

ASPECTS OF ZOOLOGICAL NOMENCLATURE



Jyrki Muona

LUONNONTIETEELLINEN KESKUSMUSEO, ELÄINMUSEO



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EUCNEMIDAE Eschscholtz, 1829

Melasides Fleming 1821: 49, Lacordaire 1857: 98, 99.
Eucnemides Eschscholtz 1829: table, Latreille 1834: 122.
[Cryptostomites Laporte 1840: 227].
Perothopides Lacordaire 1857: 98, 128.
Hylocharites Du Val 1859: 119, 121.
Gastraulaci Fleutiaux 1901: 648.
Phylloceridae Reitter 1905:4.
Xylobini Reitter 1911: 203.
Dirhagini Reitter 1911: 204 (Dirhagini).
Microhaginae Fleutiaux 1919:112.
Dendrocharini Fleutiaux 1920: 100.
Anelastini Reitter 1921: 75, 82.
Macraulacinae Fleutiaux 1922: 292, 304.
Arhipini Cobos 1964: 396 (Arhipini).
Echthrogasterini Cobos 1964: 369.
Fomaxini Cobos 1964: 294.
Pterotarsini Cobos 1964: 294.
Dromaeolini Leiler 1976: 48.
Hypocoelini Leiler 1976: 48, Mamaev 1976: 154.
Nematodini Leiler 1976: 48.
Euryptychini Mamaev 1976: 154.
Galbitini Muona 1991.
Anelastidini N. TRIBE.
Calyptocerini N. TRIBE.
Ceballosmelasini N. TRIBE.
Compsocnemina N. SUBTRIBE.
Dyscharachthini N. TRIBE.
Epiphanini N. TRIBE.
Jenibuntorini N. TRIBE.
Mesogenini N. TRIBE.
Neocharini N. TRIBE.
Oisicerini N. TRIBE.
Palaeoxeninae N. SUBFAM.
Phaenocerini N. TRIBE.
Phlegoninae N. SUBFAM.
Pseudomeninae N. SUBFAM.
Yangini N. TRIBE.

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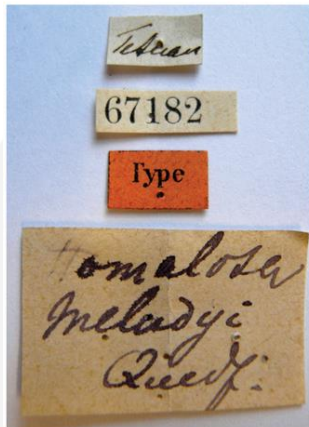


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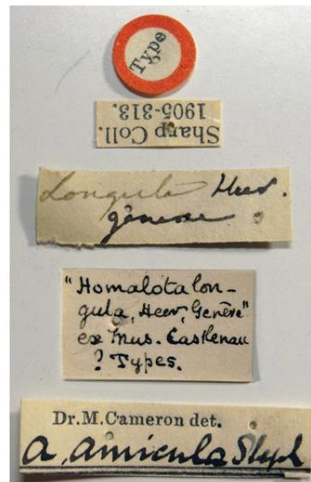
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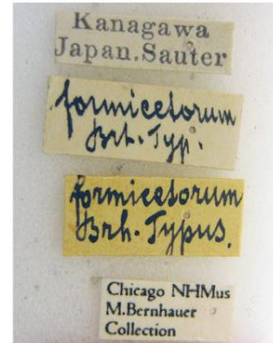
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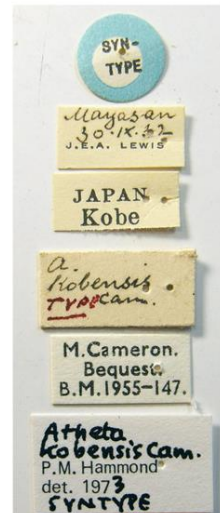
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THE GOAL STABLE NOMENCLATURE



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LUOKKA	Mammalia Linnaeus, 1758 – nisäkkäät	
LAHKO	Primates Linnaeus, 1758 – kädelliset	
YLÄHEIMO	Hominioidea Gray, 1825 – ihmisapinat	
HEIMO	Hominidae Gray, 1825 – isot ihmisapinat	PÄÄTTEET AINA -oidea, -idae, -inae, -ini, -ina
ALAHEIMO	Homininae Gray, 1825	
SUKURYHMÄ	Hominini Gray, 1825	
ALASUKURYHMÄ	Hominina Gray, 1825	SULUT merkitsevät, että laji on alunperin kuvattu eri sukuun
SUKU	Homo Linnaeus, 1758 – ihmiset	
LAJI 1	Homo erectus (Dubois, 1894) – pystyihminen	
LAJI 2	Homo neanderthalensis King, 1864 – neandertalinihminen	

