

Updated checklist and bibliography of family Trogidae (Coleoptera: Scarabaeoidea)

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Troginae, Omorginae, Trox (Trox), Trox (Granulitrox), Trox (Niditrox), Glyptotrox, Phoberus, Omorgus (Omorgus), Omorgus (Afromorgus), Omorgus (Haroldomorgus), Polynoncus, †Cretomorgus, †Paratrox, checklist, new combinations, bibliography.

Abstract. Presented are a revised and updated checklist of the world Trogidae (Coleoptera: Scarabaeoidea) including synonyms, geographic distributions, type repositories where known, and lists of valid species by genera and subgenera; and a bibliography of all papers cited as well as of supplemental literature on various other aspects of the family.

INTRODUCTION

The Trogidae are a cosmopolitan family of slightly over 300 species in five genera: *Trox* Fabricius, *Glyptotrox* Nikolaev, *Phoberus* MacLeay, *Omorgus* Erichson and *Polynoncus* Burmeister. The formerly included genera *Glareasis* Erichson (now Glarecidae, 60 species) and *Cryptogenius* Westwood (now Hybosoridae, two species) were removed, and *Afrotrogia* Petrovitz (monobasic) synonymized with *Glareasis*, by Scholtz (1986a). Smith et al. (2006) questioned the split of Trogidae and Glarecidae on molecular grounds, but did not find any definite evidence for or against the separation proposed by Scholtz (1986a). This split has been further supported in intervening studies by Scholtz et al. (1987a, 1994), Browne & Scholtz (1995, 1996, 1998, 1999), Browne et al. (1993) and Ahrens et al. (2014). The separation is therefore maintained.

Most of the characters on which three of the five trogid genera are based were known by the mid-19th century, but with the notable exceptions of LeConte (1854), Burmeister (1876) and Baker (1968) were regarded as defining merely subgenera or informal species groups within the genus *Trox*. Scholtz (1986a) published a phylogenetic analysis that clarified the family limits, re-defined the genera and divided two of them into subgenera – *Trox* into *Trox* s. str. and *Phoberus* MacLeay, and *Omorgus* into *Omorgus* s. str., *Haroldomorgus* (subgen. nov.) and *Afromorgus* (subgen. nov.). Pittino (2006) elevated *Afromorgus* to genus citing as reasons structure of the aedeagus and geographic distribution, and subsequently (2016) maintained the generic status. However, these characters had been considered by Scholtz (1986a), and if *Afromorgus* (Old World) is to be regarded as the sister genus of *Omorgus* (New World and Australia) then altering Scholtz's (1986a) tree consistently would require that *Haroldomorgus* (South America) is elevated to genus as well, which was not done by Pittino. Having three genera rather than subgenera would obscure relationships within the branch, for which reason Zidek (2013) upheld *Afromorgus* in Scholtz's sense, as a subgenus of *Omorgus*. More recently Pittino (2010) described *Madagatrox* gen. nov., which resembles some of the apterous species of *Phoberus* but is said to have the protarsus four-segmented. The genus is based on a small female specimen that has only the left protarsus preserved and, judging from the habitus photo, difficult to observe because of its infolded position. It is thus most likely that the condition is pseudotetramerous, as is not uncommon in some species. Strümpfer et al. (2014b, 2016a) performed molecular analyses of the family, synonymized *Madagatrox* with *Phoberus* which they elevated to genus, and accepted Nikolaev's (2005) division of the family into the subfamilies Troginae and Omorginae.

The discussion of regional faunas presented in the original checklist (Zidek 2013) is not

repeated, but remarks are made on the fossil record of the family, which is scant and in part controversial, and on recent taxonomic modifications introduced by Nikolaev (2016).

Nikolaev (2000) described *Prototrox transbaikalicus* from the Early Cretaceous of Transbaikalia (holotype) and Mongolia (paratype) and proposed the subfamily Prototroginae for the taxon. The remains constituting *Prototrox* lack heads, pronota and legs, reveal only symplesiomorphic characters and are likely to be paraphyletic (Krell 2006), nevertheless the Prototroginae along with the subfamily Avitortorinae Nikolaev (2007) were subsequently included in the Trogidae (Krell 2007, Nikolaev 2009). The Avitortorinae (one genus comprising five species from the Early Cretaceous of Russia and Mongolia) are equally poorly preserved and controversial (the genus *Avitortor* was originally placed in the Gyrinidae), and because of the paucity of convincing characters these two subfamilies are therefore hereby excluded from the Trogidae. That leaves only six or seven fossil species assignable to the family, *Trox antiquus* Wickham from the latest Eocene of USA (Colorado), five species described by Nikolaev (2007, 2008) from the Early Cretaceous of Russia and Mongolia (*Trox sibericus*, *T. cretaceus*, *T. minutus*, *Cretomorgus ikhbogdensis*, *Paratrox medvedevi*), and possibly *Trox oustaleti* Scudder based on a single elytron from the Eocene of Canada (British Columbia). Although naming these fossils can be justified on the grounds that the specimens must be readily distinguishable in the collections, they at the most part do not preserve the characters needed to discriminate among the extant taxa and "trogid" in a more-or-less vernacular sense is the most appropriate label for them. This is due to the fossilization process, which (with the exception of amber fossils that do not include trogids) in most instances causes at least one step of taxonomic hierarchy difference – i.e. what a paleontologist perceives as a species, a neontologist usually considers identifiable at best to genus. For this reason the fossil species are here regarded only as Trogidae incertae sedis.

Most recently, Nikolaev (2016) transferred 29 species of *Trox* (with *T. simi* regarded as a full species rather than a subspecies of *T. spinulosus*) to his new genus *Glyptotrox* and split 31 of the remaining 64 species of *Trox* into two new subgenera, *Granulitrox* and *Niditrox*, with *T. fabricii* inadvertently included in both. All the taxa denoted in the checklist by the boldfaced abbreviation **GI** for *Glyptotrox* thus are Nikolaev's new combinations. The generic and subgeneric diagnoses center on the morphology of the aedeagus, in *Glyptotrox* with "narrow, elongate parameres and median lobe equipped with more or less distinct, triangular or ear-like, subapical processes", and in *Niditrox* with "narrow, elongate parameres outstanding [reaching] over the apex of median lobe". The aedeagus of *Granulitrox* is not characterized in writing, but illustrations (2016: figs. 2, 8) show the median lobe as long or nearly as long as the parameres, which do not differ any from those of *Trox* (*Trox*). The remaining 33 species are left in the nominotypical subgenus without further comment. The checklist can only record taxonomic acts, deciding whether they result in monophyletic or paraphyletic schemes is beyond its scope.

The revised checklist contains corrections and additions such as of geographic data and new species, combinations and synonymies; and the bibliography combines all papers cited in the introduction and the checklist with supplemental literature on various other aspects of the family. The combination of references cited with supplemental literature is chosen because their separation in the original 2013 paper has been found inconvenient by some users. The cut-off date is the end of March 2017, with the understanding that coverage of taxa published during the preceding winter months may not be complete due to late arrivals of some periodicals.

MATERIAL AND METHODS

Type repositories are cited with the following codens, most after Arnett et al. (1993).

AMNH	American Museum of Natural History, New York, NY, USA;
AMSA	Australian Museum, Sydney, Australia;
ANIC	Australian National Insect Collection, Canberra, Australia;
ANSP	Academy of Natural Sciences, Philadelphia, PA, USA;
BMNH	Natural History Museum, London, UK;
CASB	Chinese Academy of Sciences, Beijing, PR China;
CASC	California Academy of Sciences, San Francisco, CA, USA;
CRNH	Carnegie Museum of Natural History, Pittsburgh, PA, USA;
CRNO	Canadian Museum of Nature, Ottawa, ON, Canada;
CUNY	Cornell University, Ithaca, NY, USA;
DEIM	Deutsche Entomologische Institut, Müncheberg, Germany;
DMSA	Durban Museum and Art Gallery, Durban, RSA;
FISF	Forschungsinstitut Senckenberg, Frankfurt a. M., Germany;
FMLT	Fundación Miguel Lillo, Tucumán, Argentina;
FMNH	Field Museum of Natural History, Chicago, IL, USA;
HMUG	Hunterian Museum, University of Glasgow, Scotland, UK;
HNHM	Hungarian Natural History Museum, Budapest, Hungary;
IEEM	Instituto Español de Entomología, Madrid, Spain;
IEXM	Instituto de Ecología, Xalapa, Veracruz, Mexico;
INAM	Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil;
INHS	Illinois Natural History Survey, Urbana-Champaign, IL, USA;
ISNB	Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;
LACR	Natural History Museum of Los Angeles County, Los Angeles, CA, USA;
LEMQ	Lyman Entomological Museum, McGill University, Montreal, PQ, Canada;
MACN	Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina;
MCSN	Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy;
MCZH	Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA;
MHNG	Muséum d'Histoire Naturelle, Geneva, Switzerland;
MLUH	Martin-Luther-Universität, Halle, Germany;
MNHB	Museum für Naturkunde Leibniz-Institut, Berlin, Germany;
MNHN	Muséum National d'Histoire Naturelle, Paris, France;
MSNM	Museo Civico di Storia Naturale, Milan, Italy;
MVMA	Museum of Victoria, Melbourne, Australia;
MZLU	Museum of Zoology, Lund University, Sweden;
MZSP	Museu de Zoologia da Universidade de São Paulo, Brazil;
NCSA	National Collection of Insects, Pretoria, RSA;
NHMB	Naturhistorisches Museum, Basel, Switzerland;
NHMV	Naturhistorisches Museum, Vienna, Austria;
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden;
NMBZ	National Museum, Bulawayo, Zimbabwe;
NMPC	National Museum (Natural History), Prague, Czech Republic;
NSMT	National Science Museum, Tokyo, Japan;
OMNH	Osaka Museum of Natural History, Osaka, Japan;
OWUT	Otsuma Women's University, Tokyo, Japan;
PINC	Russian Academy of Sciences, Institute of Paleontology, Moscow, Russia;
PPRI	Plant Protection Research Institute, Pretoria, RSA;

QMBA	Queensland Museum, Brisbane, Australia;
RPMI	R. Pittino private collection, Milan, Italy;
SAMA	South Australian Museum, Adelaide, Australia;
SAMC	South African Museum, Cape Town, RSA;
SASP	Secretariada Agricultura, São Paulo, Brazil;
SKTJ	S. Kawai private collection, Tokyo, Japan;
SMTD	Staatliches Museum für Tierkunde, Dresden, Germany;
TAMU	Texas A&M University, College Station, TX, USA;
TMSA	Ditsong Museum of Natural History, Pretoria, RSA;
TNCJ	T. Nakane private collection, Chiba-Shi, Japan;
UCCH	Universidad de Concepción, Chile;
UMBS	Institute of Tropical Biology & Conservation, University of Malaysia – Sabah;
UNSM	University of Nebraska State Museum, Lincoln, NE, USA;
UPSA	University of Pretoria Department of Zoology and Entomology, Pretoria, RSA;
USNM	United States National Museum, Washington, DC, USA;
VMPC	V. Malý private collection, Prague, Czech Republic;
WAMP	Western Australian Museum, Perth, Australia;
ZMAS	Zoological Museum, Academy of Sciences, St. Petersburg, Russia;
ZMUC	Zoological Museum, University of Copenhagen, Denmark;
ZMUM	Zoological Museum, Moscow University, Russia;
ZMUU	Zoological Museum, Uppsala University, Sweden;
ZSBS	Zoologische Sammlung des Bayerischen Staates, Munich, Germany.

Other abbreviations:

Gl – *Glyptotrox*, **OA** – *Omorgus* (*Afromorgus*), **OH** – *Omorgus* (*Haroldomorgus*), **OO** – *Omorgus* (*Omorgus*), **Ph** – *Phoberus*, **Po** – *Polynoncus*, **TG** – *Trox* (*Granulitrox*), **TN** – *Trox* (*Niditrox*), **TT** – *Trox* (*Trox*).

HT – holotype, AT – allotype, PT(s) – paratype(s), LT – lectotype, PLT – paralectotype(s), STs – syntypes.
Au. – Australia, Ter. – Territory, DRC – Democratic Republic of the Congo, RSA – Republic of South Africa.

Invalid names are offset by emdashes (–), names of fossil taxa are preceded by daggers (†).

CHECKLIST

Fam. Trogidae MacLeay, 1819: 59

Subfam. Troginae MacLeay, 1819: 59; type gen. *Trox* Fabricius

Trox Fabricius, 1775: 31; type sp. *Scarabaeus sabulosus* Linné, 1758, subsequent designation by Latreille (1810).

Syn. *Pseudotrox* Robinson, 1948: 1; type sp. *Trox laticollis* LeConte, 1854, monotypy. Syn. by Vaurie (1955: 18).

