

## Nomenclatural changes in the family Ciidae (Coleoptera)

Josef JELÍNEK

Department of Entomology, National Museum, Kunratice 1, CZ-148 00 Praha 4, Czech Republic;  
e-mail: jj.nitidula@seznam.cz

**Abstract.** Type specimens of the species *Anobium micans* Fabricius, 1792, *A. nitidum* Fabricius, 1792, and *Kateretes castaneus* Herbst, 1793, were revised and lectotypes designated. The following new synonymies are established: *Cis micans* (Fabricius, 1792) = *Cis hispidus* (Paykull, 1798) syn. nov.; *Sulcacis nitidus* (Fabricius, 1792) comb. nov. = *Sulcacis affinis* (Gyllenhal, 1827) syn. nov. *Cis castaneus* (Herbst, 1793) comb. nov. is the first available name for *Cis nitidus* auct. (non Fabricius, 1792), *Cis fusciclavis* Nyholm, 1953, for *Cis castaneus* Mellié, 1849 (non Herbst, 1793), and *Cis submicans* Abeille de Perrin, 1874, for *Cis micans* auct. (non Fabricius, 1792).

Genus-group name *Eridaulus* Thomson is available with the date 1859 and with the type species *Cis comptus* Gyllenhal, 1827, by original designation. Valid name of *Eridaulus* sensu Thomson, 1863, is *Xestocis* Casey, 1898.

**Key words.** Coleoptera, Ciidae, taxonomy, nomenclature, new synonymies, new combinations, Palaearctic region

### Introduction

On preparing the catalogue of Palaearctic Ciidae, I came across several nomenclatural problems discussed in the present paper. Some of them result from the revision of type specimens of the Fabrician species *Anobium micans* Fabricius, 1792, and *Anobium nitidum* Fabricius, 1792, the existence of which in the Zoological Museum of the Humboldt University, Berlin (abbreviated as ZMHB), was only recently established by MÜLLER et al. (2001). This discovery made it possible to resolve the long-lasting problem of the identity of *Anobium nitidum* Fabricius, 1792, but, on the other hand, revealed the misinterpretation of *Cis micans* (Fabricius, 1792) by later authors, which leads to several unavoidable nomenclatural changes proposed in this paper. Particular cases are discussed and a review of all resulting nomenclatural changes is given. Dating of the paper by MELLIÉ (1849) is based on the statements by ORLEDGE & BOOTH (2006).

## Results

### 1. *Eridaulus* Thomson, 1859, and *Eridaulus* Thomson, 1863

Problem of the genus-group name *Eridaulus* was commented on by LOHSE (1964) and LAWRENCE (1965). LOHSE (1964) pointed out that *Cis comptus* Gyllenhal, 1827, was the type species of *Eridaulus* and that the name *Eridaulus* was later misinterpreted and used as the name for the group of species related to *Cis nitidus*, to which *Cis comptus* does not belong. On the contrary, LAWRENCE (1965: 280) summarized his opinion in the following two points: (i) The genus *Eridaulus* Thomson, 1863, originally included two species: *Anobium nitidum* Fabricius, 1792, and *Cis jacquemarti* Mellié, 1849. (ii) The only worker to designate a type for *Eridaulus* was ABEILLE DE PERRIN (1874), who selected *Cis comptus* Gyllenhal, 1827. This species, however, was not originally included in the genus, and is therefore unavailable as a type. In the same work, ABEILLE DE PERRIN (1874) designated *Cis nitidus* as the type species of *Entypus* Redtenbacher, 1847, making a similar error. Later, LAWRENCE (1971) designated *Anobium nitidum* Fabricius, 1792 [in fact *Kateretes castaneus* Herbst, 1793 misidentified as *Anobium nitidum* Fabricius, 1792, see below] as the type species of *Eridaulus* Thomson, 1863.

