

# **AUTHORSHIP AND DATE OF THE GENUS-GROUP NAMES *RHIZOTROGUS* AND *AMPHIMALLON* (COLEOPTERA: MELOLONTHIDAE)**

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## **ABSTRACT**

**Authorship and date of the genus-group names *Rhizotrogus* and *Amphimallon* (Coleoptera: Melolonthidae).**

Authorship and date of the genus-group names *Rhizotrogus* and *Amphimallon* have not yet obtained the consensus of recent authors. They are currently most often credited to Berthold (1827), but sometimes to «Lepeletier & Serville, 1825». Arguments are presented demonstrating that, according to the rules of the International Code of Zoological Nomenclature, Latreille (1825) ought to be credited as the author.

**Key words:** Coleoptera, Melolonthidae, *Rhizotrogus*, nomenclature, *Amphimallon*, author, date.

## **INTRODUCTION**

Authorship of the genus-group names *Rhizotrogus* and *Amphimallon* is currently most often credited to BERTHOLD, 1827. In some recent works authorship is still credited to «LEPELETIER & SERVILLE, 1825», perhaps ensuing LANDIN's 1957 note. However, as pointed out already in 1911 by BEDEL, the second installment of volume 10 of the Encyclopédie Méthodique, containing the chapter on «Scarabé» (pp. 346-382), where LEPELETIER DE SAINT-FARCEAU and AUDINET-SERVILLE describe *Rhizotrogus* and *Amphimallon*, was published only in 1828.

With the 3<sup>rd</sup> edition (1985) of the International Code of Zoological Nomenclature, the requirements with respect to the language in which scientific names must be published to become available were made less stringent. That change has a bearing on the authorship of the genus-group names *Rhizotrogus* and *Amphimallon*, fact which appears to have been overlooked.

In the text that follows «Code» means the International Code of Zoological Nomenclature.

## **THE QUESTION OF AUTHORSHIP**

LANDIN (1957) dismissed LATREILLE (1825) as the author of these names, *Amphimallon* explicitly, *Rhizotrogus* implicitly, on grounds that are not supported

by Article 12 of the current edition of the Code (1999). However, it has to be noted that until the 3<sup>rd</sup> edition of the Code (1985), these names must have been, nonetheless, deemed unavailable from LATREILLE's 1825 work, because they were published in the gallicized form, «Rhizotrogue» and «Amphimalle». In fact, Article 11b, in the 2<sup>nd</sup> edition of the Code (1964), did still stipulate that: [The name must be either Latin or latinized, or, if an arbitrary combination of letters, must be so constructed that it can be treated as a Latin word]. It is only in the 3<sup>rd</sup> edition of the Code (1985) that this rule is relaxed to admit, as valid names, words other than Latin or latinized, provided that they are spelt in the letters of the Latin alphabet (Article 11b).

LATREILLE used to employ interchangeably the gallicized and the latinized spellings for genus-group names. His work of 1810 is paradigmatic in this respect. In the main part, LATREILLE gives for each genus the French or gallicized name followed by the Latin or latinized name, whereas in the «Table des genres» the names of genera are all in French or the gallicized form. Another example worth mentioning in this respect is that of *Sisyphus* which was first published in French, «Sisyphe» (LATREILLE, 1807). It was only in 1810 that LATREILLE for the first time employed the latinized name *Sisyphus*. For the case in point here, according to BEDEL (1911), in 1829 LATREILLE did already employ the latinized name *Rhizotrogus*. BEDEL is silent about *Amphimalle*, which he considered a subgenus of *Rhizotrogus*, and I did not have access to LATREILLE's 1829 work but, most probably LATREILLE did also use there the latinized name *Amphimallon*.