LAJI 3 **Homo sapiens** Linnaeus, 1758 – nykyihminen

SUKUNIMI	LAJINIMI (jonka kiinteäksi osaksi sukunimi kuuluu)	TAKSONIN KUVAAJA eli AUKTORI	JULKAISUVUOSI
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AIKAISEMMIN:

ALALAJI 1	Homo sapiens sapiens Linnaeus, 1758
ALALAJI 2	Homo sapiens neanderthalensis King, 1864
ERI SUVUSSA	Pithecanthropus erectus Dubois, 1894



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FIVE SET OF RULES

- Viisi eri säännöstöä
 - Animals (ICZN)
 - Plants, fungi, lichens (ICN)
 - Bacteria (ICNB)
 - Cultivated plants (ICNCP)
 - Viruses (ICTV)
 - Phytososiological rules



RULES, CONSIDRATIONS

- Help to regulate names
- Do not deal with biology
- Attached to "reality" at one point ONLY
 - Biological identity of species primary types
- Do not regulate biological thinking
 - ICZ general meeting accepts
 - Freely available on INTERNET



RULES OF ZOOLOGICAL NOMENCLATURE

- Regulate names from subspecies to overfamily
- Three independent levels
 - Species level
 - species, subspecies
 - Generic level
 - genus, subgenus
 - Family level
 - tribes, subfamilies, families, overfamilies



NAMES

- Name has to be published
 - Requirements for media
 - Depends on year of publishing
 - Before 1930, 1960, 1985, 1990, 2000, 2012 etc
- Name has to be available
 - Alphabet, length
 - Description, definition or indication
 - Has to be binomial
 - Recent requirements stricter than those of old ones



SYNONYMS

- Synonyms are either subjective or objective
- Oldest available name has priority
- Subjective synonymy
 - Based on researcher's idea of biological reality
 - The primary types of two or more species belong to one species
 - Type species of two or more genera are placed in one genus
- Objective synonymy
 - Not based on subjective opinion
 - Primary types of two or more species are the same specimen
 - Names of type species of two or more genera are identical
 - Junior homonym and its replacement name



HOMONYMS

- Two classes, primary and secondary
- Primary homonymy
 - Species with same binomen
 - Junior name has to be replaced
 - Identical genus level names
 - Identical family level names
- Secondary homonymy
 - Species with same species name but different generic name transferred in one genus
 - Junior species name has to be replaced



Meotica caucasica G. Benick, 1956 (June)



Meotica caucasica Scheerpeltz, 1956 (July)

- primary homonyms, NO synonymy



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Notiophilus aesthuans Motschulsky, 1864
(*pusillus* Waterhouse, 1833 nec Schreber, 1759)

[*Notiophilus pusillus* Waterhouse, 1833, not *Cicindela pusilla* Schreber, 1759]

[*Notiophilus aquaticus* (Linnaeus, 1758) = *Cicindela pusilla* Schreber, 1759]



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TYPES

- SPECIES LEVEL
 - SYNTYPE, HOLOTYPE AND PARATYPE
 - "Co-tyyppi, allotyyppi, homeotyyppi, topotyyppi" jne
 - LECTOTYPE, PARALECTOTYPE AND NEOTYPE
- GENUS LEVEL
 - SPECIES **NAME** BASED ON PRIMARY TYPE OF SPECIES
- FAMILY LEVEL
 - GENUS **NAME** BASED ON SPECIES **NAME** OF GENUS TYPE SPECIES



TYPES, original

- SYNTYPE, **HOLOTYPE** AND PARATYPE

Cussolenis luzonicus n. sp.

Fig. 1, 19, 27.

Holotype

Philippines: Luzon, Nueva Vizcaya, Balance, 2014-04, male, glued on a card, aedeagus and postgenital segment mounted in Euparal on a celluloid acetate card (JMC)

Paratypes

Philippines: Luzon, Nueva Vizcaya, Balance, 2014-04, female (JMC); Luzon, Nueva Vizcaya, Kayapa, 2016-12, two females (JMC).