Subgen. *Granulitrox* Nikolaev, 2016: 88; type sp. *Trox granulipennis* Fairmaire, 1852, original designation.

Subgen. *Niditrox* Nikolaev, 2016: 89; type sp. *Trox eversmannii* Krynicki, 1832, original designation.

Glyptotrox Nikolaev, 2016: 86; type sp. *Trox mandli* Balthasar, 1931, original designation.

Phoberus MacLeay, 1819: 137-138, as subgen. of *Trox*; type sp. *Trox horridus* Fabricius, 1775, monotypy. Elev. to gen. by Strümpher et al. (2015: 60, 178).

Syn. *Madagatrox* Pittino, 210: 75; type sp. *Madagatrox ranotsaraensis* Pittino, 2010: 77, monotypy. Syn. by Strümpher et al. (2015: 61).

Subfam. Omorginae Nikolaev, 2005: 322; type gen. *Omorgus* Erichson

Omorgus Erichson, 1847: 111; type sp. *Trox suberosus* Fabricius, 1775, subsequent designation by Lacordaire (1856).

Syn. *Chesas* Burmeister, 1876: 264; type sp. *Trox pastillarius* Blanchard, 1846, original designation. Syn. by Vaurie (1962: 109, 115).

Syn. *Lagopelas* Burmeister, 1876: 265; type sp. *Trox ciliatus* Blanchard, 1846, original designation. Syn. by Vaurie (1962: 109, 115).

Syn. *Megalotrox* Preudhomme de Borre, 1886: 59; type sp. *Trox gigas* Harold, 1872, subsequent designation by Scholtz (1982). Syn. by Vaurie (1962: 109, 115).

Afromorgus Scholtz, 1986a: 362, as subgen. of *Omorgus*; type sp. *Trox squalidus* Olivier, 1789, original designation. Maintained as subgenus.

Haroldomorgus Scholtz, 1986a: 362, as subgen. of *Omorgus*; type sp. *Trox batesi* Harold, 1872, monotypy. Maintained as subgenus.

Polynoncus Burmeister, 1876: 264, as subgen. of *Trox*; type sp. *Trox pedestris* Harold, 1872, subsequent designation by Scholtz (1982).

Trogidae incertae sedis

†*Cretomorgus* Nikolaev, 2007: 106, 215, Early Cretaceous; type sp. *Cretomorgus ikhbogdensis* Nikolaev, 2007, monotypy.

†*Paratrox* Nikolaev, 2009: 179, Early Cretaceous; type sp. *Paratrox medvedevi* Nikolaev, 2009, monotypy.

Species-group taxa

acanthinus Harold, 1872: 154; **TT**; Mexico (Veracruz); STs – BMNH.

–*aciculeatus* Robinson, 1940: 156; HT ♂ – ANSP; = *foveicollis* (syn. by Vaurie 1955: 39).

acinus (Scholtz, 1980a: 39); **OA**; ne. Tanzania; HT ♀ – SMTD, PT – UPSA.

aculeatus (Harold, 1872: 37); **Ph**; “Caffraria”; LT ♂ – MNHN (des. by Scholtz 1980a: 64).

aeger (Guérin, 1844: 85); **Po**; Argentina, Brazil, Paraguay, Uruguay (not in Chile, see Diéguez 2008); type – MNHN?; syn. *leprosus*.

aequalis Say, 1831: 5; **TN**; Canada (Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec), USA (e. states s. to South Carolina and w. to Texas and North Dakota; also Arizona, Colorado), Mexico (Durango, Chihuahua, Coahuila, Morelos, Nuevo León); Type(s) destroyed or MCZH?

affinis Robinson, 1940: 158, as ssp. of *aequalis*; **TN**; USA (ne. states, also California, Iowa, Texas, possibly Kansas and Louisiana); HT ♂ – ANSP.

–*aino* Nakane & Tsukamoto, 1955: 92; HT – NSMT; = *setifer*.

alatus (Macleay, 1888: 907); **OO**; Australia (Northern Ter., Western Au.); HT – ANIC.

alius Scholtz, 1986b: 50; **OO**; Australia (Western Au.); HT – QMBA.

–*alpigenus* Zhang, 1988: 234; HT – CASB; = *lama* (syn. by Pittino 2016: 1).

alternans (Macleay, 1826: 3, 1827: 439); **OO**; Australia (Capital Ter., South Au., Victoria, Western Au.); HT – ANIC; syn. *australasiae* Germar, *litigiosus*. [Described as new twice, in 1826 and in a larger version of the work issued in 1827.]

–*alternans* LeConte, 1854: 211 (n. praeocc., see *lecontei*); HT [=LT] – MCZH; = *sonorae* (syn. by Horn 1874: 8).

–*alternatus* (Say, 1835: 179); = *suberosus* (syn. by Harold 1872: 120).

amictus (Haaf, 1954b: 714); **OO**; Australia (South Au., Western Au.); HT – ISNB, PT – BMNH.

amitinus (Kolbe, 1904: 294); **OA**; se. Kenya; LT – MNHB (des. by Scholtz 1980a: 38).

–*angulatus* Fähræus, 1857: 381; LT ♂ – NHRS (des. by Scholtz 1980a: 90); = *squamiger* (syn. by Haaf 1953: 326).

–*annexus* (Kolbe, 1904: 293); type lost; = *denticulatus* (syn. by Haaf 1954a: 354).

†*antiquus* Wickham, 1909: 129, as *Trox*; **fossil**, late Eocene of Colorado (Florissant), USA; HT – USNM (Dept. Invertebrate Paleontology).

aphanocephalus Scholtz, 1986b: 18; **OO**; Australia (Queensland); HT – MVMA.

aproximans Escalera, 1914: 158, as var. of *confluens*; **TT**; Morocco; LT ♂ – IEEM (des. by Pittino 1983: 276); made available as ssp. of *confluens* by Balthasar (1936: 452).

arcuatus (Haaf, 1953: 323); **Ph**; RSA (e. Cape); HT ♂ – NHMB, PTs – BMNH, MNHN.

- arenarius* Fabricius, 1787: 18; type – ZMUC; = *scaber* (syn. by Harold 1872: 183).
- arenarius* Paykull, 1798: 80; = *hispidus* (syn. by Harold 1872: 165).
- arenosus* Gmelin, 1790: 1586; type lost; = *scaber* (syn. by Harold 1872: 183).
- argentinus* (Harold, 1872: 143); **Po**; Argentina (Córdoba, Neuquén, Buenos Aires, Bahía Blanca); HT ♂ – MNHN; syn. with *gemmifer* by Vaurie (1962: 120), reinstated by Pittino (1987: 384).
- aricensis* (Gutiérrez, 1950: 63); **Po**; Argentina, Bolivia, Chile, Peru; HT ♂ – UCCH, PTs – BMNH.
- asiaticus* Faldermann, 1835a: 261; = *niger* (syn. by Pittino 2006: 80).
- asmaraensis* Balthasar, 1939: 32; HT – NMPC; = *nigrociliatus* (syn. by Haaf 1953: 328).
- asper* LeConte, 1854: 215; **OO**; USA (from Rhode Island to Florida and w. to Nebraska, Kansas and Texas; also in Utah), Mexico (n. Sonora); HT – MCZH.
- asperatus* (MacLeay, 1888: 908); = *crotchi* (syn. by Blackburn 1904: 284).
- asperrimus* (MacLeay, 1888: 909); = *semicostatus* (syn. by Blackburn 1904: 284).
- asperulatus* (Harold, 1872: 75); **OA**; Botswana, Namibia, RSA; LT ♂ – MNHN (des. by Scholtz 1979a: 189).
- atrox* LeConte, 1854: 214; **TT**; Canada (Alberta, British Columbia, Ontario, Saskatchewan), USA (w. states e. to Mississippi River; also Illinois, Indiana, Iowa, Michigan), Mexico (Durango); HT – MCZH.
- augustae* (Blackburn, 1892: 39); **OO**; Australia (New South Wales, Northern Ter., Queensland, South Au., Victoria); HT – BMNH.
- australasiae* (Erichson, 1842: 158); **OO**; Australia (all states).
- australasiae* (Germar, 1848: 189) [n. nov. *litigiosus* Harold]; LT – MNHN; = *alternans* (syn. and LT des. by Scholtz 1986b: 46).
- baccatus* (Gerstaecker, 1866: 49); **OA**; Kenya, Tanzania; Ltm – MNHB (des. by Scholtz 1980a: 59).
- bachorum* Strümpfer, Farrell & Scholtz, 2014a: 369; **OO**; Australia (Queensland); HT – QMBA, 25 PTs – QMBA, UPSA.
- badeni* (Harold, 1872: 83); **OO**; ne. Brazil, n. Colombia; LT – ISNB (des. by Scholtz 1990b: 1417).
- barbarus* Harold, 1872: 169; LT ♂ – MNHN; = *granulipennis* (syn. and LT des. by Pittino 2006: 80).
- barbosus* Laicharting, 1781: 31; = *scaber* (syn. by Harold 1872: 183).
- batesi* (Harold, 1872: 126); **OH**; n. Argentina, Brazil, Paraguay; LT – ISNB (des. by Scholtz 1990b: 1418).
- bayoni* (Pittino, 2011b: 409), as genus *Afromorgus*; **OA**; Uganda; HT – MCSN; **comb. n.**
- benadirensis* (Pittino, 2011b: 410), as genus *Afromorgus*; **OA**; Somalia; HT ♂ – RPMI; **comb. n.**
- berytensis* Petrovitz, 1980: 614; HT ♂ – MHNG; = *mixtus* (syn. by Pittino 1983: 271).
- bifurcatus* (Vaurie, 1962: 129); **Po**; Argentina, Bolivia, Brazil, Paraguay; HT ♂ + PTs – MNHB, PTs at other institutions; redescribed by Pittino (1987: 393).
- birmanicus* (Arrow, 1927: 467); **OO**; Myanmar; HT – BMNH.
- borgognoi* (Marchand, 1902: 332); **OA**; Chad, Mali, Mauritania; type lost.
- borrei* (Harold, 1872: 84); **OO**; Argentina, s. Bolivia, Brazil(?), Uruguay; HT + PT – ISNB.
- boucomonti* Paulian, 1933: 205; **GI**; China (Fujian, Jiangxi, Yunnan); HT – MNHN.
- braacki* (Scholtz, 1980a: 87); **Ph**; RSA (s. Cape); HT ♂ + PTs – TMSA, PT – BMNH.
- brahminus* (Pittino, 1985: 338); **GI**; China (Xizang, Yunnan), India (Himachal Pradesh, Punjab, Sikkim, West Bengal), Malaya, n. Vietnam; HT ♂ – BMNH, PT ♂ – RPMI.
- brasilensis* (Vaurie, 1962: 134); **Po**; Brazil, Paraguay; HT ♂ – MZSP, PTs – AMNH and other institutions.
- brevicollis* (Eschscholtz, 1822: 12); **Po**; Argentina, Brazil, Chile, Colombia, Paraguay, Peru; ST – BMNH; syn. *lachrymosus*.
- brincki* (Haaf, 1958a: 475); **Ph**; Lesotho (Drakensberg Mtns.); HT ♂ + PTs – MZLU, PTs – NHMB.
- brucki* (Harold, 1872: 93); **OO**; Australia (Capital Ter., New South Wales, Queensland, Victoria); type – MNHN?
- bullatus* (Curtis, 1845: 444); **Po**; Argentina, Bolivia, Chile, Peru, Uruguay; HT – BMNH.
- burmeisteri* Pittino, 1987: 380; **Po**; Argentina (Mendoza); HT ♂ + PTs – MNHN, PTs also at other institutions.
- cadaverinus cadaverinus* Illiger, 1802b: 44; **TT**; c. Europe to Siberia, Mongolia, Kyrgyzstan, Syria.
- cadaverinus komareki* Balthasar, 1931: 130, as sp., demoted to ssp. by Balthasar 1936: 455; China (Heilongjiang), Mongolia, Siberia (Ussuri region); HT – NMPC.