However, LAWRENCE (1965) overlooked the fact that Thomson himself designated the type species of his new genera in the first volume of his *Skandinaviens Coleoptera* (THOMSON 1859). Thus his new genus-group names are available by indication (ICZN 1999, Article 12.2.5) with the date 1859, even though the formal descriptions of relevant genera appeared later in subsequent volumes of the book. In the first volume THOMSON (1859: 91) designated *Cis comptus* Gyllenhal, 1827, as the type species of *Eridaulus* (original designation) and *Cis nitidus* as the type species of *Entypus* Redtenbacher, 1847 (subsequent designation). ABEILLE DE PERRIN (1874) and LOHSE (1964) thus only accepted the previous designations by THOMSON (1859), which remained neglected by most subsequent authors. Whereas the designation of *Cis nitidus* as the type species of *Entypus* is indeed erroneous because the species was not originally included in *Entypus* by REDTENBACHER (1847), *Cis comptus* is perfectly valid as the type species of *Eridaulus* Thomson, 1859, a junior subjective synonym of *Cis* Latreille, 1796 (type species *Dermestes boleti* Scopoli, 1763). *Eridaulus* Thomson, 1863, containing *Cis nitidus* and *Cis jacquemarti*, can be understood as a misinterpretation of *Eridaulus* Thomson, 1859, and the subsequent designation of *Cis nitidus* as its type species by LAWRENCE (1971) is invalid.

Species related to *Cis nitidus* auct. (non Fabricius, 1792) (see below) and corresponding to *Eridaulus* sensu THOMSON (1863) are morphologically distinct from other species of *Cis* Latreille, 1796 (type species *Dermestes boleti* Scopoli, 1763), and seem to represent a monophyletic group which was given a rank varying between genus and species-group by various authors. THOMSON (1863) described it as a distinct genus but it was more frequently classified as a subgenus of *Cis*, e.g. by KIESENWETTER (1898), SCHILSKY (1900), REITTER (1901) and ABDULLAH (1973). LAWRENCE (1965) argued in favour of its generic rank but later (LAWRENCE 1971) reduced it to the *Cis nitidus* species-group. This concept was accepted e.g. by LOHSE (1965), KAWANABE (1997) and ORLEDGE & BOOTH (2006). Nevertheless, LOHSE & LUCHT (1992) again proposed subgenus rank for it. However, when this group is treated as a genus-

group taxon, *Eridaulus* is not available as its name for reasons mentioned above. Thus the oldest available name for it is *Xestocis* Casey, 1898 (= *Eridaulus* sensu Thomson, 1863, non *Eridaulus* Thomson, 1859). The synonymy of *Eridaulus* sensu Thomson, 1863 and *Xestocis* was established by LAWRENCE (1965: 280-281).

The resulting taxonomic changes should be summarised as follows:

### ***Eridaulus* Thomson, 1859**

*Eridaulus* Thomson, 1859: 91 type species *Cis comptus* Gyllenhal, 1827 (original designation), junior subjective synonym of *Cis* Latreille, 1796.

### ***Xestocis* Casey, 1898**

*Xestocis* Casey, 1898: 85 type species *Xestocis levettei* Casey, 1898 (subsequent designation by LAWRENCE (1965)).

*Eridaulus*: THOMSON (1863) (non THOMSON, 1859)

## **2. Status and lectotype designations of *Anobium micans* Fabricius, 1792,**

### ***A. nitidum* Fabricius, 1792, and *Kateretes castaneus* Herbst, 1793**

#### ***Anobium micans* Fabricius 1792**

**Material examined.** TWO SYNTYPES (ZMHB), one of them with missing head, prothorax and left elytron, both with common handwritten label: 'Micans\* n./ Anob. micans F\* Pr \*Pz\*/ An. festivum m. Pz./ An. hispidum Pz.\*'. The completely preserved specimen is designated as lectotype and labelled: '53117 [white label, printed] // Hist.-Coll. (Coleoptera) / Nr.53117 (2 Ex.) / Cis micans Fabr. / Germania-Anglia / Zool. Mus. Berlin [white, printed] // SYNTYPUS / Anobium micans / Fabricius 1792 / labelled by MNHUB 2000 [red, printed] // LECTOTYPUS / Anobium micans Fabricius 1792 / des. J. Jelínek 2006 [red, printed and handwritten]'. The second specimens is labelled: 'Hist.-Coll. (Coleoptera) / Nr.53117 (2 Ex.) / Cis micans Fabr. / Germania - Anglia / Zool. Mus. Berlin [white, printed] // SYNTYPUS / Anobium micans / Fabricius 1792 / labelled by MNHUB 2000 [red, printed] // PARALECTOTYPUS / Anobium micans Fabricius 1792 / des. J. Jelínek 2006 [red, printed and handwritten]'.