With regard to the availability of these names from LATREILLE's 1825 work, it is worth noting that of the 61 genus-group names included by LATREILLE in his «Tribu Scarabéides», all but two had already been coined either by LATREILLE himself or by other authors. The two exceptions are «Rhizotrogue» and «Amphimalle» (not «Amfimalle») as stated by LANDIN (1957) and MONTREUIL (1997). For each of these two genus-group names, and only for them, LATREILLE (1825) provides the name of a species. He writes (page 371):

[0. Antennes de dix articles.

Les g. Rhizotrogue (*melontha aestiva*), Aréode.

00. Antennes de neuf articles.

Les g. Amphimalle (*melolontha solstitialis*), Euchlore (*anomala*, Dej.)]

Clearly, «melontha» in «melontha aestiva» is a lapsus for «melolontha».

Article 11.2 of the Code (1999) stipulates that [A scientific name must, when first published, have been spelt only in the 26 letters of the Latin alphabet...] which «Rhizotrogue» and «Amphimalle» obviously are.

Article 11.3 further stipulates that [Providing it meets the requirements of this Chapter, a name may be a word in or derived from Latin, Greek or any other language (even one with no alphabet), or be formed from such a word. It may be an arbitrary combination of letters providing this is formed to be used as a word.]. Evidently, LATREILLE's (1825) «Rhizotrogue» and «Amphimalle» conform also to this requirement.

Article 12.1 requires that [To be available, every new name published before 1931 must satisfy the provisions of Article 11 and must be accompanied by a description or a definition of the taxon that it denotes, or by an indication.].

Article 12.1.5 defines as one of the possible instances of an indication [in the case of a new genus-group name, the use of one or more available specific names in

combination with it, or clearly included under it, or clearly referred to it by bibliographic reference, provided that the specific name or names can be unambiguously assigned to a nominal species-group taxon or taxa.]. The specific names rendered by LATREILLE (1825) can be unambiguously assigned, «*melolontha aestiva*» to *Melolontha aestiva* Olivier, 1789, and «*melolontha solstitialis*» to *Scarabaeus solstitialis* Linnaeus, 1758, which FABRICIUS (1775) had already transferred to the genus *Melolontha* Fabricius, 1775. In these circumstances, LATREILLE's names comply also with the requirements of Articles 12.1 and 12.1.5 of the Code. Hence, LATREILLE (1825) ought to be credited with their authorship.

It should be noted that any argument to the effect that the specific names provided by LATREILLE (1825) cannot be unambiguously assigned, would also deny availability of the genus-group names *Rhizotrogus* and *Amphimallon* from BERTHOLD's 1827 work. In fact BERTHOLD (1827) presents nothing else but the translation to German of LATREILLE's 1825 work, with the sole differences that he latinizes the genus-group names and emends «*melontha*» in «*melontha aestiva*» to «*Melolontha*». BERTHOLD (1827) writes (page 362):

[0. Die Antennen bestehen aus zehn Gliedern.  
Die Geschl. *Rhizotrogus* (*Melolontha aestiva*), *Areoda*.  
00. Die Antennen bestehen aus neun Gliedern.  
Die Geschl. *Amphimallon* (*Melolontha solstitialis*), *Euchlora* (*Anomala*, *Dej.*.)]

In LATREILLE's 1825 work all genus-group names are in French or gallicized. In BERTHOLD's 1827 German translation all genus-group names are in Latin or latinized. Thus, according to Article 33.2.1 of the Code [... or when two or more names in the same work are treated in a similar way.] those are demonstrably intentional changes in the original spellings. According to Articles 33.2.3 and 33.2.3.1 of the Code, unless in prevailing usage *Rhizotrogus* Berthold, 1827 and *Amphimallon* Berthold, 1827 are deemed unjustified emendations.