- caffer caffer* (Harold, 1872: 41); **Ph**; RSA (Cape, Free State); HT + PT – MNHB; Scholtz (1980a: 95) was unable to examine the MNHB types listed by Haaf (1953: 334) and designated a LT (MNHN), which is invalid.
- caffer lilianae* (Scholtz, 1980a: 96); Malawi, e. RSA, e. Zimbabwe; HT ♂ + PTs – NMBZ, PTs – BMNH + TMSA + UPSA.
- cambeforti* (Pittino, 1985: 334); **G**; China (Sichuan); HT + AT + PTs – MNHN.
- cambodjanus* (Pittino, 1985: 331); **G**; Cambodia; HTf – MNHN; male described by Pittino & Kawai (2006).
- canaliculatus* Say, 1824: 278; type? – MCZH; = *tuberculatus* DeGeer (syn. by Harold 1872: 155).
- candezei* (Harold, 1872: 113); **OO**; Argentina; type – MNHN?, ISNB?
- candidus* (Harold, 1872: 98); **OO**; Australia (Capital Ter., New South Wales, Queensland, South Au., Victoria); LT – MNHN (des. by Scholtz 1986b: 28).
- capensis* (Scholtz, 1979b: 174); **TT**; RSA (s. Cape); HT ♂ – TMSA, PTs – BMNH and other institutions.
- capillaceus* Scholtz, 1990b: 1413; **OO**; Colombia (Bogotá); HT ♀ – CRNH; male unknown.
- capillamentis* Strümpher & Scholtz, 2011a: 140; **OO**; Australia (Queensland); HT ♂ – QMBA, 11 PTs – UPSA.
- capillaris* Say, 1823: 238; **TT**; Canada (Ontario), USA (ne. states to Tennessee, Missouri, Kansas; also Illinois, Indiana, Iowa, Texas, Utah); type? – MCZH.
- carinatus* Loomie, 1922: 135; **OO**; USA (s. Arizona, s. New Mexico, sw. Texas), Mexico (Chihuahua); HT ♂ – USNM.
- carinicollis* Scholtz, 1986b: 52; **OO**; Australia (Western Au.); HT – WAMP.
- castelnaui* (Lansberge, 1887: 201); = *gigas* (syn. by Blackburn 1904: 285).
- chevrolati* Harold, 1868: 86; = *perlatus* (syn. by Harold 1872: 161).
- chilensis* (Harold, 1872: 137); **Po**; w. Argentina, Chile; HT – MNHN.
- chinensis* (Boheman, 1858: 52); **OA**; e. China, Taiwan, Japan, se. Asia, Indonesia (Java, Sumatra); HT ♂ – NHRS; syn. *obscurus*.
- ciliatus* (Blanchard, 1846: 190); **OO**; Argentina, Bolivia; type – MNHN.
- clathratus* Reiche, 1861: 205; **TT**; France (Corsica), Italy (Sardinia).
- concinus* Erichson, 1848: 932; = *eversmanni*.
- confluens* Wollaston, 1864: 193; **TG**; Algeria, Canary Is., Libya, Morocco, Tunisia; HT – BMNH.
- confluentus* (Robinson, 1941a: 134); HT ♂ – ANSP; = *umbonatus* (syn. by Vaurie 1955: 76).
- conjunctus* Petrovitz, 1975: 2; = *sonorae* (syn. by Pittino 2006: 28, 81).
- consanguineus* (Péringuey, 1901: 466); **OA**; Namibia, Zaire, n. Zimbabwe; LT – SAMC (des. by Scholtz 1980a: 34).
- consimilis* (Haaf, 1953: 324); **Ph**; Namibia, RSA; HT + AT – NHMB, PTs – BMNH.
- contractus* Robinson, 1940: 153; **TT**; USA (sc. Texas); HT ♂ – ANSP.
- coracinus* Gmelin, 1790: 1587; **inc. sedis**; patria?
- costatus* (Wiedemann, 1823: 30); **OO**; Australia (all states), se. Asia, s. China, Papua New Guinea, Solomon Is.; syn. *montalbanensis*, *regularis*, *velutinus*.
- cotodognanensis* Compte, 1986: 69; **TT**; Spain.
- crenatus* (Olivier, 1789: no. 4: 7); = *suberosus* (syn. by Harold 1872: 120).
- †*cretaceus* Nikolaev, 2007: 102f, 105, 206, 215, as *Trox*; **fossil**, Early Cretaceous of Mongolia.
- cribrum* Gené, 1836: 186; **TG**; France (Corsica), Italy (Sardinia).
- cricetus* Ádám, 1994c: 37; = *hispidus* (syn. by Pittino 2006: 28).
- crotchi* (Harold, 1871: 116); **OO**; Australia (New South Wales, Northern Ter., Queensland, South Au., Victoria, Western Au.); LT – MNHN (des. by Scholtz 1986b: 26); syn. *asperatus*, *eremita*.
- curvipes* (Harold, 1872: 90); **OO**; Australia (Northern Ter., Queensland, Western Au.); HT – MNHN.
- cyrenaicus* Pittino, 2011a: 374; **TG**; Libya (Benghazi); HT ♂ + 2 PTs – RPMI.
- cyrtus* (Haaf, 1953: 333); **Ph**; Lesotho, RSA; HT ♂ + PTs – MNHN; syn. *fumarius*.
- damarinus* (Péringuey, 1901: 469); LT – SAMC; = *rusticus* (syn. and LT des. by Scholtz 1979a: 191).
- demaioni* Reitter, 1904: 156; LT – HNHM; = *transversus* (syn. by Pittino 2006: 28).
- demarzi* (Haaf, 1958: 1081); **OO**; Australia (Northern Ter., Queensland), w. Irian; HT – NHMB.
- dentibius* Robinson, 1940, see ssp. of *spinulosus*.

- denticulatus* (Olivier, 1789: 13); **OA**; Djibouti, Ethiopia, Kenya, Somalia, Sudan, Tanzania, Uganda; type lost; syn. *annexus*, *neumanni*, *verrucosus*? (see separate entry).
- denticulatus* (Beauvois, 1805: 176); = *suberosus* (syn. by Harold 1872: 120).
- denticulatus* (Blanchard, 1846: 189), praeeoc. by *denticulatus* Olivier; = *pedestris* Harold, n. nov.
- desertorum* (Harold, 1872), see ssp. of *niloticus*.
- dhaulagiri* (Paulus, 1972a: 55); **GI**; Nepal; HT ♂ – FIF.
- diffluens* (Vaurie, 1962: 138); **PO**; Chile (Santiago); HT ♀ – CASC.
- dilaticollis* (MacLeay, 1888: 907); **OO**; Australia (Northern Ter., Queensland, Western Au.); LT – ANIC (des. by Scholtz 1986b: 22).
- discedens* (Haaf, 1954a: 359); **OA**; e. Kenya, se. Somalia, Tanzania; HT ♂ – NHMV.
- disjunctus* Strümpher, 2016b: 164 (in Strümpher et al. 2016b); **PH**; Western Cape Province, RSA; HT ♂ – TMSA, PTs – UPSA and other institutions.
- dohrni* (Harold, 1871: 112); **OO**; Australia (Western Au.); LT – MNHN (des. by Scholtz 1986b: 10).
- doiinthanonensis* Masumoto, 1996: 9; **GI**; nw. Thailand; HT ♂ – OWUT.
- drumonti* (Pittino, 2011b: 408), as genus *Afromorgus*; **OA**; Angola, DRC; HT – ISNB; **comb. n.**
- ecuadorensis* (Vaurie, 1962: 133); **PO**; Ecuador, Peru; HT ♂ + PTs – ZMUC, PTs also at other institutions.
- elderi* (Blackburn, 1892: 37); **OO**; Australia (South Au.: Ooldea); LT ♀ – BMNH (des. by Scholtz 1986b: 12); male unknown.
- elevatus* (Harold, 1872: 73); **OA**; s. Angola, Namibia; LT ♂ – MNHN (des. by Scholtz 1979a: 190); syn. *gravidus*.
- elizabethae* (Van der Merwe & Scholtz 2005: 184); = *quadricostatus* (syn. by Strümpher & Scholtz 2009: 76).
- elkantaraensis* Pittino, 2011a: 373; **TG**; Algeria; HT ♂ – RPML.
- elmariae* (Van der Merwe & Scholtz, 2005: 184); **PH**; RSA (Natal); HT ♂ – TMSA.
- elongatus* (Haaf, 1954b: 706); **OO**; “Northern Australia”; HT ♂ – MNHN; known only from HT.
- endroedyi* (Scholtz, 1979a: 185); **OA**; s. Angola, nw. Namibia; HT ♂ + PTs – TMSA.
- eremita* (Blackburn, 1892: 38); LT – BMNH; = *crotchi* (syn. and LT des. by Scholtz 1986b: 26).
- erinaceus* LeConte, 1854: 212; LT – MCZH; = *variolatus* (syn. and LT des. by Robinson 1940: 151).
- erlangeri* (Kolbe, 1904: 293); LT ♂ – MNHB (des. by Scholtz 1980a: 55); = *niloticus niloticus* (syn. by Haaf 1954a: 345).
- erugatus* Scholtz, 1990b: 1425; **PO**; Argentina; HT ♀ – FMLT; male unknown.
- euclensis* (Blackburn, 1892: 39); **OO**; Australia (Capital Ter., New South Wales, Queensland, South Au., Victoria, Western Au.); LT – BMNH (des. by Scholtz 1986b: 44).
- eversmannii* Krynicki, 1832: 123; **TN**; Europe, w. Russia, Siberia, Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan, Iran, China (Xinjiang).
- eximius* Faldermann, 1835b: 368; **TG**; China (Nei Mongol), Mongolia.
- expansus* (Arrow, 1900: 22); **OA**; ec. Somalia; HT ♂ – BMNH; known only from HT.
- eyrensis* (Blackburn, 1904: 293); **OO**; Australia (South Au., Western Au.); LT – BMNH (des. by Scholtz 1986b: 47).
- fabricii* Reiche, 1853: 89; **TG/TN?**; Italy (Sicily), Portugal, Spain, Malta, Algeria, Libya, Morocco, Tunisia, Egypt.
- fascicularis fascicularis* (Wiedemann, 1821: 129); **PH**; RSA (s. Cape, n. Transvaal mtns.), e. Zimbabwe; LT – MNHB (des. by Scholtz 1980a: 78).
- fascicularis rowei* (Scholtz, 1980a: 78); RSA (Free State, Natal mtns.); HT ♂ + PTs – TMSA, PTs – BMNH.
- fascifer* LeConte, 1854: 213; **TT**; Canada (British Columbia), USA (Pacific nw. from San Francisco to Canadian border); HT – MCZH.
- femoratus* (DeGeer, 1774: 269), as *Scarabaeus*; = *sabulosus sabulosus* (syn. by Harold 1872: 175).
- fenestratus* (Harold, 1872: 97); = *subcarinatus* (syn. by Haaf 1958b: 1079).
- fenestrellus* (Balthasar, 1939: 34); **OA**; type loc. Mali; type lost; syn. by Scholtz (1979a: 188) with *melancholicus*, revalidated by Pittino (2006: 27, 2011b: 405) as genus *Afromorgus*.
- floridanus* Howden & Vaurie, 1957: 1; **TT**; USA (Florida); HT + PTs – AMNH, AT – CRNO, PTs also at other

institutions.

formosanus (Nomura, 1973: 37); **GI**; South Korea, Taiwan; HT ♂ – NSMT.

foveicollis (Harold, 1872: 181); **GI**; Canada (Ontario), USA (e. states w. to Kansas, Oklahoma, Texas); type – MNHN?; syn. *aciculeatus*.

foveolatus (Boheman, 1860: 114); **OA**; Namibia; LT ♂ + PLTs – NHRS (des. by Scholtz 1979a: 184); syn. *massalis*; Paulian (1981: 7) reported this species from Madagascar, but his habitus photo (fig. 3) is not *foveolatus* and his drawing of the aedeagus (fig. 8d) appears to have been copied from Haaf (1954a: fig. 18).

frater Pittino, 2005: 74; **OA**; India, Pakistan, Sri Lanka; HT ♂ – RPMI, PTs – RPMI, SKTJ.

freyi (Haaf, 1954a: 370); **OA**; Namibia, nw. RSA; HT ♂ + PTs – NHMB, PTs also at other institutions.

frontera (Vaurie, 1955: 41); **GI**; USA (s. Texas); HT + AT + PTs – TAMU, PTs also at other institutions.

fujikoi Ochi, 2000: 43; Japan (Honshu); see ssp. of *sabulosus*.

–*fumarius* Haaf, 1953: 333; HT ♂ – NHMB (syn. by Scholtz 1980a: 97).

–*furcifer* Pittino, 1987: 394; HT ♂ + PTs – HNHM, PTs also at other institutions; = *bifurcatus* (syn. by Scholtz 1990b: 1441).

fuliginosus (Robinson, 1941a: 134); **OO**; USA (s. Texas), Mexico (Coahuila, Tamaulipas, Veracruz, Yucatán), Guatemala; HT – USNM.

funestus (Lansberge, 1886: 94); **OA**; “Africa”; type lost; undocumented species, which the original description appears to place in the *gemmatus* or *baccatus* group of *Omorgus* (*Afromorgus*) – see Scholtz 1980a: 99, 1986a: 362.