Both specimens belong to the species currently known as *Cis hispidus* (Paykull, 1798). *Anobium micans* Fabricius, 1792, has priority and must be the valid name of the species. The latter name has been used for a different species of the genus *Cis* (*Cis micans* auct., non Fabricius, 1792) whose only available name seems to be *Cis submicans* Abeille de Perrin, 1874. This nominal taxon was described by ABELLE DE PERRIN (1874) as *Cis setiger* var. *submicans* and said to combine body shape and some other traits of *Cis setiger* Mellié, 1849, with the uniform pubescence of *Cis micans*. It was subsequently synonymized with *Cis micans* by REITTER (1901) and the synonymy was accepted by DALLA TORRE (1911) and ABDULLAH (1973). Unfortunately, I was not able to examine any type specimen of *Cis submicans*.

#### ***Anobium nitidum* Fabricius, 1792**

**Material examined.** TWO SYNTYPES (ZMHB). One, well preserved specimen (one antenna missing) is selected as lectotype, labelled: '53134 [white, printed] // Hist.-Coll. (Coleoptera) / Nr.53134 (1 Ex.) / Cis nitida Fabr. / German / Zool. Mus. Berlin [white, printed] // SYNTYPUS / Anobium nitidum / Fabricius 1792 / labelled by MNHUB 2000 [red, printed] // Nitida / n. / Anob. Nitidum / Frib\* Py. \* [white, handwritten] // LECTOTYPUS / Anobium nitidum Fabricius 1792 / des. Jelínek 2006 [red, printed and handwritten] // Sulcacis nitidus (F.) / det. J. Jelínek, 2006 [white, printed and handwritten]'.

FABRICIUS (1792) described his *Anobium nitidum* among those species of *Anobium* corre-

sponding to the current family Ciidae. However, HERBST (1793) with some hesitation applied this name to a species which differed from the original Fabrician description and which is now placed in the family Anobiidae. As demonstrated by MÜLLER et al. (2001), Herbst's text is rather a misinterpretation of the Fabrician taxon than a description of a new species, which would be in any case a junior primary homonym of *Anobium nitidum* Fabricius, 1792. Nevertheless, since that time the name '*nitidum*' has been applied in parallel to two different taxa, currently named as *Cis nitidus* (Ciidae) and *Hemicoelus nitidus* (Anobiidae). This duplicity was discovered already by PANZER (1793, Heft 10, no. 9), who wrote: 'Da Hr.Prof. Fabric.[ius] Hr.Garn.[ison] Pr.[iest] Herbst und ich dieses Kaeferchen aus einer Hand erhalten haben, und ich für die Richtigkeit der Fabriciuschen Bestimmung mir zu stellen getraue, so isst es wahrscheinlich, dass bey Hrn. Herbst eine Verwechslung mit einem andern Anobio vorgegangen seyn mag, welches er selbst vorläufig zuzugeben geneigt scheint' [= As professor Fabricius, garrison priest Herbst and me received this beetle from the same source, and I am prepared to trust the identification by Fabricius, it is probable that the confusion with another *Anobium* may have been initiated by Mr. Herbst, a situation that he himself has tentatively suggested might be the case]. It was repeatedly discussed by various authors (SCHILSKY 1900, MÜLLER et al. 2001) but no appropriate solution was adopted, perhaps because the location and identity of the true Fabrician types of Ciidae were not known. Most recent authors resolved the duplicity by attributing the name *Anobium nitidum* (*Hemicoelus nitidus*) to HERBST (1793) in spite of the alleged homonymy mentioned above. On the other hand, SILFVERBERG (1991), considering the specimen of '*Anobium nitidum*' in the Fabricius collection in Copenhagen as the type specimen (see below), proposed the replacement name *Cis alter* Silfverberg, 1991, for '*Cis nitidus* auctt. non Fabricius'. Unfortunately, this name does not meet the conditions of ICZN Article 13 and is therefore unavailable (nomen nudum) as realized by ORLEDGE & BOOTH (2006).