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TYPES, original

- SYNTYPE, HOLOTYPE AND PARATYPE



TYPES, original

- SYNTYPE, HOLOTYPE AND PARATYPE



TYPES, "recreations"

- LECTOTYPE
 - NO HOLOTYPE IN ORIGINAL DESCRIPTION, FIXING IDENTITY AS IF THERE HAD BEEN ONE
 - SHOULD NEVER BE DONE WITHOUT REVISION OF WHOLE GROUP
 - SHOULD NEVER BEEN DONE AS CURATORIAL ROUTINE
- NEOTYPE
 - IF URGENTLY NEEDED AND ORIGINAL MATERIAL LOST, NEOTYPE DESIGNATION REQUIRED





oblongulus *Bruckii*
Bonnes

TYPE

MUSEUM PARIS
Collection Léon Fairmaire
1906

LECTOTYPUS *Trechus*
bruckii Fairmaire
Faille, Bourdeau &
Fresneda des. 2012

PARALECTOTYPUS
T. bruckii Fairmaire
Faille, Bourdeau &
Fresneda des. 2012

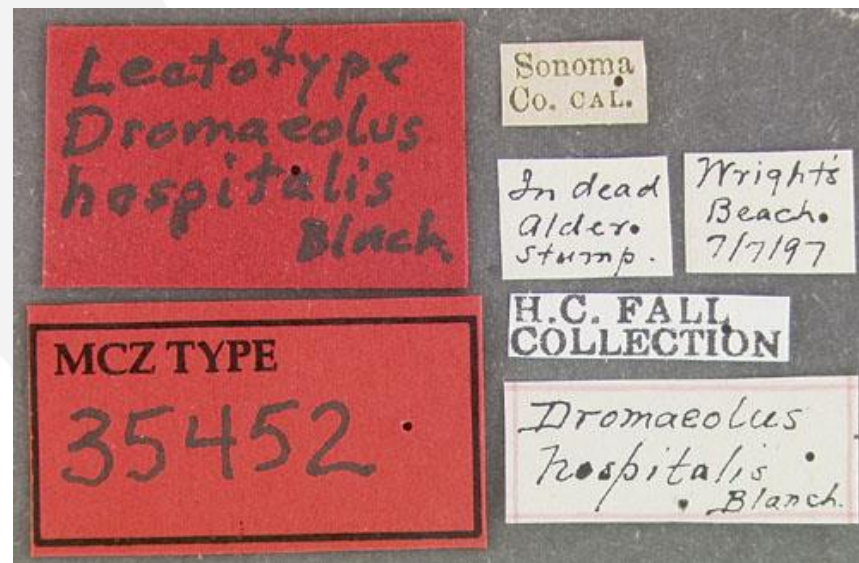
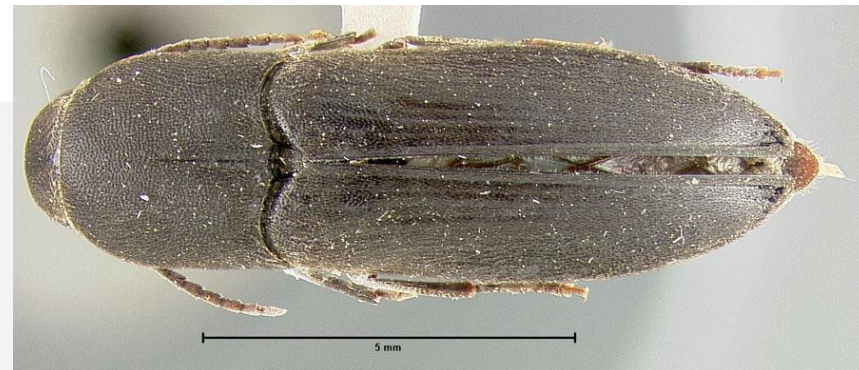


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*Titthoes
confinis* Cast.
NEOTYPE ♂
QUENTIN & VILLIERS DET. 1981

NEOTYPE

*cf.: Ann. Soc. ent. FR (N.S.)
1983, 19(1): 93-95*

Coll. R. I. Sc. N. B.

Sénégal

Kaolack
Sénégal

*Lehat
Bauer*

Coll. R. I. Sc. N. B.

