

Nomenclatural notes on *Rhinothrombium* Berlese, 1910 (Acari: Tanaupodidae)

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The online version of NOMENCLATOR ZOOLOGICUS¹ is a great tool for zoological taxonomists. Because it is online for open access, its data can be easily imported or copied into other online databases and resources. Uncritical use of such information can cause problems. Here I discuss the case of two entries in the NOMENCLATOR ZOOLOGICUS: *Rhynothrombium* Berlese, 1910 and *Rhinothrombium* Berlese, 1912. The older name *Rhynothrombium* has not been used in acarological literature since Berlese (1912), but it has recently surfaced in online databases such as SysTax², WikiSpecies³ and J. Hallan's catalog of Acari⁴. In the latter, it was even suggested that *Rhinothrombium* is a misspelling of *Rhynothrombium* introduced by the *Zoological Record*. The purpose of this note is to clarify this issue.

The history

Berlese (1910: 353) established *Eothrombium* with *E. echinatum* Berlese, 1910 as the type species. In the same paper, Berlese (1910: 354) erected *Rhynothrombium* as a subgenus of *Eothrombium*; the type species by original designation is *E. (R.) nemoricolum* Berlese, but no etymology was given for the new subgeneric name, nor were any corrigenda included in the same work to indicate that this is an incorrect spelling. In his monograph on the Trombidiidae *s.l.* two years later, Berlese (1912: 43) emended the subgeneric name to *Rhinothrombium*; this time he gave the etymology immediately below the name—he thus corrected the prefix *Rhyno-* to *Rhino-* to mean “*nasus*”. His emendation, even though two years after his initial publication, has been widely accepted (e.g. Hull 1918; André 1925; Vitzthum 1929, 1943; Thor 1929, 1935; Womersley 1937; Thor & Willmann 1947; Baker & Wharton 1952; Feider 1955, 1959, 1979; Robaux 1966, 1967, 1973, 1974; Daniel 1971; Vercammen-Grandjean 1973; Krantz 1978; Kethley 1982; Evans 1992; Zhang 1993; Krantz & Walter 2009). The only exception is the checklist of mite generic names by Redford (1950).

Is Berlese (1912)'s emendation justified?

Rhynothrombium Berlese, 1910, *Rhinothrombium* Berlese, 1912 or *Rhinothrombium* Berlese, 1910—which name should we use? The answer depends on if Berlese (1912)'s emendation is justified or not. If the emendation is justified, then we should use *Rhinothrombium* Berlese, 1910.

1. <http://uio.mbl.edu/NomenclatorZoologicus/> last accessed 9 March 2009; veSrion o.86.
2. <http://www.biologie.uni-ulm.de/systax/> last accessed 9 March 2009.
3. <http://species.wikimedia.org> last accessed 9 March 2009.
4. <http://insects.tamu.edu/research/collection/hallan/Acari/Family/Tanaupodidae.txt> last accessed 9 March 2009.

If the emendation is unjustified, then we should use *Rhinothrombium* Berlese, 1912 (ICNZ 1999, article 33.2.3). In any case, *Rhynothrombium* Berlese, 1910 should not be used.

When the original name is incorrectly spelt, if it can be demonstrated in the same work itself that it is an inadvertent error, then it must be corrected as required in Article 32.5 (ICNZ 1999). However, the name was not corrected in Berlese (1910), but in Berlese (1912). Thus, we follow the following article of the Code (ICZN 1999):

“33.2.3. Any other emendation is an "unjustified emendation"; the name thus emended is available and it has its own author and date and is a junior objective synonym of the name in its original spelling; it enters into homonymy and can be used as a substitute name, but
33.2.3.1. 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.”

Prevailing usage is defined in the Glossary of ICZN (1999: 121): “that usage of the name which is adopted by at least a substantial majority of the most recent authors concerned with the relevant taxon, irrespective of how long ago their work was published”. The above section on the history of names clearly showed that all but one of the papers by acarologists subsequent to Berlese (1912) accepted *Rhinothrombium*. *Rhynothrombium* appeared only in a few online databases authored/edited by non-acarologists. These electronic databases are also not valid publications in the sense of the International Code of Zoological Nomenclature. Therefore, the emendation by Berlese (1912), although unjustified (22.2.3), is deemed to be justified because it has been in prevailing usage since 1912 (33.2.3.1). Thus, the correct name is *Rhinothrombium* Berlese, 1910.

Discussion on the taxonomic status

It has been suggested by Robaux (1967) that *Rhinothrombium* is a junior synonym of *Eothrombium*. He based his remarks on his observation that two specimens of *Eothrombium echinatum* of Berlese's ACAROTECA in Marc André's collection had a nasus as in *Rhinothrombium*. However, my study of a specimen from Berlese's ACAROTECA now preserved in Oudemans' collection at Nationaal Natuurhistorisch Museum in Leiden (The Netherlands) showed the absence of a nasus in agreement with Berlese's original description. Either Robaux (1967) failed to see the nasus in specimens of André's collection or there were two species involved in these two collections. However, clarifying this is beyond the scope of this nomenclatural note. The taxonomic status of *Rhinothrombium* was discussed in detail by Zhang (1993).

