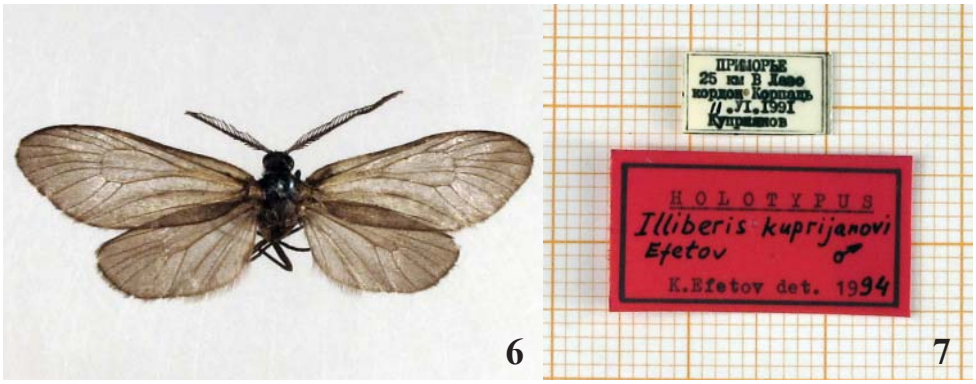


Fig. 5. *Striartona clathrata* (Poujade, 1886), genitalia of holotype female of *Bintha clathrata* Poujade, 1886: (*v*) ventral view; (*d*) dorsal view. China.



Figs 6, 7. *Pseudoilliberis kuprijanovi* (Efetov, 1995). 6, holotype male of *Illiberis kuprijanovi* Efetov, 1995. Far East of Russia; 4, pin-labels of holotype.

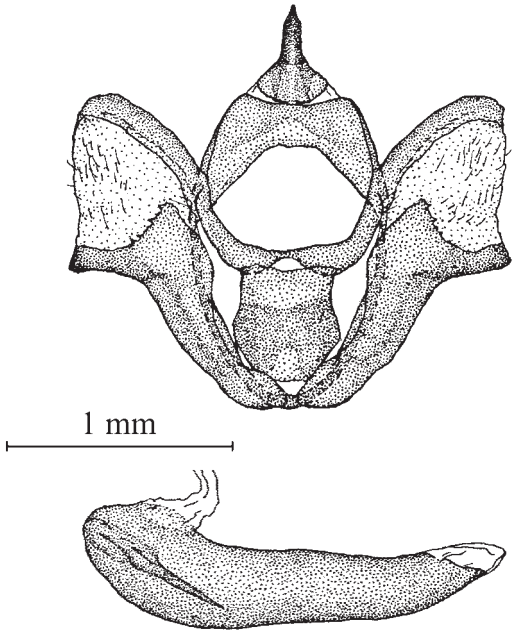


Fig. 8. *Pseudoilliberis kuprijanovi* (Efetov, 1995), genitalia of holotype male of *Illiberis kuprijanovi* Efetov, 1995. Far East of Russia.