–*furcillifer* Pittino, 1987: 396; HT ♂ – RPMI; = *parafurcatus* (syn. by Scholtz 1990b: 1441).

galapagoensis (Van Dyke, 1953: 124); **Po**; n. Galapagos (Darwin and Wolf Is.); HT ♀ – CASC.

gansuensis Ren, 2003: 110; **TT**; China (Gansu); HT – CASB?

gemmatus (Olivier, 1789: 7); **OA**; Arabia, Chad, Djibouti, Egypt, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Mali, Mauritania, Niger, Nigeria, Senegal, Somalia, Sudan; type lost.

gemmifer (Blanchard, 1846: 187); **Po**; Argentina, Brazil, Chile, Uruguay; HT – MNHN; syn. *argentinus*.

–*gemmiferus* (Blanchard, 1846: 187); = *gemmifer*.

–*gemmiferus* (Blanchard, 1846: 188), n. praecoc.; = *gutifer*.

gemmingeri (Harold, 1872: 134); **Po**; Argentina, Bolivia, Brazil, Paraguay, Uruguay (not in Chile, see Diéguez 2008); HT – MNHN.

gemmulatus Horn, 1874: 8; **TT**; USA (Arizona, California, New Mexico, South Dakota), Mexico (n. Baja); LT – MCZH (des. by Robinson 1940: 151).

genieri Scholtz, 1991b: 112; **OA**; Burkina Faso; HT ♂ – LEMQ; known only from HT.

gibberosus Scholtz, 1990b: 1428; **Po**; Chile (Biobio, Malleco); HT ♂ – USNM, PTs – CRNO + UPSA.

–*gibbus* (Olivier, 1789: no. 4: 13); type lost; = *suberosus* (syn. by Harold 1872: 120).

gigas (Harold, 1872: 48); **OO**; Australia (South Au., Western Au.); type lost; syn. *castelnavi*.

–*glaber* (Scholtz, 1980a: 36); **OA**; s. Tanzania; HT ♂ – ZSBS; = *lindemanna* (syn. by Pittino 2005: 75).

–*globulatus* (Fairmaire, 1883: 490); type – MNHN?; = *hemisphaericus* (syn. by Berg 1884: 98).

–*gonoderus* (Fairmaire, 1901: 135); HT – MNHN; = *squalidus* (syn. by Paulian 1937: 134).

gordoni (Steiner, 1981: 205); **Po**; Peru (Cuzco); HT + AT + PTs – USNM.

–*graecus* Mulsant & Rey, 1871: 223; = *transversus*.

granulatus (Herbst, 1783: 12); **OA**; Afghanistan, India (Himachal Pradesh, Sikkim, West Bengal, c. + s. states), Pakistan; type lost.

–*granulatus* Fabricius, 1801: 110; HT – ZMUC; = *fabricii* (syn. by Pittino 2006: 80).

granuliceps (Haaf, 1954b: 703); **OO**; “Australia”; HT ♀ – MNHN; known only from HT.

–*gravidus* (Péringuey, 1901: 470); LT – SAMC; = *elevatus* (syn. and LT des. by Scholtz 1979a: 190).

granulipennis Fairmaire, 1852: 83; **TG**; Caucasus, Italy (Sicily), Spain (incl. Canary Is.), Gibraltar, Algeria, Egypt (incl. Sinai), Libya, Morocco, Tunisia, Iran, Israel, Lebanon, Syria; LT – MNHN (des. by Pittino 1983: 268); syn. *barbarus*.

gunki (Scholtz, 1980a: 86); **Ph**; RSA (s.-sw. Cape); HT ♂ – TMSA, PTs – PPRI, UPSA.

guttalis (Haaf, 1954a: 336); **OA**; Ghana, Mali, Nigeria, Senegal; HTm – NHMB.

- gutifer* (Harold, 1868: 86), n. nov. pro *T. gemmiferus* (Blanchard 1846: 188), praeocc. by *T. gemmiferus* (Blanchard 1846: 187); **Po**; Argentina, Chile, Paraguay; HT – MNHN.
- haafi* (Vaurie, 1962: 122); **Po**; s. Argentina; HT ♂ – MNHN, PTs – MNHB + MNHN + NHMB.
- haagi* (Harold, 1872: 59); **OA**; India (West Bengal), Pakistan; HT – MNHN; regarded as a ssp. of *niloticus* by Haaf (1954a: 348) and Scholtz (1982: 12), elev. to sp. by Pittino (2006: 26, 27, 79).
- hamatus* (Robinson, 1940: 153); **GI**; Canada (Ontario), USA (e. states s. to Georgia + Tennessee and w. to Kansas + Nebraska; also Oklahoma, Texas); HT ♂ – ANSP.
- haroldi* Flach, 1879: 155; type? – NMPC; = *perrisii*.
- hemisphaericus* (Burmeister, 1876: 253); **Po**; s. Argentina, s. Chile; STs – MACN?; syn. *globulatus*.
- herminae* Strümpher, 2016b: 165 (in Strümpher et al. 2016b); **Ph**; Western Cape Province, RSA; HT ♂ – TMSA, PTs – UPSA and other institutions.
- hispanicus* Harold, 1862a: 161; **TG**; France (Pyrenees), Portugal, Spain; HT – MNHN.
- hispidus* (Pontoppidan, 1763: 431), as *Scarabaeus*; **TG**; Europe, Canary Is., Iran, Syria, Turkey; type lost; syn. *arenarius* Paykull (hom.), *cricketulus*, *insularis* Schneider (hom.), *luridus* Rossi (hom.), *sabulosus* Preyssler (hom.).
- hispidus* Paykull, 1798: 81; = *scaber* (syn. by Harold 1872: 183).
- horiguchii* Ochi & Kawahara, 2002: 54; **TT**; Japan, North Korea.
- horridus* (Fabricius, 1775: 818); **Ph**; RSA (sw. Cape); ST(2) – ZMUC; syn. *pectinatus*, *silphoides*.
- howdenorum* Scholtz, 1986b: 14; **OO**; Australia (Western Au.); HT – SAMA, PT – BMNH.
- howelli* (Howden & Vaurie, 1957: 4); **OO**; USA (ec. Florida, Texas); HT ♂ – CRNO, PT ♂ – INHS; presumed to occur through much of the range of its host bird Caracara (*Polyborus cheriway*), as far south as the Guianas and Peru.
- †*kikhbogdensis* Nikolaev, 2007: 107f, 215, as *Cretomorgus* gen. nov.; **fossil**, Early Cretaceous of Mongolia.
- inadai* (Ochi, Kawahara & Inagaki, 2008: 135); **TT (GI?)**; Japan (Yakushima I.); HT ♂ – OMNH [= *opacotuberculatus*?].
- inclusus* (Walker, 1858: 208); **OA**; China (Hainan), India, Sri Lanka; HT ♂ – BMNH.
- incognitus* Strümpher & Scholtz, 2011a: 141; = *vladislavi* (syn. by Strümpher et al. 2014a: 371); HT ♂ + 1 PT ♀ – QMBA, 2 PT ♀♀ – UPSA.
- incultus* (Fähraeus, 1857: 377); LT – NHRS (des. by Scholtz 1979a: 187), PLT(1) – BMNH; = *squalidus* (syn. by Harold 1872: 108).
- indicus* (Harold, 1872: 102); **OA**; India; “Typenmaterial” – MNHN.
- indigenus* Scholtz, 1990b: 1411; **OO**; Galapagos (Española I.); HT ♂ – CRNO, PTs – AMNH, BMNH and other institutions.
- ineptus* (Balthasar, 1931: 131); **GI**; e. Siberia, Mongolia; HT[ST?] – NMPC.
- inermis* Pittino, 2005: 77; **OA**; s. India, Sri Lanka, s. Vietnam; HT ♀ + PTs – RPMI.
- inflatus* (Loomie, 1922: 135); **OO**; USA (Arizona, New Mexico, Texas), Mexico (Chihuahua); HT ♂ – USNM.
- insignicollis* (Blackburn, 1896: 265); **OO**; Australia (New South Wales, Northern Ter., Western Au.); HT – MVMA.
- insignis* (Haaf, 1954a: 344); **OA**; s. Angola, Namibia; HT ♂ – NHMB, PTs – TMSA.
- instabilis* Haaf, 1953: 331; HT ♂ – NHMB, PT – BMNH; = *sulcatus* (syn. by Scholtz 1979a: 193).
- insularis* (Chevrolat, 1864: 416); **GI**; Cuba; HT – ANSP? [allegedly in Poey Coll., but not found by Robinson (1940)].
- insularis* Schneider, 1898: 69; = *hispidus*.
- integer* LeConte, 1854: 216; LT – MCZH (des. by Robinson 1940: 151); = *punctatus* (syn. by Horn 1874: 5).
- iranicus* Petrovitz, 1980: 613; **TG**; Iran; HT ♀ – MHNG.
- italicus* (Reiche, 1853: 89); **OA**; China (“Kwangu”), India (Himachal Pradesh, Kashmir, Sikkim, West Bengal), Pakistan, Italy (intro.); HT – MNHN.
- jeanae* Scholtz, Inward & Kerley, 2007: 98; **TT**; Thailand; HT ♂ – BMNH; known only from HT.
- juglans* (Ratcliffe, 1978: 299); **Po**; Brazil, Guyana; HT + AT – INAM, PTs – AMNH and other institutions.
- kerleyi* (Masumoto, 1996: 10); **GI**; nw. Thailand; NSMT.

- kiuchii* (Masumoto, 1996: 11); **GI**; Laos, Thailand; HT – OWUT.
- klapperichi* Pittino, 1983: 280; **TG**; Ukraine (Crimea), Greece, Cyprus, Turkey, Israel, Jordan, Syria, Iran, Iraq; HT + AT – MHNG, PTs – BMNH.
- komareki* Balthasar, 1931, see ssp. of *cadaverinus*.
- koreanus* Kim, 1991: 136; **TN**; South Korea.
- kyotensis* Ochi & Kawahara, 2000: 53; **TT**; Japan.
- lachrymosus* (Curtis, 1845: 455); HT – BMNH; = *brevicollis* (syn. by Harold 1872: 145).
- lama* Pittino, 1985: 329; **TT**; China (se. Xizang); HT ♂ – BMNH; syn. *alpigenus*.
- larvatus* (Gerstaecker, 1873: 309); LT – DEIM (des. by Scholtz 1979a: 188); = *melancholicus* (syn. by Haaf 1954a: 379).
- laticollis* LeConte, 1854: 213; **TT**; USA (Arkansas, Indiana, Iowa, Massachusetts, Nebraska, New Jersey, New York, Pennsylvania); HT – MCZH.
- lecontei* Harold, 1872: 156, n. nov. pro *alternans* LeConte, n. praecoc.; = *sonorae* (syn. by Horn 1874: 8).
- leonardii* Pittino, 1983: 277; **TG**; Portugal, Spain, Algeria, Libya, Morocco, Tunisia, Egypt, Israel, Syria; HT ♂ – MSNM, PT ♂ – RPMI.
- leprosus* (Blanchard, 1846: 188); HT – MNHN; = *aeger* (syn. by Harold 1872: 132).
- levis* (Haaf, 1953: 325); **Ph**; RSA (Cape, Free State); HT ♀ – BMNH, PTs – ISNB.
- liliana* Scholtz, 1980, see ssp. of *caffer*.
- lindemanna* (Petrovitz, 1975: 1); **OA**; Tanzania, e. RSA; HT ♂ – ZSBS; syn. *glaber*.
- litigious* (Harold, 1872: 88) (n. nov. pro *australasiae* Germar, n. praecoc.); = *alternans* (syn. by Scholtz 1986b: 46).
- litoral* Pittino, 1991: 77; **TG**; Albania, Bosnia-Herzegovina, Croatia, Montenegro, Serbia, Italy, Malta, Turkey; HT + AT – RPMI, PTs – BMNH, NMPC and other institutions.
- lobicollis* (Arrow, 1927: 466); **OA**; Myanmar, Thailand; STs – BMNH.
- longitarsis* (Harold, 1872: 136); **Po**; Argentina, Chile; HT – MNHN.
- loxus* (Vaurie, 1955: 58); **OO**; Mexico (Veracruz), Costa Rica, Argentina, Brazil, Colombia; HT ♀ – MCZH; presumed to occur continuously from Mexico to Argentina.
- lucidus* Pittino, 2010: 80; **OO**; Argentina (Buenos Aires); HT ♀ – MSNM; known only from HT.
- lugubris* (Haaf, 1954a: 338); **OA**; se. Kenya, Tanzania; HT ♂ – NHMV.
- luridus* (Fabricius, 1781: 496); **Ph**; Namibia, RSA (w. Cape); LT – ZMUC (des. by Scholtz 1979a: 194).
- luridus* Rossi, 1790: 17; = *hispidus*.
- lutosus* (Marsham, 1802: 25), as *Scarabaeus*; “England”; type lost, **n. dubium**.
- madagascariensis* (Fairmaire, 1871: 34); HT – MNHN; = *melancholicus* (syn. by Harold 1872: 108).
- maindroni* Pittino, 2005: 78; **OA**; Pakistan; HT + AT + PTs – MNHN, PT – RPMI.
- maissouri* (Haaf, 1954a: 384), as ssp. of *T. inclusus*; **OA**; “Vorder-Indien (Maissour, Shimoga), Surada und Burma”; HT ♂ + PTs – MNHN; elev. to sp. by Pittino (2006: 27).
- mandli* (Balthasar, 1931: 128); **GI**; e. Siberia, China (Fujian, Heilongjiang), Japan, South Korea. HT – NMPC, syn. *nishijimai*.
- manilensis* (Schultze, 1915: 271); = *suberosus* (syn. by Haaf 1954b: 739).
- mariae* Scholtz, 1986b: 13; **OO**; Australia (Western Au.); HT – WAMP.
- mariettae* Scholtz, 1986b: 20; **OO**; Australia (Northern Ter.); HT – ANIC.
- marshalli* (Haaf, 1957a: 694); **OO**; Australia (n. Queensland); HT ♀ – NHMB; known only from HT redescribed by Pittino & Kawai (2010).
- martini* Reitter, 1892: 153, as var. of *granulipennis*; **TG**; Spain, Algeria, Libya, Tunisia; LT ♀ – DEIM (des. by Pittino 1983: 274); made available as ssp. of *granulipennis* by Balthasar (1936: 452).
- massaicus* (Kolbe, 1904: 293); LT – MNHB (des. by Scholtz 1980a: 55); = *niloticus niloticus* (syn. by Haaf 1954a: 345).
- massalis* (Harold, 1881: 156); type lost; = *foveolatus* (syn. by Haaf 1954a: 360).
- matsudai* (Ochi & Hori, 1999: 37); **GI**; Japan (Amami-Ōshima).
- matsumurai* Miyake & Yamaya, 1995: 31; Japan (Okinawa-shotō); see ssp. of *uenoi*.
- maurus* Herbst, 1790: 26; patria?; **n. dubium**.