Next to BERTHOLD (1827), LEPELETIER DE SAINT-FARGEAU & AUDINET-SERVILLE (1828) did also latinize LATREILLE's names to *Rhizotrogus* and *Amphimallon*. They credit LATREILLE with their authorship, and they are the first who present a description for the two genera. They entitle the respective sections as follows:

[RHIZOTROGUE, *Rhizotrogus*. LAT. *Melolontha*. OLIV.] (page 367),  
and

[AMPHIMALLE, *Amphimallon*. LAT. *Melolontha*. FAB. OLIV. PAYK.  
HERBST. *Scarabaeus*. LINN. DE GEER. GEOFF.] (page 368).

Like BERTHOLD's, LEPELETIER DE SAINT-FARGEAU & AUDINET-SERVILLE's names are, according to Article 33.2.1, demonstrably intentional changes in the original spellings, and according to Articles 33.2.3 and 33.2.3.1 of the Code, unless in prevailing usage they are deemed unjustified emendations.

Besides *Amphimallon*, three alternative spellings were proposed for *Amphimalle*: *Amphimalla* Stephens, 1830, *Amphimallus* Mulsant, 1842, and *Amphimallum* Agassiz, 1846. As pointed out by MONTREUIL (1997), although the spelling

*Amphimallus* enjoyed some popularity in the second half of the 19<sup>th</sup> century, the spelling *Amphimallon* is currently in prevailing usage.

STEPHENS (1830) writes (page 221): [GENUS CCV. C AMPHIMALLA, Latreille.]. This is not a demonstrably intentional change in the original spelling, in the sense of the Code. As it is not in prevailing usage, *Amphimalla* is deemed an incorrect subsequent spelling. As such, it is not an available name, does not enter into homonymy and cannot be used as a substitute name (Article 33.3.1).

MULSANT (1842) writes (page 440): [Genre *Amphimallus*, AMPHIMALLE; LATREILLE.]. AGASSIZ (1846) thought that «Amphimallum» would be a more appropriate spelling. He writes (page 18): [°Amphimallon *Latr.* Col. 1825 (*Ser.* A - llum)]. According to Article 33.2.1, those are both demonstrably intentional changes in the original spelling. As neither is in prevailing usage, *Amphimallus* and *Amphimallum* are deemed unjustified emendations and as such they are available, have their own authors and dates, and are junior objective synonyms of the name in its original spelling (Article 33.2.2).

No alternative spelling, other than *Rhizotrogus*, was ever proposed for *Rhizotroque*.

## DISCUSSION AND CONCLUSION

According to the rules of the Code, authorship of the names *Rhizotroque* and *Amphimalle* belongs unquestionably to LATREILLE (1825).

The spellings *Rhizotrogus* and *Amphimallon* are currently in prevailing usage. They are credited to BERTHOLD (1827) in the majority of recent works (last 20 years), and in some to «LEPELETIER & SERVILE, 1825» (in fact 1828).

Article 33.2.3.1 of the Code stipulates that [when an unjustified emendation is in prevailing usage and is attributed to the original author and date it is deemed to be a justified emendation.]. The slight problem here is that, although they are currently in prevailing usage, their authorship is not ascribed to LATREILLE (1825) but most often to BERTHOLD (1827), more rarely to «LEPELETIER & SERVILE, 1825». Therefore, application of Article 33.2.3.1 is not straightforward.

To revert back to the original spellings *Rhizotroque* and *Amphimalle* would not serve well one of the main objects of the Code, i.e., nomenclatural stability. Consequently, notwithstanding that Article 33.2.3.1 is not entirely satisfied, I suggest that the following should be used as the valid names, author and date, and their respective type species:

***Rhizotrogus*** Latreille, 1825: 371. Type species: *Melolontha aestiva* Olivier, 1789, by monotypy.

***Amphimallon*** Latreille, 1825: 371. Type species: *Melolontha solstitialis* (Linnaeus, 1758) (described as *Sacarabaeus solstitialis*), by monotypy.

Furthermore, the names *Amphimallus* Mulsant, 1842 and *Amphimallum* Agassiz, 1846 ought to be considered junior objective synonyms of *Amphimallon* Latreille, 1825.

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