The specimen standing as '*Anobium nitidum*' in the Fabricius collection in the Zoological Museum of the University, Copenhagen, is a fragment of an anobiid identified as *Anobium* (A.) *punctatum* (DeGeer, 1774) by B. Buche, and apparently does not belong to the type series of *Anobium nitidum* (MARTIN in litt.; MÜLLER et al. 2001). I examined two conspecific syntypes of *Anobium nitidum* Fabricius, 1792, deposited in the Museum of Natural History of the Humboldt University, Berlin (MÜLLER et al. 2001) in October 2006. One of them lacks the head and prothorax, but the second, apart from being faded out, is well preserved, with seriate-punctate elytra bearing erect seriate setae, and with one completely preserved antenna of nine antennomeres. This specimen is clearly conspecific with *Sulcacis affinis* (Gyllenhal, 1827). In order to stabilize the nomenclature, this latter specimen was designated as the lectotype of *Anobium nitidum* Fabricius, 1792, and appropriately labelled (see above). The identity of *Anobium nitidum* F. with *Sulcacis affinis* is not in conflict with the brief original description of the former (black with testaceous legs).

The history of the nominal taxon *Anobium nitidum* Fabricius, 1792, was rather intricated from the beginning. Apart from the misinterpretation by HERBST (1793), the current concept of *Cis nitidus* goes back to PANZER (1793), whose figure of *Anobium nitidum* F. seems to represent *Cis nitidus* in the current sense. In fact, the name *Anobium nitidum* Fabricius, 1792, is the oldest available name for *Sulcacis affinis* (Gyllenhal, 1827), while the oldest available

name for *Cis nitidus* sensu PANZER (1793) is *Cis castaneus* (Herbst, 1793) (see below).

***Kateretes castaneus* Herbst, 1793**

**Material examined.** Two specimens, one of them fragmentary, labelled: ‘castanea / n. / *Kateretes castaneus* Ht. / *Anobium nitidum* Pk. Paykull [white, handwritten] // 53132 [white, printed] // ?SYNTYPUS / *Kateretes castaneus* / Herbst 1793 / labelled by MNHUB 2000 [red, printed]’. The second, well preserved specimen is designated as the lectotype and labelled: ‘Hist.-Coll. (Coleoptera) / Nr. 53132 (2 Ex.) / *Cis castaneus* Hrbst. / Germania? / Zool. Mus. Berlin [white, printed] // ?SYNTYPUS / *Kateretes castaneus* / Herbst 1793 / labelled by MNHUB 2000 [red, printed] // LECTOTYPUS / *Kateretes / castaneus* Herbst, 1793, / des. J.Jelínek, 2006 [red, printed and handwritten] // *Cis / castaneus* (Herbst, 1793) det. Jelínek, 2006 [white, printed and handwritten]’.

The latter, well preserved specimen clearly belongs to the species currently identified as *Cis nitidus* (sensu Panzer, 1793). *Kateretes castaneus* Herbst, 1793, was not mentioned in the basic works and catalogues of Ciidae (MELLIÉ 1849, DALLA TORRE 1911, ABDULLAH 1973) except for JAKOBSON (1905: 953), who included ‘*castaneus* (Herbst)’ as a synonym of *Cis nitidus*. It is the oldest available name for *Cis nitidus* auct. (non Fabricius, 1792) but at the same time the senior secondary homonym of *Cis castaneus* Mellié, 1849, which must be therefore replaced with its junior synonym *Cis fusciclavis* Nyholm, 1953.

The resulting nomenclatural changes can be summarized as follows:

***Cis castaneus* (Herbst, 1793) comb. nov.**

*Kateretes castaneus* Herbst, 1793: 17

*Cis nitidus*: PANZER (1793): Heft 10, no.9 (non Fabricius, 1792)

***Cis fusciclavis* Nyholm, 1953 nom. rediv.**

*Cis castaneus* Mellié, 1849: 351 (non *Kateretes castaneus* Herbst, 1793)

*Cis fusciclavis* Nyholm, 1953: 190

***Cis micans* (Fabricius, 1792)**

*Anobium micans* Fabricius, 1792: 238

*Anobium hispidum* Paykull, 1798: 310, **syn. nov.**

*Ptinus ruficornis* Marsham, 1802: 87

*Cis nitidicollis* Abeille de Perrin, 1874: 32

*Cis albohispidulus* Reitter, 1901: 50

*Cis savilli* Donisthorpe, 1936: 220

***Cis submicans* Abeille de Perrin, 1874 nom. rediv.**

*Cis submicans* Abeille de Perrin, 1874: 28

*Cis micans*: auctt. (non Fabricius, 1792)