Ex Repréparé par
M. Galant



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GENUS GROUP TYPES

- TYPE SPECIES OF GENUS IS A NAME, NOT AN ANIMAL
- NAME OF TYPE SPECIES HAS TO BE IN ORIGINAL DESCRIPTION
 - TYPE SPECIES DESIGNATION USING A SENIOR SYNONYM IS INVALID
- OLD GENERA WERE OFTEN DESCRIBED WITHOUT SPECIES
 - FIRST INCLUDED SINGLE SPECIES IS THE TYPE
 - IF SEVERAL WERE FIRST INCLUDED, ONE OF THEM IS DESIGNATED AS TYPE SPECIES



SPECIES NAMES AND GENDER

- ALL GENERA HAVE GENDER
 - Species names follow this **IF** adjectives

Atheta nigra



Pterostichus niger



Coryphium nigrum



Lamprodila rutilans

Lamrodila mirifica

Lamprodila decipiens

Scintillatrix rutilans

Scintillatrix mirificus

Scintillatrix decipens



Lampra rutilans

Lamprodila mirifica

Lamprodila decipiens



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Entomosatopus Bonvouloir, 1871
= *Dystrigonisthis* Blackburn, 1900
= *Janczykia* Cobos, 1954
= *Poecilochroides*, Cobos 1979

curtus Bonvouloir, 1871

golbachi (Cobos, 1979) (*Poecilochroides*)

paradoxus (Blackburn, 1900) (*Dystrigonisthis*)
= *Janczykia mackayi* (Cobos, 1954)



Atomaria vespertina Mäklin, 1853

= Atomaria **pulchra** auct, nec Erichson 1846

= Atomaria **prolixa** auct, nec Erichson 1846

ICONOGRAPHIA COLEOPTERORUM POLONIAE
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Atomaria **pulchra** Erichson, 1846

= Atomaria barani Brisout de Barneville, 1863

= Atomaria **badia** auct. Brit, nec Erichson, 1846

= Atomaria affinis auct. Brit, nec. (Sahlberg, 1834)



Atomaria **badia** Erichson, 1846

= Atomaria sahlbergi Sjöberg, 1947

ICONOGRAPHIA COLEOPTERORUM POLONIAE
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Atomaria atrata Reitter, 1875

= Atomaria **prolixa** Erichson, 1846



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Homalota
Atheta

Aloconota, 1858

Disopora Thomson, 1859

Liogluta Thomson, 1858

Enalodroma Thomson, 1859

Paranopleta Brundin, 1954

Lundbergia

Philhygra Mulsant & Rey, 1873

Hygroecia Mulsant & Rey, 1873

Mocyta Mulsant & Rey, 1874

Mycetota Adam, 1987

Rhagocneme Munster, 1923

Xenota

Datomicra

Microdota

Amidobia

Parameotica

Alaobia

Nothotecta

Neohilara

Boreophilia

Dimetrota

Badura

Chaetida

Atheta s.s.tr.

Platarea

Traumoecia

Bessobia

Thinobaena

Arctopleta

Asiophylla

Pachyatheta

Scale = 1 mm



7. *Atheta microelytrata*



8. *Atheta riparia*



9. *Philhygra pseudofarsoni*



10. *Philhygra terrestris*



11. *Boreophilia herschelensis*



12. *Boreophilia davidgei*



Jyrki Luoma

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subfamily **Eucneminae** Eschscholtz, 1829

tribe Dyscharachthini Muona, 1993

genus *Dyscharachthis* Blackburn, 1900: 217 type species *Dyscharachthis brevipennis* Blackburn, 1900

Galloisius Fleutiaux, 1923: 294 type species *Galloisius amplicollis* Fleutiaux, 1923
amplicollis Fleutiaux, 1923: 295 (*Galloisius*) **A:** JA SE TAI

tribe Eucnemini Eschscholtz 1829

genus *Eucnemis* Ahrens, 1812: 38 type species *Eucnemis capucina* Ahrens, 1812

capucina Ahrens, 1812: 38 **E:** AU BE BG BH BY CR CT CZ DK GE FI FR HU IT LA LS LT LU NL NR NT PL RO SP SK
SZ SV WS **N:** AG

ater Geoffroy, 1785: 128 (*Cucujus*)

carinatus Billberg, 1820: 21 (*Eucnemis*)

deflexicollis Mannerheim, 1823: 23 (*Elater*)

macrotis Beck, 1817: 18 (*Elater*)

zaitzevi Mamaev, 1976: 137 **A:** ES FE

americanus Horn, 1886: 14-15.



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