- †*medvedevi* Nikolaev, 2009: 179, as *Paratrox* gen. nov.; **fossil**, Early Cretaceous of Mongolia; HT – PINC.
- melancholicus* (Fåhræus, 1857: 378); **OA**; Angola, Botswana, Cameroon, CAR, Chad, Comoros, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, RSA, Rwanda, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe; LT – NHRS (des. by Scholtz 1979a: 187); syn. *fenestrellus*, *larvatus*, *madagascariensis* [see note under *fenestrellus*]. Pittino (2006, 2011b) revalidated *O. fenestrellus* in genus *Afromorgus* and separated from *A. melancholicus* three new species, *A. bayoni*, *A. benadirensis* and *A. drumonti*, based on lateral laminae of medial lobe of the aedeagus.
- mentitor* (Blackburn, 1896: 266); **OO**; Australia (Northern Ter., South Au., Western Au.); HT – MVMA, “one type” – BMNH.
- mielensis* Deloya, 1995: 153; **OO**; Mexico (Puebla); HT + AT – IEXM.
- miliarius* (Gmelin, 1790: 1587); **Ph**; RSA (Cape); type lost; undocumented species, which the original description appears to place in the *sulcatus* group of *Phoberus* – see Scholtz 1980a: 99.
- †*minutus* Nikolaev, 2008: 55, as *Trox*; **fossil**, Lower Cretaceous of Siberia.
- mirabilis* Pittino, 1987: 391; **Po**; Argentina, Chile; HT ♂ – RPMI.
- mitis* Balthasar, 1933: 81; **TT**; e. Siberia, China (Beijing, Heilongjiang), Japan, South Korea; LT – NMPC (des. by Pittino 2006: 28).
- mixtus* Harold, 1872: 167, as var. of *granulipennis*; **TG**; Cyprus, Turkey, Israel, Lebanon, Syria; LTm – MNHN (des. by Pittino 1983: 271); syn. *berytensis* Petrovitz; made available as sp. by Pittino 1983: 271 (as ssp. in 1985).
- mollis* (Arrow, 1927: 468); **OO**; Indonesia (Borneo, Sumatra), Malaya; LT – BMNH (des. by Scholtz 1986b: 38) + 1 PLT.
- monachus* (Herbst, 1790: 25); **OO**; USA (e. states from the Great Lakes to Florida and w. to Nebraska, Kansas, Oklahoma and e. Texas); HT – MNHB; syn. *pustulatus*, *tuberculatus* Beauvois.
- montalbanensis* (Schultze, 1915: 272); = *costatus* (syn. by Haaf 1954a: 390).
- montanus* (Kolbe, 1891: 22); **Ph**; Kenya, Tanzania, Uganda; LT – BMNH (des. by Scholtz 1980a: 77).
- monteithi* Scholtz, 1986b: 58; **OO**; Australia (e. Queensland: Kroombit); HT – QMBA.
- monticola* Robinson, 1940: 158, as ssp. of *variolatus*; HT – ANSP; = *variolatus* (syn. by Vaurie 1955: 53).
- morsus* LeConte, 1854: 216; HT – MCZH; = *punctatus* (syn. by Horn 1874: 5).
- morticinii* (Pallas, 1781: 11), as *Scarabaeus*; **TG**; sw. Russia, w. to e. Siberia, Kazakhstan, Kyrgyzstan, Turkmenistan, China (Xinjiang); syn. *pinguis*.
- mozalae* (Strümpher & Scholtz, 2009: 73); **Ph**; s. Mozambique; HT ♂ – TMSA, 6 PT ♂♂ – UPSA, SAMC, NCSA, BMNH.
- mutabilis* (Haaf, 1954a: 376); **OA**; Botswana, w. Ethiopia, Kenya, Malawi, Mozambique, e. RSA, Tanzania, Uganda, Zaire; HT – NHMB, PTs – BMNH.
- mutsuensis* Nomura, 1937: 85; **GI**; Japan; HT ♂ – NSMT.
- nama* (Kolbe, 1908: 125); **Ph**; s. Namibia, RSA (nw. Cape); LT ♂ – MNHB (des. by Scholtz 1979a: 195).
- nanningensis* Pittino, 2005: 71; **OO**; China (Guangxi); HT ♂ – RPMI; known only from HT.
- nanniscus* (Péringuey, 1901: 458); **Ph**; RSA (e. Cape); LT – SAMC (des. by Scholtz 1979b: 177).
- nasutus* (Harold, 1872: 34); **Ph**; RSA (sw. Cape); HT ♂ – MNHN.
- natalensis* (Haaf, 1954c: 57); **Ph**; RSA (se. Natal); HT ♂ – DMSA.
- natalensis quadricostatus* (Scholtz, 1980a: 72); HT ♂ – TMSA, PT – UPSA; = *quadricostatus* (elev. to sp. by Strümpher & Scholtz 2009: 76).
- natalensis schaborti* (Scholtz, 1980a: 72); HT ♂ – TMSA; = *quadricostatus* (syn. by Strümpher & Scholtz 2009: 76).
- necopinus* (Scholtz, 1986c: 29); **Ph**; nw. Zambia; HT ♂ + PTs – BMNH; closest to *T. squamiger* in the *sulcatus*

- group, which Scholtz (1986a: 361) transferred to *Trox* (*Phoberus*).
- neumanni* (Kolbe, 1904: 293); LT ♂ - MNHB (des. by Scholtz 1980a: 51); = *denticulatus* (syn. by Haaf 1954a: 354).
- neuquen* (Vaurie, 1962: 123); **Po**; Argentina, Chile; HT ♂ + PT ♂ - MNHB, PT ♀ - CRNO.
- ngomensis* (Van der Merwe & Scholtz, 2005: 182); **Ph**; RSA (Natal); HT ♂ - TMSA.
- nicicola* Bonnaire, 1881: 63; = *perrisii*.
- niger* Rossi, 1792: 9; **TG**; Europe, Siberia, Kazakhstan, Kyrgyzstan, Turkey; NT ♀ - MNHB (des. by Pittino 1991: 65); syn. *asiaticus*.
- nigrescens* (Robinson, 1941a: 134); HT ♂ - ANSP; = *tesselatus* (syn. by Vaurie 1955: 7).
- nigrociliatus* (Kolbe, 1904: 292); **Ph**; Ethiopia (highlands); LT - MNHB (des. by Scholtz 1980a: 92); syn. *asmaraensis*.
- nigrociliatus nyansanus* (Haaf, 1953: 330); = *nyansanus* (elev. to sp. by Strümpher & Scholtz 2017: 295).
- nigrociliatus nyassicus* (Haaf, 1953: 330); = *nyassicus* (elev. to sp. by Strümpher & Scholtz 2017: 296).
- nigroscobinus* Scholtz, 1986b: 20; **OO**; Australia (Western Au.); HT ♀ - ANIC; male unknown.
- niloticus niloticus* (Harold, 1872: 79); **OA**; Djibouti, Ethiopia, Kenya, Madagascar, Somalia, Sudan, Tanzania Uganda [S of 15°N]; LT ♀ - MNHN (des. by Scholtz 1980a: 55); syn. *erlangeri*, *massaicus*.
- niloticus desertorum* (Harold, 1872: 77), as sp., demoted to ssp. by Haaf (1954a: 347); Arabia, Egypt, Eritrea [N of 15°N]; LT ♀ - MNHN (des. by Scholtz 1980a: 56); syn. *philbyi*.
- niponensis* Lewis, 1895: 387; **TN**; Japan, Taiwan, Nepal, + Oriental; HT - BMNH; syn. with *T. scaber* by Arrow (1912: 61), reinstated by Pittino (2006: 80) without explanation.
- nishijimai* Nakane & Tsukamoto, 1955: 90; = *mandli*.
- nobilis* (Wollaston, 1867: 93); = *suberosus* (syn. by Harold 1872: 120).
- nocheles* Scholtz, 1990b: 1412; **OO**; Argentina (Río Negro); HT ♂ + PT ♂ - LACR.
- nodicollis* (MacLeay, 1888: 908); **OO**; Australia (Western Au.); LT - ANIC (des. by Scholtz 1986b: 56); doubtful species that may prove to be *O. subcarinatus*.
- nodosus* (Robinson, 1940: 152); **OO**; USA (New Mexico, w. Texas), Mexico (n. Chihuahua); HT ♂ - ANSP.
- nodulosus* Harold, 1872: 165, as var. of *hispidus*; **TG**; France (Corsica), Italy (Sardinia); LT ♂ - DEIM (des. by Pittino 1991: 69); made available as ssp. by Schmidt (1936: 76).
- nohirai* Nakane, 1954: 10; **TN**; Japan; HT - NSMT.
- nomadicus* (Scholtz, 1980b: 138); = *verrucosus* (syn. by Pittino 2006: 28).
- novaecaledoniae* (Balthasar, 1966: 184); HT?, 4 PTs - NMPC; = *suberosus* (syn. by Scholtz 1986b: 54).
- nyansanus* (Haaf, 1953: 330); **Ph**; Kenya, Rwanda, Zaire; HT ♂ - MNHB [see *nigrociliatus*].
- nyassicus* (Haaf, 1953: 330); **Ph**; e. Tanzania; HT ♂ - MNHB [see *nigrociliatus*].
- nyikanus* Strümpher, 2017: 293 (in Strümpher & Scholtz); **Ph**; Malawi; HT ♂ - NCSA, 4 PTs - TMSA, UPSA.
- obesus* (Scholtz, 1980a: 30); **OA**; Djibouti, Ethiopia, Kenya, Tanzania, Uganda; HT + PTs - BMNH.
- obscurus* (Waterhouse, 1875: 98); HT - BMNH; = *chinensis* (syn. by Arrow 1927: 466).
- occidentalis* Pittino, 1987: 395, as ssp. of *parafurcatus*; = *parafurcatus* s. str. (syn. by Scholtz 1990b: 1441); HT ♂ - MNHN, PT ♂ - RPMI.
- oligonus* (Loomis, 1922: 133); HT - USNM; = *texanus* (syn. by Vaurie 1955: 75).
- omacanthus* (Harold, 1872: 64); **OA**; India (Sikkim, Uttar Pradesh, West Bengal, c. states); type lost?
- opacotuberculatus* Motschulsky, 1860: 41; **Gl**; e. Siberia, China (Heilongjiang), Taiwan, Japan, Korean peninsula; type - ZMUM?
- opacus* Felsche, 1909: 450; LT - SMTD (des. by Scholtz 1980a: 74); = *pusillus* (syn. by Haaf 1953: 341).
- †*oustaleti* Scudder, 1879: 178B, as *Trox*; **fossil**, Eocene, Nine-Mile Creek, BC, Canada.
- ovalis* (Haaf, 1957b: 117); **OO**; Australia (Northern Ter.); HT ♀ - MVMA; male unknown.