***Sulcacis nitidus* (Fabricius, 1792) comb. nov.**

*Anobium nitidum* Fabricius, 1792: 238

*Cis affinis* Gyllenhal, 1827: 628, **syn. nov.**

## Acknowledgements

It is my pleasant duty to express my thanks to all those who enabled me with their help to complete this paper. I am obliged to J. Frisch, B. Jaeger and M. Uhlig (Zoologisches

Museum der Humboldtuniversität, Berlin) who enabled me to study the Fabrician types in their charge, to H. Dathe and G. Mierschel (Deutsches Entomologisches Institut, Müncheberg) for access to the library of the institute, as well as to O. Martin (Zoological Museum of the University, Copenhagen) and O. Mehl (Struer, Denmark) for information on the specimen of '*Anobium nitidum*' in the Fabrician collection in Copenhagen. Last but not least, I thank to I. Löbl (Genève) and A. Smetana (Ottawa) for copies of some important papers, and G. M. Orledge (University of Bath) and P. Štys (Charles University, Prague) for their comments on the manuscript.

## References

- ABDULLAH M. 1973: The systematic position of Cisidae (Heteromera) including a catalogue of the world and comments on central European families of Cucujoidea (Coleoptera). *Zoologische Beiträge (N. F.)* **19**: 189-246.
- ABELLE DE PERRIN E. 1874: *Essai monographique sur les Cisides européens et circumméditerranéens*. E. Camoin, Marseille, [1] + 99 + [1] pp.
- CASEY T. L. 1898: Studies in the Ptinidae, Cioidae and Sphindidae of America. *Journal of the New York Entomological Society* **6**: 61-93.
- DALLA TORRE K. W. VON 1911: Cioidae. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum Catalogus, Pars 30*. W. Junk, Berlin, 32 pp.
- DONISTHORPE H. 1936: *Cis savilli* n. sp., a species of Coleoptera new to science. *Entomologist's Monthly Magazine* **72**: 220.
- FABRICIUS J. C. 1792: *Entomologia systematica emendata et aucta secundum classes, ordines, genera, species adjectis synonymis, locis, observationibus, descriptionibus. Tom I., Pars I*. Christ. Gottl. Proft, Hafniae, xx + 330 pp.
- GYLLENHAL L. 1827: *Insecta Suecica descripta. Classis I., Coleoptera sive Eleutherata, Tomus I., pars IV. cum appendice ad partes priores*. Frederic Fleischer, Lipsiae, x + 761 pp.
- HERBST J. F. W. 1793: *Jablonsky's Natursystem aller bekannten in- und auslaendischen Insekten, als eine Fortsetzung der von Buffonschen Naturgeschichte. Der Kaefer fuenfter Theil. Mit 16 illuminierten Kupferstabilen*. Joachim Pauli, Berlin, xvi + 392 pp + 16 pls.
- ICZN 1999: *International Code of Zoological Nomenclature. Fourth edition*. International Trust for Zoological Nomenclature, London, 306 pp.
- JAKOBSON G. G. 1905: *Zhuki Rossii i zapadnoy Evropy. [Beetles of Russia and western Europe]*. A. F. Dervien, S.-Peterburg, [2] + 1024 pp (in Russian).
- KAWANABE M. 1997: The Japanese species related to the group of *Cis nitidus* (Coleoptera, Ciidae). *Elytra* (Tokyo) **25**: 311-331.
- KIESENWETTER H. VON 1898: Cioidae. Pp. 169-197, 812. In: KIESENWETTER H. VON & SEIDLITZ G. (eds.): *Naturgeschichte der Insecten Deutschlands begonnen von Dr. W. F. Erichson, fortgesetzt von Prof. Dr. H. Schaum, Dr. G. Kraatz, H. v. Kiesenwetter, Julius Weise, Edm. Reitter und Dr. G. Seidlitz. Erste Abtheilung Coleoptera. Fünfter Band. Erste Hälfte*. Nicolaische Verlags-Buchhandlung, Berlin, xxvi + 877 pp.
- LAWRENCE J. F. 1965: Comments on some recent changes in the classification of the Ciidae (Coleoptera). *Bulletin of the Museum of Comparative Zoology* **133**: 273-293.
- LAWRENCE J. F. 1971: Revision of the North American Ciidae (Coleoptera). *Bulletin of the Museum of Comparative Zoology* **142**: 419-522.
- LOHSE G. A. 1964: Die in Mitteleuropa vertretenen Gattungen der Cisidae. (1. Beitrag zur Kenntnis der mitteleuropäischen Cisidae). *Entomologische Blätter für Biologie und Systematik der Käfer* **60**: 116-122.
- LOHSE G. A. 1965: Über einige umstrittene Cis-Arten. (2. Beitrag zur Kenntnis europäischer Cisidae). *Entomologische Blätter für Biologie und Systematik der Käfer* **60** (1964): 174-181.
- LOHSE G. A. & LUCHT W. H. 1992: Cisidae. Pp. 171-173, 324-325. In: LOHSE G. A. & LUCHT W. H. (eds.): *Die Käfer Mitteleuropas. 2. Supplementband mit Katalogteil*. Goecke & Evers, Krefeld, 375 pp.

