Article

Circumscriptional names of higher taxa in Hexapoda

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Abstract

Testing non-typified names by applying rules of circumscriptional nomenclature shows that in most cases the traditional usage can be supported. However, the original circumscription of several widely used non-typified names does not fit the taxa they are applied to. Here I discuss names historically applied to the taxa whose correct circumscriptional names should be Hexapoda, Amyocerata, Triplura, Dermatoptera, Saltatoria, Spectra, Pandictyoptera, Palaeoblattariae, Neoblattariae, Parametabola, Parasita, Arthroidignatha, Plantisuga, Metabola, Birostrata, Rhaphidioptera, Meganeuroptera, Eleuterata, Panzygothoraca, Lepidoptera and Glossolepidoptera. The new names Holopandictyoptera **taxon nov.**, Cryptovipositoria **taxon nov.**, Oothecophora **taxon nov.**, Enteracantha **taxon nov.**, and Pleuroptera **taxon nov.** are proposed for recognized but yet unnamed taxa.

Key words: dual nomenclature system, circumscriptional nomenclature, circumscriptional names, typified names, Hexapoda, Insecta, new taxa, Holopandictyoptera, Cryptovipositoria, Oothecophora, Enteracantha, Pleuroptera

General nomenclatural principles

Typified vs. circumscriptional names

Since pre-Linnaean times, two alternative approaches to naming taxa have been in general use—the type-based and the circumscription-based. The two are mutually exclusive, and a name can be used according to one of them only. A classification may either stick to one of these approaches, or use both concurrently by applying different approaches either to names of different taxa or to different names of the same taxon. Numerous examples of how this worked on various arthropod classifications since 1758 are given in my online catalogue *Nomina Circumscribentia Insectorum* (Kluge 2004–2010), where typified (i.e., type-based) and circumscriptional (i.e., circumscription-based) names are marked "T" or "C" in colored squares, respectively. What makes the two alternative approaches coexist is the general language-related challenge: to communicate meaning unequivocally, a name must be uniquely associated with an object, but the number of objects to be named is unlimited, whereas the human memory can only handle a limited number. Circumscriptional nomenclature gives each taxon a unique name but cannot provide enough names to cover all the taxa. Typified nomenclature is capable to name any number of taxa, but the names are not unique: depending on classification, the same typified name can be applied to different taxa; this allows to minimize the number of names. The situation may dictate what kind of name (circumscriptional or typified) to chose for a given taxon. Low-rank taxa (numerous and often known to a small number of specialists) usually get typified names, whereas high-rank taxa (which are fewer and often widely known) get circumscriptional names. Each approach has its advantages, and attempts to impose a single type of nomenclature have been unsuccessful.

A solution I suggested is my versatile *Dual Nomenclature System (Dual-Nom)* that takes advantage of both type-based and circumscription-based names (Kluge 1999*a–b*, 2000, 2004*a*, 2009*a*). The basic principle of Dual-Nom is applying two sets of rules to different sets of names, with no name subject to both. Dual-Nom includes *circumscriptional nomenclature (Circ-Nom)* and *hierarchical nomenclature (Hier-Nom)*, treating any non-typified name as circumscriptional (see "The circumscriptional nomenclature" below) and any typified name as hierarchical (see "The type-based hierarchical nomenclature" below). The typified names can also be treated as rank-based; thus, Dual-Nom is compatible with the *International Code of Zoological Nomenclature* (the *Code*) and the Rohdendorf-Rasnitsyn nomenclature for higher taxa (see "Type-based rank-based nomenclatures" below). Under Dual-Nom, a taxon may have two valid names: a typified hierarchical name (available for every taxon) and a non-typified circumscriptional name.

Hemihomonyms (term coined by Starobogatov 1991) are identical names given to obviously different taxa under different nomenclatures—unlike true homonyms, i.e., identical names applied to different taxa within a single nomenclatural system. Thus, a given nomenclature can get rid of homonyms by applying its