- ovatus* (Beauvois, 1805: 175); = *suberosus* (syn. by Harold 1872: 120).
pampeanus (Burmeister, 1876: 255); **Po**; Argentina; 4 STs – MACN.
parafurcatus Pittino, 1987: 395; **Po**; Argentina, Brazil; HT + PTs – MNHN; syn. *furcillifer*, *parafurcatus occidentalis*.
parvicollis Scholtz, 1986b: 35; **OO**; Australia (New South Wales, Northern Ter., Victoria, Queensland); HT – ANIC.
parvisetosus (Ochi, Kon & Bai, 2010: 131); **Gl**; China (Sichuan); HT ♂ + PTs – CASB.
pastillarius (Blanchard, 1846: 187); **OO**; Argentina, Bolivia, Chile; HT – MNHN?
patagonicus (Blanchard, 1846: 186); **Po**; Argentina, s. Brazil; HT – MNHN?
patriciae Pittino, 1987: 386; **Po**; Argentina, Uruguay; HT ♂ + PT ♂ – RPML.
pauliani (Haaf, 1954a: 385); **OA**; China (Henan, Hong Kong, Hubei, sw. China), India (Sikkim, West Bengal), Nepal, Sri Lanka, Cambodja, n. Vietnam, Annam, Indonesia (Java); HT ♂ – NHMV, PTs – BMNH.
paulseni Ratcliffe, 2016: 2; **TT**; USA (Kansas, Nebraska); HT + AT + 44 PTs – UNSM.
-pectinatus (Pallas, 1781: 10), as *Scarabaeus*; type lost; = *horridus* (syn. by Harold 1872: 36).
pedestris (Harold, 1872: 128); **Po**; Argentina; HT – MNHN?; syn. *denticulatus* Blanchard (n. praeocc.).
pellosomus Scholtz, 1986b: 27; **OO**; Australia (New South Wales, Victoria); HT – ANIC, PTs – BMNH.
penicillatus (Fåhræus, 1857: 383); **Ph**; RSA; LT ♂ – NHRS (des. by Scholtz 1980a: 81).
perhispidus (Blackburn, 1904: 296); **OO**; Australia (all states except Tasmania); HT – BMNH.
perlatus (Goeze, 1777: 74), as *Scarabaeus*; **TG**; Europe, Algeria; syn. *chevrolati*, *sabulosus* Olivier, *subterraneus*.
perrieri (Fairmaire, 1899: 519); **Ph**; Madagascar; HT ♂ – MNHN; not considered by Scholtz (1986a: 361), but compared by Haaf (1953: 342) to *T. pusillus*; listed by Pittino (2006: 80) in *Trox*, transferred to *Phoberus* by Strümpher et al. 2015: 179.
perrisii Fairmaire, 1868: 482; **TN**; Europe, Turkey, Algeria, Morocco; syn. *haroldi*, *nidicola*.
persuberosus (Vaurie, 1962: 145); **OO**; Argentina, Bolivia, Brazil, Paraguay, Peru, Uruguay; HT ♂ + PTs – SASP and other institutions.
peruanus (Erichson, 1847: 111); **Po**; Argentina, Bolivia, Chile, Peru; LT ♂ – MNHB.
-philbyi (Paulian, 1948: 143); HT ♂ – MNHN; = *niloticus desertorum* (syn. by Haaf 1954a: 347).
pilularius (Germar, 1824: 113); **Po**; Argentina, Bolivia, Brazil, Chile, Paraguay, Uruguay; HT – MLUH?
-pinguis Faldermann, 1835b: 369; = *morticinii*.
placosalinus Ren, 2003: 112; **TT**; China (Xinjiang); HT – CASB?
planicollis (Haaf, 1953: 337); **Ph**; Lesotho, Namibia, RSA (Cape), Zimbabwe; HT ♂ – NHMB.
-platycyphus (Loomis, 1922: 133); HT – USNM; = *umbonatus* (syn. by Robinson 1940: 150).
plicatus Robinson, 1940: 153; **TT**; USA (Arizona, New Mexico, Texas), Mexico (most states); HT – ANSP.
ponderosus (Péringuey, 1901: 467); **OA**; Ethiopia, Mozambique, e. RSA, Tanzania, Zimbabwe; type lost.
-porcatus Say, 1825: 193; = *unistriatus* (syn. by Harold 1872: 174).
poringensis Ochi, Kon & Kawahara, 2005: 65; **Gl**; Borneo (Sabah), Java; HT ♀ – UMBS; male described by Pittino & Kawai (2006: 7).
principalis (Haaf, 1954a: 337), as ssp. of *gutalis* (elev. to sp. by Scholtz 1980a: 43); **OA**; n. Cameroon, Chad, e. Nigeria, Sudan; HT ♂ – NHMB.
procerus (Harold, 1872: 127); **OA**; Arabia, n. Burkina Faso, Chad, Egypt, Ethiopia, c. India, Iran, Mali, Niger, ne. Nigeria, Pakistan, Senegal, Somalia, Sudan; LT – MNHN (des. by Scholtz 1980a: 35).
punctatus (Germar, 1824: 113); **OO**; USA (w. states from Montana, Utah and California e. to the Mississippi River; also Kentucky, Ohio, Mississippi), Mexico (Aguascalientes, Baja, Chihuahua, Durango, Guanajuato, Nuevo León, Sonora); syn. *integer*, *morsus*.

- punctatus* LeConte, 1854: 215; HT – MCZH? [not found by Vaurie (1955: 61)]; = *suberosus* (syn. by Harold 1872: 120).
- puncticollis* (Haaf, 1953: 330); **Ph**; Arab Emirates, Yemen; HT ♂ – ZSBS, PTs – MNHN.
- pusillus* (Péringuey, 1908: 634); **Ph**; Angola, Benin, Congo (DRC), Gabon, Ghana, Guinea, Ivory Coast, Liberia, Sierra Leone, Tanzania, Uganda, Zaire, Zambia, Zimbabwe; LT – SAMC (des. by Scholtz 1980a: 74); syn. *opacus*, *pusio*, *urbani*.
- pusio* Kolbe, 1914: 288; LT – MNHB; = *pusillus* (syn. and LT des. by Scholtz 1980a: 74).
- pustulatus* LeConte, 1854: 215; HT – MCZH; = *monachus* (syn. by Harold 1872: 116).
- quadricostatus* (Scholtz, 1980), see ssp. of *natalensis*, elev. to sp. by Strümpher & Scholtz (2009: 76).
- quadridens* (Blackburn, 1892: 38); **OO**; Australia (all states except Tasmania); LT – BMNH (des. by Scholtz 1986b: 41).
- quadrimaculatus* Ballion, 1871: 338; **TG**; Israel, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan; type – ZMAS?, ZMUM?
- quadrinodosus* (Haaf, 1954b: 723); **OO**; Australia (Capital Ter., New South Wales, Queensland, Victoria); HT – MNHB, PTs – BMNH.
- radula* (Erichson, 1843: 235); **OA**; Angola, Botswana, Kenya, Mozambique, Namibia, e. RSA, Tanzania, Zimbabwe; LT ♂ – MNHB (des. by Scholtz 1979a: 190); syn. *variolosus*.
- raduloides* (Kolbe, 1904: 292); LT – MNHB; = *tuberosus* (syn. and LT des. Scholtz 1980a: 44).
- ranavalo* (Paulian, 1937: 134); HT – BMNH; = *sallei* (syn. by Vaurie 1962: 130).
- ranotsaraensis* (Pittino, 2010: 77), as *Madagatrox* gen. nov.; **Ph**; sw. Madagascar; HT ♀ – MNHN; no other material (transferred to *Phoberus* by Strümpher et al. 2015: 79).
- regalis* (Haaf, 1954b: 704); **OO**; “Australia”; HT ♂ – MNHN; known only from HT.
- regularis* (Harold, 1868: 85); = *costatus* (syn. by Harold 1872: 115).
- reiterorum* (Král & Kubán, 2012: 148), as genus *Afromorgus*; **OA**; Socotra I.; HT + AT + PTs – NMPC; **comb. n.**
- rhyparoides* (Harold, 1872: 32); **Ph**; Lesotho, RSA, St. Helena I. (intro.); LT – MNHN (des. by Scholtz 1980a: 73); syn. *whiteheadi*.
- rimulosus* (Haaf, 1957a: 693); **OA**; India (“Vorder-Indien: Coromandel”); HT ♂ – NHMB.
- robinsoni* Vaurie, 1955: 47; **TT**; Canada (Alberta, Manitoba, Saskatchewan), USA (c. states s. to Texas; also Colorado, Illinois, Michigan, Minnesota, Wisconsin); HT + AT + PTs – AMNH, Pts also at other institutions.
- rotundulus* (Haaf, 1957b: 117); **OO**; Australia (Northern Ter., Western Au.); HT – MVMA.
- rowei* Scholtz, 1980, see ssp. of *fascicularis*.
- rubricans* (Robinson, 1946: 57); **OO**; USA (se. Texas), Mexico (widespread), Guatemala (w. coast), Nicaragua (w. coast); HT ♂ – CASC.
- rudebecki* (Haaf, 1958a: 474); **Ph**; Lesotho, RSA (sw. Cape, w. Natal); HT ♂ – MZLU.
- rusticus* (Fåhræus, 1857: 379); **OA**; Namibia, e. RSA, Zimbabwe; LT – NHRS (des. Scholtz 1979a: 191); syn. *damarinus*.
- sabulosus sabulosus* (Linné, 1758: 350), as *Scarabaeus*; **TT**; Europe, Siberia, Kazakhstan, Mongolia, Korean peninsula, Turkey, Syria; type – ZMUU?; syn. *femoratus*.
- sabulosus fujiokai* Ochi, 2000: 43; Japan (Honshu).
- sabulosus* Olivier, 1789: no. 4: 8; = *perlatus*.
- sabulosus* Preyssler, 1790: 48; = *hispidus*.
- salebrosus* (Macleay, 1871: 186); **OO**; Australia (Northern Ter., Queensland, Western Au.); LT – AMSA (des. by Scholtz 1986b: 32); syn. *vitreomaculatus*.
- sallei* (Harold, 1872: 138); **Po**; Bolivia, Ecuador, Peru; HT – MNHN; syn. *ranavalo*.
- satorui* Kawai, 2006a: 1; **OA**; RSA (Cape), Ivory Coast; HT ♂ – NSMT.
- scaber* (Linné, 1767: 573); **TN**; Europe, Siberia, n. Africa, Canary Is., Canada, USA, Argentina, Chile (recorded but not established in Chile, see Diéguez 2008), Australia, Borneo (Sabah); type – ZMUU?; syn. *arenarius*, *arenosus*, *barbosus*, *hispidus* Paykull, *nipponensis*, *trisulcatus*.