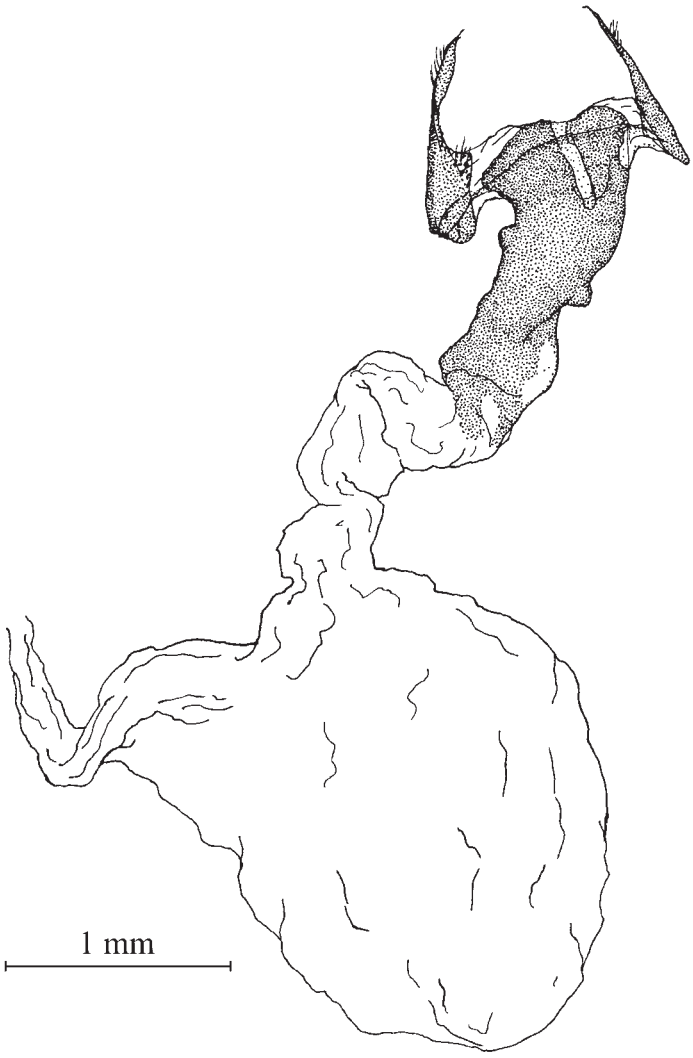


Fig. 9. *Pseudoilliberis kuprijanovi* (Efetov, 1995), genitalia of paratype female of *Illiberis kuprijanovi* Efetov, 1995. Far East of Russia.

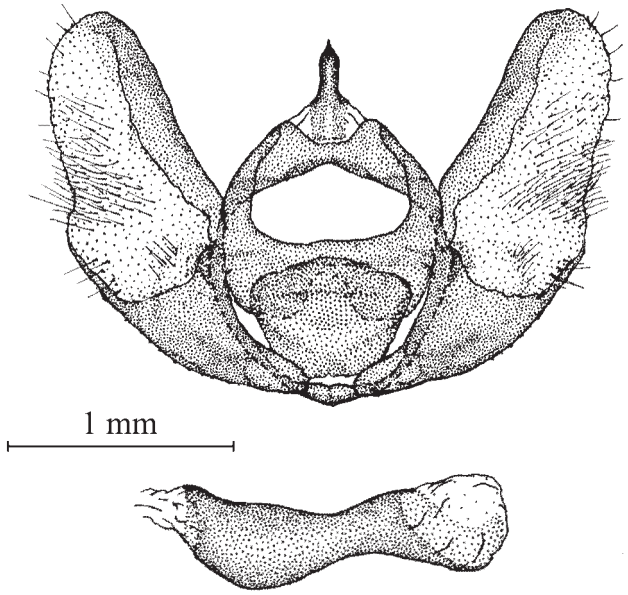


Fig. 10. Male genitalia of *Illiberis (Nikilliberis) kardakoffi* Alberti, 1951. Far East of Russia.

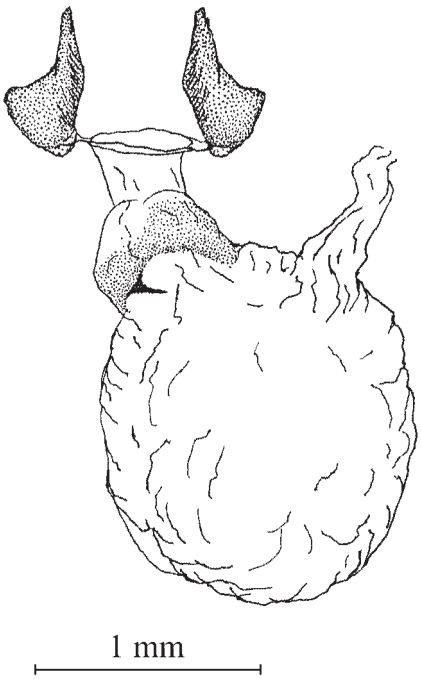


Fig. 11. Female genitalia of *Illiberis (Nikilliberis) kardakoffi* Alberti, 1951. Far East of Russia.