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References

- André, M. (1925) Description d'un Acarien terrestre libre de la famille des Thrombidiidae peu connu et nouveau pour la faune Française. *Bulletin de la Société zoologique de France*, 50, 256–262.
Baker, E.W. & Wharton, G.W. (1952) *An Introduction to Acarology*. Macmillan, New York, 465 pp.

- Berlese, A. (1910) Brevi diagnosi di generi e specie nuovi di Acari. *Redia*, 6, 346–388.
- Berlese, A. (1912) Trombidiidae. Prospetto dei generi e delle specie finora noti. *Redia*, 8, 1–291.
- Daniel, M. (1971) Sametky - Prostigmata. In Daniel, M. & Černý, V. (eds) Klíč Zvířeny CSSR, vol. 4. Československá Akademie Věd, Praha, pp. 369–422.
- Evans, G.O. (1992) *Principles of Acarology*. CAB International. Wallingford, UK. 563 pp.
- Feider, Z. (1955) Arachnida, Acarina Trombidoidea. *Fauna RPR*, 5, 1–187.
- Feider, Z. (1959) New proposals on the classification of mites from the group Trombidia. *Zoologicheskii Zhurnal*, 38, 537–549.
- Feider, Z. (1979) Principes et méthodes dans la taxonomie du group des Trombidia. In: Piffel, E. (Ed.), *Proceedings of the Fourth International Congress of Acarology*. Akademiai Kiado, Budapest, pp. 417–423.
- Hull, J.E. (1918) Terrestrial Acari of the Tyne province. *Transaction of the Natural History Society of Northumbria*, 75, 13–88.
- International Commission on Zoological Nomenclature (ICZN) (1999) *International Code of Zoological Nomenclature, Fourth edition*. International Trust for Zoological Nomenclature, London, xxix + 306 pp.
- Krantz, G.W. (1978) *A Manual of Acarology*. 2nd Edition, Corvallis, Oregon. Oregon State University Book Store, 508 pp.
- Krantz, G.W. & Walter, D.E. (2009) *A Manual of Acarology*. 3rd Edition, Lubbock, Texas Tech University Press, 807 pp.
- Redford, C.D. (1950) *Systematic check list of mite genera and type species*. Secrétariat général de l'U.I.S.B., Paris, 232 pp.
- Robaux, P. (1966) Sur quelques Thrombidiidae rares ou nouveaux pour la faune de France (Acarina-Thrombidiidae). *Acarologia*, 8, 611–630.
- Robaux, P. (1967) Révision des Tanaupodinae et Lasseniinae (Acarina - Thrombidiidae). Note préliminaire. *Acarologia*, 9, 124–126.
- Robaux, P. (1973) Importance de l'étude des caractères morphologiques, de la biology et de l'écologie a toutes les stages, pour établir la phylogénèse des Acariens voisins des Thrombidioids. *Acarologia*, 15, 121–128.
- Robaux, P. (1974) Recherches sur le développement et la biologie des acariens 'Thrombidiidae'. *Mémoires du Museum National d'Histoire Naturelle (Serie A Zoologie)*, 85, 1–186.
- Thor, S. (1929) Über die Phylogenie und Systematik der Acarina, mit Beiträgen zur ersten Entwicklungsgeschichte einzelner Gruppen. *Nyt Magazin for Naturvidenskaberne Oslo*, 67, 145–210.
- Thor, S. (1935) Übersicht und Einteilung der Familie Trombidiidae W.E. Leach 1814 in unterfamilien. *Zoologischer Anzeiger*. 109, 107–112.
- Thor, S. & Willmann, C. (1947) Acarina. Trombidiidae. *Das Tierreich*, 71b, 187–541.
- Vercammen-Grandjean, P.H. (1973) Sur les statuts de la famille des Trombidiidae Leach, 1815 (Acarina: Prostigmata). *Acarologia*, 15(1), 102–114.
- Vitzthum, H.G. (1929) Acari. *Die Tierwelt Mitteleurop*, 3(7), 1–112.
- Vitzthum, H.G. (1943) *Acarina*. Akademische Verlagsgesellschaft, Leipzig, xi, 1011 pp.
- Womersley, H. (1937) A revision of Australian Trombidiidae. *Records of South Australian Museum*, 6, 75–100.
- Zhang, Z.-Q. (1993) The genus *Rhinothrombium* (Acari: Tanaupodidae) from China. *Oriental Insects*, 27, 373–377.

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