- scabrosus* (Beauvois, 1805: 175); **OO**; Canada (Ontario), USA (from New York to Florida and w. to Nebraska, Colorado, Kansas, Oklahoma and Texas).
- schaborti* Scholtz, 1980: 72, see ssp. of *natalensis*.
- scutellaris* (Say, 1823: 238); **OO**; USA (Arizona, Colorado, Kansas, New Mexico, ne. Utah, Texas), Mexico (Chihuahua, Coahuila, D.F., Durango, Morelos, Puebla, Sonora); LT? – MCZH.
- semicostatus* (Macleay, 1871: 186); **OO**; Australia (Capital Ter., New South Wales, Queensland, Western Au.); LT – ANIC (des. by Scholtz 1986b: 31); syn. *asperrimus*.
- semmelinki* (Lansberge, 1887: 200); = *squamosus* (syn. by Scholtz 1986b: 53).
- senegalensis* (Scholtz, 1983: 205); **OA**; Senegal; HT ♂ – TMSA, PT ♀ – UPSA (types only).
- serrulatus* Beauvois, 1805: 176; = *tuberculatus* DeGeer (syn. by Harold 1872: 155).
- setifer* Waterhouse, 1875: 98; **TT**; Japan, South Korea; LT + PLT – BMNH; syn. *aino*.
- setosipennis* (Blackburn, 1904: 292); **OO**; Australia (New South Wales, Northern Ter., Queensland, South Au.); LT – BMNH (des. by Scholtz 1986b: 23).
- setulosus* Kolbe, 1891: 23; HT ♂ – MNHB; = *squamiger* (syn. by Haaf 1953: 326).
- seymourensis* (Mutchler, 1925: 229); **Po**; s. + c. Galapagos; HT – AMNH.
- †*sibericus* Nikolaev, 2007: 104f, 215, 220, as *Trox*; **fossil**, Early Cretaceous of Siberia.
- silphoides* Thunberg, 1787: 38; type – ZMUU?; = *horridus* (syn. by Harold 1872: 36).
- simi* Robinson, 1940; ssp. of *spinulosus*.
- sonorae* LeConte, 1854: 211; **TT**; Canada (Alberta, Northwest Ter., Saskatchewan), USA (e. to South Dakota, Nebraska, Kansas and Texas; also California, Louisiana, Missouri), Mexico (Chihuahua, Durango, Nuevo León, Sonora, Zacatecas); HT – MCZH; syn. *alternans* LeConte, *lecontei*.
- sordidatus* Balthasar, 1936: 452, as ssp. of *granulipennis*; **TG**; Bulgaria, Croatia, Greece, Syria, Turkey; HT ♂ [ST?] – NMPC (elev. to sp. by Pittino 1983: 277).
- sordidus* LeConte, 1854: 211; **TT**; Canada (Ontario, Quebec), USA (most e. states and w. to Kansas and Texas); HT [= LT] – MCZH.
- spatulatus* (Vaurie, 1962: 151); **OO**; Argentina; HT ♂ – NHMB, PTs – CRNO.
- speculifer* (Heller, 1914: 317); = *squamosus* (syn. by Scholtz 1986b: 53).
- spinulosus spinulosus* Robinson, 1940: 156; **G**; Canada (Ontario), USA (from Michigan to Tennessee and w. to Nebraska; also Arkansas, Louisiana); HT – ANSP.
- spinulosus dentibius* Robinson, 1940: 156, as sp., demoted to ssp. by Vaurie (1955: 36); USA (Arizona, New Mexico, w. Texas), Mexico (Baja, Chihuahua, Coahuila, Durango, Michoacán, Morelos, Nuevo León); HT – ANSP; intergrades with *spinulosus* s. str. in sc. Texas.
- spinulosus simi* Robinson, 1940: 157, as sp., demoted to ssp. by Vaurie (1955: 36); USA (e. states from Pennsylvania and New Jersey s. to Virginia); HT – ANSP.
- squalidus* (Olivier, 1789: 12); **OA**; Afrotropical: continent-wide and Madagascar; LT ♂ – TMSA (des. Scholtz 1979a: 187); syn. *gonoderus*, *incultus*.
- squamiger* (Roth, 1851: 133); **Ph**; Burundi, Cameroon, Ethiopia, Kenya, RSA, Rwanda, Somalia, Tanzania, Uganda, Zaire, Zimbabwe [listed also from the Arab Emirates and Yemen, see Pittino 2006: 81]; LT ♀ – ZSMC (des. by Scholtz 1980a: 90); syn. *angulatus*, *setulosus*.
- squamosus* (Macleay, 1871: 186); **OO**; e. Australia, e. Papua New Guinea; LT – ANIC (des. by Scholtz 1986b: 53); syn. *semmelinki*, *speculifer*.
- stellatus* (Harold, 1872: 92); **OO**; Australia (Western Au.); HT – NHMV.
- sternbergi* (Van der Merwe & Scholtz, 2005: 183); **Ph**; RSA (Zululand); HT ♂ – TMSA.
- strandi* Balthasar, 1936: 452; **TT**; Algeria, Libya, Morocco, Tunisia; HT [ST?] – NMPC.
- striatus* Melsheimer, 1846: 137; **TT**; Canada (Ontario), USA (Arkansas, Illinois, New Jersey, Pennsylvania); HT – MCZH? (not found by Vaurie 1955: 32).
- strigosus* (Haaf, 1953: 319); **Ph**; RSA (e. Cape, Free State, se. Transvaal); HT ♂ – NHMB, PTs – BMNH.
- strzeleckensis* (Blackburn, 1895: 33); **OO**; Australia (all states except Tasmania); LT – BMNH (des. by Scholtz 1986b: 24).
- subcarinatus* (Macleay, 1864: 128); **OO**; Australia (all states except Tasmania), Papua New Guinea; LT – ANIC (des. by Scholtz 1986b: 51); syn. *fenestratus*, *nadicollis*?

- suberosus* (Fabricius, 1775: 31); **OO**; New World, Australia, Oceania; HT ♂ – BMNH; syn. *alternatus*, *crenatus*, *denticulatus*, *gibbus*, *manilensis*, *nobilis*, *novaecaledoniae*, *ovatus*, *punctatus* LeConte, *torresalei*, *tricolor*, *triestinae*, *tuberosus* Castelnau.
- subterraneus* (Geoffroy, 1785: 8), as *Scarabaeus*; = *perlatus*.
- sugayai* (Masumoto & Kiushi, 1995: 206); **GI**; s. Japan.
- sulcatus* (Thunberg, 1787: 38); **Ph**; Namibia, RSA, Zimbabwe; type(s) – ZMUU; syn. *instabilis*.
- suturalis* LeConte 1854: 214; LT ♂ – MCZH (des. by Robinson 1940: 150); = *texanus* (syn. by Vaurie 1955: 75).
- taiwanus* (Masumoto, Ochi & Li, 2005: 233); **GI**; c. Taiwan.
- talpa* (Fåhræus, 1857: 380); **Ph**; RSA (e. Cape, Natal); HT – NHRS.
- tasmanicus* (Blackburn, 1904: 292); **OO**; Australia (Tasmania + Flinders I.); HT – BMNH.
- tatei* (Blackburn 1892: 37); **OO**; Australia (New South Wales, South Au., Western Au.); LT – BMNH (des. by Scholtz 1986b: 11).
- tenebrosus* (Harold, 1872: 130); **Po**; Ecuador; HT ♂ – MNHN.
- terrestris* (Say, 1825: 192); **GI**; USA (Pennsylvania and Atlantic coast states from Massachusetts s. to Mississippi and Florida); types destroyed.
- tesselatus* LeConte, 1854: 216; **OO**; USA (Arizona, Kansas, New Mexico, Texas), Mexico (Baja, Guerrero, Morelos, Sinaloa, Sonora); LT ♂ – MCZH (des. by Robinson 1940: 151); syn. *nigrescens*.
- testudo* (Arrow, 1927: 466); **OA**; India, Pakistan; HT ♂ – BMNH.
- texanus* LeConte, 1854: 214; **OO**; USA (New Mexico, s. Texas), Mexico (Nuevo León, Tamaulipas); LT ♀ – MCZH (des. by Robinson 1940: 150).
- tibialis* Masumoto, Ochi & Li, 2005: 235; **GI**; Taiwan.
- tomentosus* (Robinson, 1941a: 135); **OO**; Mexico (Nayarit, Oaxaca, Sinaloa, Sonora); HT ♂ – ANSP.
- torresalei* (Báguena Corella, 1959: 212); = *suberosus* (syn. by Scholtz 1982: 14).
- transversus* Reiche & Saulcy, 1856: 405; **TG**; Greece; LT – HNHM (des. by Pittino 2006: 28); syn. *demaisioni*, *graecus*.
- tricolor* (Blackburn, 1904: 296); type – BMNH; = *suberosus* (syn. by Arrow 1927: 466).
- triestinae* Pittino, 1987: 378; HT ♂ – MNHN; = *suberosus* (syn. by Scholtz 1990b: 1407).
- trilobus* (Haaf, 1954b: 727), as ssp. of *candidus*; **OO**; Australia (all states except Western Au. and Tasmania), Papua New Guinea; HT + Pts – BMNH.
- trisulcatus* Curtis, 1845: 446; HT – BMNH; = *scaber* (syn. by Harold 1872: 183).
- tuberculatus* (DeGeer, 1774: 318), as *Scarabaeus*; **TT**; USA (from Massachusetts s. to extreme nw. Florida and w. to e. Texas, e. Kansas and Nebraska; also Arizona, New Mexico, Wyoming); syn. *canaliculatus*, *serrulatus*.
- tuberculatus* (Beauvois, 1805: 175); = *monachus* (syn. by Harold 1872: 116).
- tuberosus* (Castelnau, 1840: 107); = *suberosus* (misspelling, see Vaurie 1955: 60).
- tuberosus* (Klug, 1855: 657); **OA**; Botswana, Ethiopia, Kenya, Mozambique, e. RSA, Tanzania, Uganda, Zaire; LT ♂ – MNHB (des. by Scholtz 1980a: 44); syn. *raduloides*.
- tytus* (Robinson, 1941b: 228); **OO**; USA (Arizona, Georgia, Oklahoma, Pennsylvania), Cuba; HT ♂ – ANSP, PT – BMNH; known only from nests of barn owl (*Tyto alba pratincola*).
- uenoi uenoi* (Nomura, 1961: 70); **GI**; Japan (Tokuno-shima Is.); HT ♂ – NSMT.
- uenoi matsumurai* Miyake & Yamaya, 1995: 31; Japan (Okinawa-shoto).
- umbonatus* LeConte, 1854: 214; **OO**; USA (Arizona, New Mexico, Texas, Utah), Mexico (Chihuahua, Coahuila, Nuevo León, Tamaulipas); LT ♂ – MCZH (des. by Robinson 1940: 150); syn. *confluentus*, *platycyphus*.
- undaraensis* Strümpher, Farrell & Scholtz, 2014a: 370; **OO**; Australia (Queensland); HT ♀ – QMBA, male unknown.
- undulatus* Zoubkoff, 1829: 158; = *cadaverinus cadaverinus*.
- unguicularis* (Haaf, 1954a: 369); **OA**; Mozambique, ne. RSA, e. Zimbabwe; HT ♀ – NHMB, PTs – BMNH, FMNH and other institutions.
- unistriatus* Beauvois, 1805: 175; **TT**; Canada (all provinces except British Columbia), USA (s. to Colorado in

- the west and to North Carolina in the east; also sw. Arkansas, Florida, Louisiana, Texas); syn. *porcatus*.
-urbani Mikšić, 1958a: 15; type lost; = *pusillus* (syn. by Scholtz 1980a: 74).
ussuriensis Balthasar, 1931: 129; **TT**; Siberia, Mongolia, China (Heilongjiang), Korean peninsula; 2 STs – NMPC.
varicosus (Erichson, 1843: 235); **OA**; w. Angola; LT ♂ – ISNB (des. by Scholtz 1980a: 63).
variolatus Melsheimer, 1846: 138; **TT**; Canada (New Brunswick, Nova Scotia, Ontario, Quebec), USA (e. states w. to Kansas, Oklahoma and Texas; also Iowa); HT – MCZH; syn. *erinaceus*, *variolatus monticola*.
-variolosus (Fåhræus, 1857: 378); LT – NHRS (des. Scholtz 1980a: 47), 1 PLT – BMNH; = *radula* (syn. by Harold 1872: 68).
-velutinus (Blackburn, 1892: 40); HT – BMNH; = *costatus* (syn. by Haaf 1954b: 734).
verrucosus (Reiche & Saulcy, 1856: 404); **OA**; e. Africa incl. Egypt, Arab Emirates, Iraq, Syria, Yemen; LT ♂ – MNHN (des. by Pittino 2006: 28), PLT – BMNH; syn. *nomadicus*; considered a synonym of *denticulatus* (Olivier) by Harold (1872), Arrow (1927), Haaf (1954a) and Scholtz (1980a, 1982), revalidated by Pittino (2006: 28, 79).
villosus (Haaf, 1954b: 728); **OO**; Australia (Northern Ter., Queensland, Western Au.); HT – MNHB, PTs – BMNH.
vimmeri Balthasar, 1931: 130; **TT**; e. Siberia, Mongolia, China (Beijing), South Korea; HT [ST?] – NMPC; revived from synonymy of *T. ineptus* by Pittino (2006: 27).
-vitreomaculatus (MacLeay, 1888: 909); = *salebrosus* (syn. by Blackburn 1904: 284).
vladislavi Kawai, 2009b: 73; **OO**; Australia (Queensland); HT – QMBA, AT + PTs – VMPC; syn. *incognitus*.
-whiteheadi Wollaston, 1877: 61; HT – BMNH; = *rhyaroides* (syn. by Haaf 1953: 340).
wittei (Haaf, 1955a: 47), as ssp. of *guttalis* (elev. to sp. by Scholtz 1980a: 43); **OA**; Angola, Namibia, Tanzania, s. Zaire, Zambia, Zimbabwe; HT ♂ – ISNB.
yamayai Nakane, 1983: 139; **GI**; Japan (Ryukyus: Iriomote I.); HT ♂ – TN CJ.
yangi (Masumoto, Ochi & Li, 2005: 238); **GI**; n. Taiwan.
youngai (Strümpher & Scholtz, 2011b: 340); **Ph**; RSA; HT ♂ – TMSA, 66 PTs – TMSA, NCSA, SAMC, BMNH.
zoufali Balthasar, 1931: 131; **TN**; e. Siberia, China (Beijing, Hubei), North Korea, Oriental; HT [ST?] – NMPC.
zumpti (Haaf, 1957a: 692); **OA**; Botswana, Kenya, Namibia, e. RSA, Zimbabwe; HT ♂ + PTs – NHMB.