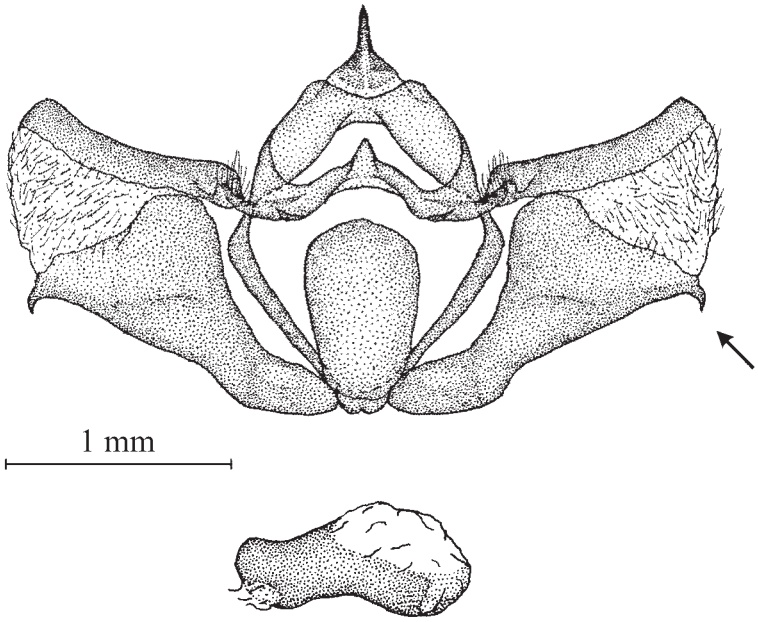


Fig. 12. Male genitalia of *Illiberis (Primilliberis) rotundata* Jordan, 1907. Far East of Russia.

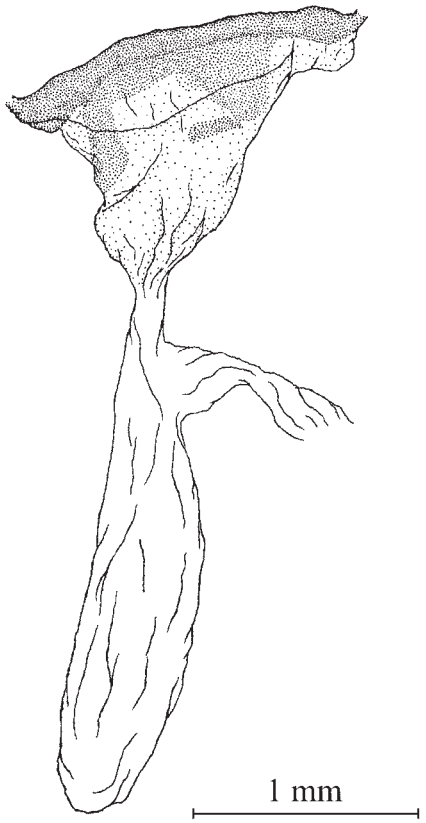


Fig. 13. Female genitalia of *Illiberis (Primilliberis) rotundata* Jordan, 1907, holotype. China.

Fig. 14. *Procris formosana* Matsumura, 1927, genitalia of holotype female (in original description erroneously mentioned as a male), ventral view. China, Taiwan.

Fig. 15. *Illiberis (Illiberis) sinensis* Walker, 1854, genitalia of female, ventral view. China, 'Nanning'.

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Index
of Lepidoptera names

Names which are accepted as valid in this book are printed in **bold**. Page numbers in **bold** refer to figures.

Index
of authors who described valid genera, subgenera, species, and subspecies

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Contents

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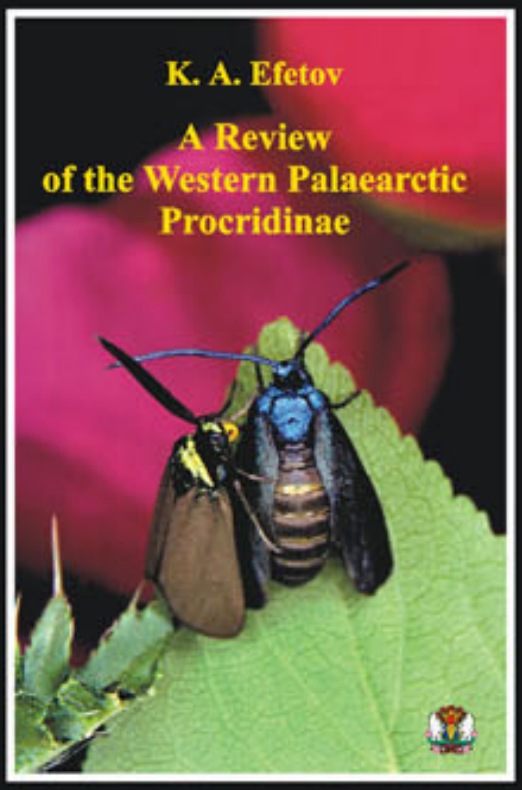