- MARSHAM T. 1802: *Coleoptera Britannica, sistens Insecta Britanniae Indigena, secundum Methodum Linnaeanum Disposita. Tomus I. Coleoptera*. Wilks et Taylor, London, xxxi + 547 + [1] pp.
- MELLIÉ J. 1849: Monographie de l'ancien genre *Cis* des auteurs. *Annales de la Société Entomologique de France* (2) **6** (1848): 205-274, 313-396, pls 9-12.
- MÜLLER C., JAEGER B., KOMPANTSEV A. V. & UHLIG M. 2001: Type and species catalogue of the minute tree-fungus beetles of the Museum für Naturkunde in Berlin, with general information on the Coleoptera collection, its curation and "Historical Collection" (Coleoptera, Polyphaga, Ciidae and Pterogeniidae). *Mitteilungen aus dem Museum für Naturkunde in Berlin, Zoologische Reihe* **77**: 303-323.
- NYHOLM T. 1953: Bemerkungen über einige schwedische *Cis*-Arten (Col., Ciidae). *Entomologisk Tidskrift* **74**: 187-196.
- ORLEDGE G. M. & BOOTH R. G. 2006: An annotated checklist of British and Irish Ciidae with revisionary notes. *Coleopterist* **15**: 1-16.
- PANZER G. W. F. 1793: *Faunae insectorum germanicae initia oder Deutschlands Insecten. Erster Jahrgang*. Felsseckersche Buchhandlung, Nürnberg, Heft i-xii + 16 pp.
- PAYKULL G. 1798: *Fauna Svecica. Insecta. Tomus I*. Joh. F. Edman, Upsaliae, [8] + 358 pp.
- REDTENBACHER L. 1847: *Fauna Austriaca. Die Käfer. Nach der analytischen Methode bearbeitet*. Carl Gerold, Wien, xxvii + 883 pp + 2 pls.
- REITTER E. 1901: *Byrrhidae (Anobiidae) und Cioidae. Bestimmungstabelle der europäischen Coleopteren. XLVII. Heft 47*. Edm. Reitter, Brünn, 64 pp. [Reprint from REITTER E. 1902: Analytische Uebersicht der palaearktischen Gattungen und Arten der Coleopteren-Familien: Byrrhidae (Anobiidae) und Cioidae. *Verhandlungen des Naturforschenden Vereines in Brünn* **40** (1901) (Abhandlungen): 3-64].
- SCHILSKY J. 1900: *Die Käfer Europa's. Nach der Natur beschrieben von Dr. H. C. Küster und Dr. G. Kraatz. Fortgesetzt von J. Schilsky. Siebunddreissigstes Heft*. Verlag von Bauer und Raspe (Emil Küster), Nürnberg, i-iv + 1-100 + A-W pp.
- SILFVERBERG H. 1991: Nomenclatorial corrections in North European Coleoptera. *Entomologica Fennica* **2**: 21-22.
- THOMSON C. G. 1859: *Skandinaviens Coleoptera synoptisk bearbetade. Tom I. [Synoptic elaboration of Scandinavian Coleoptera. Vol. I]*. Lundbergska Boktryckeriet, Lund, 290 pp (in Swedish and Latin).
- THOMSON C. G. 1863: *Skandinaviens Coleoptera synoptisk bearbetade. Tom V. [Synoptic elaboration of Scandinavian Coleoptera. Vol. V]*. Lundbergska Boktryckeriet, Lund, 340 pp (in Swedish and Latin).