LISTS OF VALID SPECIES BY GENERA AND SUBGENERA

Subspecies, nomina dubia and fossil species omitted. Limits of biogeographic regions after Löbl & Smetana (2006: 12, map 1) and Löbl & Löbl (2016: XV, map 1). Af – Afrotropical, Au – Australian, Md – Madagascan, Na – Nearctic, Nt – Neotropical, Or – Oriental, Pa – Palearctic, [**L**] – larva known.

Trox (Trox) Fabricius

acanthinus Harold, Nt
aproximans Escalera, Pa
atrox LeConte, Na-Nt, [**L**]
cadaverinus Illiger, Pa
capensis Scholtz, Af, [**L**]
capillaris Say, Na
clathratus Reiche, Pa
contractus Robinson, Na
cotodognanensis Compte, Pa
fascifer LeConte, Na, [**L**]
floridanus Howden & Vaurie, Na
gansuensis Ren, Pa

gemmulatus Horn, Na-Nt
horiguchii Ochi & Kawahara, Pa
inadai Ochi et al., Pa
jeanae Scholtz et al., Or
kyotensis Ochi & Kawahara, Pa
lama Pittino, Pa
laticollis LeConte, Na
mitis Balthasar, Pa
paulseni Ratcliffe, Na
placosalinus Ren, Pa
plicatus Robinson, Na-Nt, [**L**]
robinsoni Vaurie, Na, [**L**]
sabulosus (Linné), Pa, [**L**]

setifer Waterhouse, Pa
sonorae LeConte, Na-Nt, [L]
sordidus LeConte, Na, [L]
strandii Balthasar, Pa
striatus Melsheimer, Na
tuberculatus (DeGeer), Na, [L]
unistriatus Beauvois, Na, [L]
ussuriensis Balthasar, Pa
variolatus Melsheimer, Na-Nt, [L]
vimmeri Balthasar, Pa

Trox (Granulitrox Nikolaev)

confluens Wollaston, Pa
cribrum Gené, Pa, [L]
cyrenaicus Pittino, Pa
elkantaraensis Pittino, Pa
eximius Faldermann, Pa
fabricii Reiche [sg. *Niditrox?*], Pa
granulipennis Fairmaire, Pa-Af
hispanicus Harold, Pa
hispidus (Pontoppidan), Pa, [L]
iranicus Petrovitz, Pa
klapperichi Pittino, Pa
leonardii Pittino, Pa
litoralis Pittino, Pa
martini Reitter, Pa
mixtus Harold, Pa
morticinii (Pallas), Pa
niger Rossi, Pa
nodulosus Harold, Pa
perlatus (Goeze), Pa, [L]
quadrimaculatus Ballion, Pa
sordidatus Balthasar, Pa
transversus Reiche, Pa

Trox (Niditrox Nikolaev)

aequalis Say, Na-Nt, [L]
affinis Robinson, Na
eversmannii Krynicki, Pa
fabricii Reiche [sg. *Granulitrox?*], Pa
koreanus Kim, Pa
niponensis Lewis, Pa-Or
nohirai Nakane, Pa
perrisii Fairmaire, Pa
scaber (Linné), subcosmopolitan, [L]
zoufali Balthasar, Pa-Or

Glyptotrox Nikolaev

boucomonti (Paulian), Pa-Or
brahminus (Pittino), Pa-Or
cambeorti (Pittino), Pa
cambodjanus (Pittino), Or

dhaulagiri (Paulus), Pa
doiinthanonensis (Masumoto), Or
formosanus (Nomura), Pa
foveicollis (Harold), Na, [L]
frontera (Vaurie), Na, [L]
hamatus (Robinson), Na
ineptus (Balthasar), Pa
insularis (Chevrolat), Nt
ineptus (Balthasar), Pa
insularis (Chevrolat), Nt
kerleyi (Masumoto), Or
kiuchii (Masumoto), Or
mandli (Balthasar), Pa, [L]
matsudai (Ochi & Hori), Pa
mutsuensis (Nomura), Pa
opacotuberculatus (Motschulsky), Pa
parvisetosus (Ochi et al.), Pa
poringensis (Ochi et al.), Or
spinulosus (Robinson), Na-Nt, [L]
sugayai (Masumoto & Kiushi), Pa
taiwanus (Masumoto et al.), Pa
terrestris (Say), Na
tibialis (Masumoto et al.), Pa
uenoi (Nomura), Pa
yamayai (Nakane), Pa

Phoberus MacLeay [Af + Arabian pen.]

aculeatus (Harold)
arcuatus (Haaf)
braacki (Scholtz)
brincki (Haaf)
caffer (Harold)
consimilis (Haaf), [L]
cyrtus (Haaf)
disjunctus Strümpher.
elmariae (Van der Merwe & Scholtz)
fascicularis (Wiedemann), [L]
gunki (Scholtz)
herminae Strümpher
horridus (Fabricius)
levis (Haaf)
luridus (Fabricius)
miliarius (Gmelin)
montanus (Kolbe)
mozalae (Strümpher & Scholtz)
nama (Kolbe)
nanniscus (Péringuey)
nasutus (Harold)
natalensis (Haaf)
necopinus (Scholtz)
ngomensis (Van der Merwe & Scholtz)
nigrociliatus (Kolbe)

nyansanus (Haaf)
nyassicus (Haaf)
nyikanus Strümpfer
penicillatus (Fähræus)
perrieri (Fairmaire), Md
planicollis (Haaf)
puncticollis (Haaf)
pusillus (Péringuey)
quadricostatus (Scholtz)
ranotsaraensis (Pittino), Md
rhyparoides (Harold), [L]
rudebecki (Haaf)
squamiger (Roth), [L]
sternbergi (Van der Merwe & Scholtz)
strigosus (Haaf)
sulcatus (Thunberg)
talpa (Fähræus)
youngai (Strümpfer & Scholtz)

Omorgus Er. (Haroldomorgus Scholtz)

batesi (Harold), Nt

Omorgus Erichson (Omorgus Er.)

alatus (MacLeay), Au
alius Scholtz, Au
alternans (MacLeay), Au
amicus (Haaf), Au
aphanocephalus Scholtz, Au
asper LeConte, Na-Nt, [L]
augustae (Blackburn), Au
australasiae (Erichson), Au
bachorum Strümpfer et al., Au
badeni (Harold), Nt
birmanicus (Arrow), Or
borrei (Harold), Nt
brucki (Harold), Au
candezei (Harold), Nt
candidus (Harold), Au
capillaceus Scholtz, Nt
capillamentis Strümpfer & Scholtz, Au
carinatus (Loomie), Na-Nt, [L]
carinicollis Scholtz, Au
ciliatus (Blanchard), Nt
costatus (Wiedemann), Au-Or, [L]
crotchii (Harold), Au
curvipes (Harold), Au
demarzi (Haaf), Au
dilatocollis (MacLeay), Au
dohrni (Harold), Au
elderi (Blackburn), Au
elongatus (Haaf), Au

euclensis (Blackburn), Au
eyrensis (Blackburn), Au
fuliginosus (Robinson), Na-Nt, [L]
gigas (Harold), Au
granuliceps (Haaf), Au
howdenorum Scholtz, Au
howelli (Howden & Vaurie), Na-Nt
indigenus Scholtz, Nt
inflatus (Loomie), Na-Nt, [L]
insignicollis (Blackburn), Au
loxus (Vaurie), Nt
lucidus Pittino, Nt
mariae Scholtz, Au
mariettae Scholtz, Au
marshalli (Haaf), Au
mentitor (Blackburn), Au
mictlensis Deloya, Nt
mollis (Arrow), Or
monachus (Herbst), Na-Nt, [L]
monteithi Scholtz, Au
nanningensis Pittino, Pa
nigroscobinus Scholtz, Au
nocheles Scholtz, Nt
nodicollis (MacLeay), Au
nodosus (Robinson), Na-Nt
ovalis (Haaf), Au
parvicollis Scholtz, Au
pastillarius (Blanchard), Nt
pellosomus Scholtz, Au
perhispidus (Blackburn), Au
persuberosus (Vaurie), Nt, [L]
punctatus (Germar), Na-Nt, [L]
quadridens (Blackburn), Au
quadrinodosus (Haaf), Au
regalis (Haaf), Au
rotundulus (Haaf), Au
rubricans (Robinson), Na-Nt, [L]
salebrosus (MacLeay), Au
scabrosus (Beauvois), Na-Nt
scutellaris (Say), Na-Nt, [L]
semicostatus (MacLeay), Au
setosipennis (Blackburn), Au
spatulatus (Vaurie), Nt
squamosus (MacLeay), Au
stellatus (Harold), Au
strzeleckensis (Blackburn), Au
subcarinatus (MacLeay), Au
suberosus (Fabricius), Na-Nt-Au, [L]
tasmanicus (Blackburn), Au
tatei (Blackburn), Au
tesselatus LeConte, Na-Nt
texanus LeConte, Na-Nt, [L]

tomentosus (Robinson), Nt
trilobus (Haaf), Au
tytus (Robinson), Na-Nt
umbonatus LeConte, Na-Nt
undaraensis Strümpfer et al., Au
villosus (Haaf), Au
vladislavi Kawai, Au

Omorgus Er. (Afromorgus Scholtz)

acinus (Scholtz), Af
amitinus (Kolbe), Af
asperulatus (Harold), Af, [L]
baccatus (Gerstaecker), Af
bayoni (Pittino), Af
benadirensis (Pittino), Af
borgognoi (Marchand), Af
chinensis (Boheman), Pa-Or
consanguineus (Péringuey), Af
denticulatus (Olivier), Af
discedens (Haaf), Af
drumonti (Pittino), Af
elevatus (Harold), Af
endroedyi (Scholtz), Af
expansus (Arrow), Af
fenestrellus (Balthasar), Af
foveolatus (Boheman), Af
frater Pittino, Pa-Or
freyi (Haaf), Af, [L]
funestus (Lansberge), Af
gemmatus (Olivier), Pa-Af
genieri Scholtz, Af
granulatus (Herbst), Pa-Or
guttalis (Haaf), Pa-Af
haagi (Harold), Pa-Or
inclusus (Walker), Pa-Or
indicus (Harold), Or
inermis Pittino, Or
insignis (Haaf), Af
italicus (Reiche), Pa-Or
*lindemanna*e (Petrovitz), Af
lobicollis (Arrow), Or
lugubris (Haaf), Af
maindroni Pittino, Pa
melancholicus (Fähræus), Pa-Af-Md, [L]
mutabilis (Haaf), Af
niloticus (Harold), Pa-Af
obesus (Scholtz), Af
omacanthus (Harold), Pa-Or
pauliani (Haaf), Pa-Or
ponderosus (Péringuey), Af
principalis (Haaf), Af
procerus (Harold), Af-Pa-Or, [L]

radula (Erichson), Af, [L]
reiterorum (Král & Kubáň), Pa-Af (Socotra)
rimulosus (Haaf), Or
rusticus (Fähræus), Af
satorui Kawai, Af
senegalensis (Scholtz), Af
squalidus (Olivier), Af-Md, [L]
testudo (Arrow), Pa-Or
tuberosus (Klug), Af
unguicularis (Haaf), Af
varicosus (Erichson), Af
verrucosus (Reiche & Saulcy), Af-Pa
wittei (Haaf), Af
zumpti (Haaf), Af

Polynoncus Burmeister [all Nt]

aeger (Guérin)
aricensis (Gutiérrez), [L]
bifurcatus (Vaurie)
brasiliensis (Vaurie)
brevicollis (Eschscholtz)
bullatus (Curtis)
burmeisteri Pittino
chilensis (Harold)
diffluens (Vaurie)
ecuadorensis (Vaurie)
erugatus Scholtz
galapagoensis (Van Dyke)
gemmifer (Blanchard)
gemmingeri (Harold)
gibberosus Scholtz
gordoni (Steiner)
guttifer (Harold)
haafi (Vaurie)
hemisphaericus (Burmeister)
juglans (Ratcliffe)
longitarsis (Harold)
mirabilis Pittino
neuquen (Vaurie)
pampeanus (Burmeister)
parafurcatus Pittino
patagonicus (Blanchard)
patriciae Pittino
pedestris (Harold)
peruanus (Erichson)
pilularius (Germer)
sallei (Harold)
seymourensis (Mutchler), [L]
tenebrosus (Harold)

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