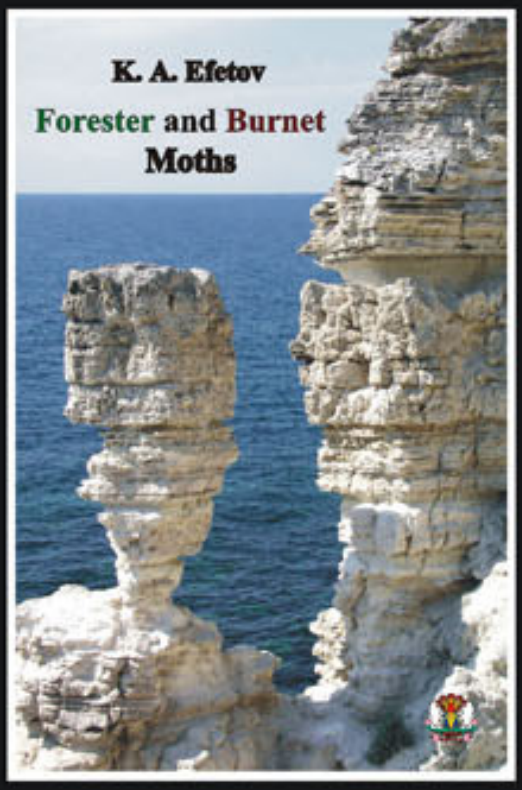

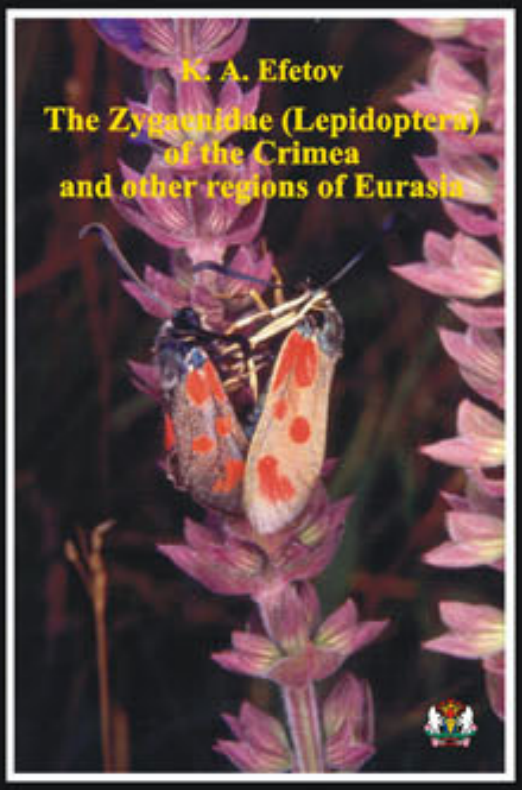

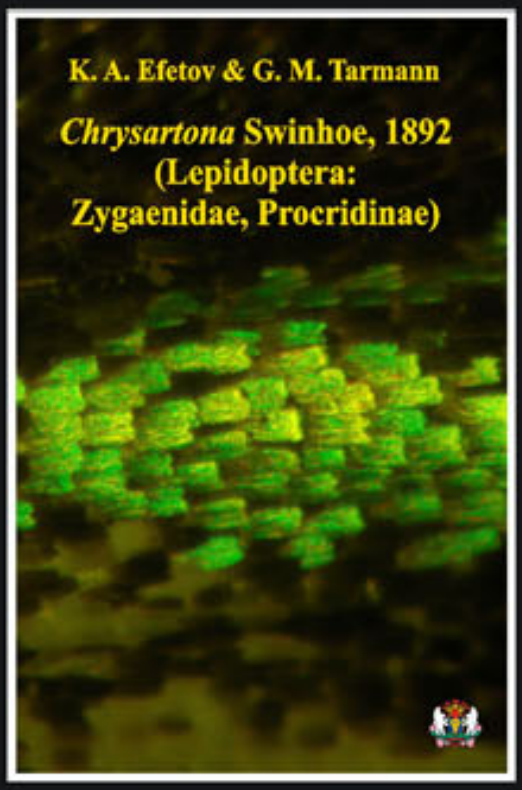

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