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Order Blattodea*

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Abstract

The Blattodea comprise the termites (epifamily Termitoidae only) and the cockroaches (all other taxa). 7570 living species of Blattodea are currently recognised, of which 2929 are termites (Krishna *et al.* 2013) and 4641 are cockroaches (Beccaloni 2007).

Key words: Blattodea, cockroaches, termites, classification, diversity

Introduction

The Blattodea comprise the termites (epifamily Termitoidae only) and the cockroaches (all other taxa). Beccaloni and Eggleton (2011) recognized 7314 extant named species of Blattodea, including 2692 termites and 4622 cockroaches and. In this update, 7570 living species of Blattodea are currently recognised, of which 2929 are termites (Krishna *et al.* 2013) and 4641 are cockroaches (Beccaloni 2007).

Inward, Beccaloni & Eggleton (2007) and subsequent phylogenetic studies (Legendre *et al.* 2008; Ware *et al.* 2008; Cameron *et al.* 2012; Djernaes *et al.* 2012; Xiao *et al.* 2012) have confirmed that the termites and the cockroach family Cryptocercidae are sister groups and that this clade is nested within the Blattodea. Since the termites had previously been classified as an order (Isoptera), a lower rank for this group was required. Eggleton, Beccaloni & Inward (2007) argued that the simplest solution which would result in the least disruption to the existing classifications of the termites and cockroaches, was to classify the termites as an epifamily (*i.e.* Termitoidae) and to create two other epifamilies to contain the cockroach species also placed in the superfamily Blattoidea with the termites. No other changes to the existing classifications of the termites and cockroaches were necessary. This suggestion was adopted by the Blattodea Species File Online world catalogue of cockroaches (Beccaloni 2007) and others (e.g. Beccaloni & Eggleton 2011; Cameron *et al.* 2012). Recently, however, Krishna *et al.* (2013) proposed that the termites and their sister group Cryptocercidae should instead be ranked as infraorders (probably simply to retain use of the name Isoptera for the termites). If this suggestion was followed then not only would the three epifamilies of Blattoidea become infraorders but the three Blattodea superfamilies would need to become suborders. We feel that these changes would cause unnecessary confusion since the higher classification of cockroaches listed below is widely used in both the literature and by large bioinformatics initiatives such as the Species 2000 and ITIS 'Catalogue of Life' (<http://www.catalogueoflife.org/col>) and the Encyclopedia of Life (EoL, <http://eol.org/>). Our recommendation is therefore not to adopt the changes proposed by Krishna *et al.* (2013) and to continue to use the higher classification below.

Classification

Order **Blattodea** Brunner von Wattenwyl, 1882¹ (3 superfamilies)

Superfamily **Corydioidea** Saussure, 1864² (2 families)

Family **Nocticolidae** Bolívar, 1892 (9 genera, 32 species)

Family **Corydiidae** Saussure, 1864³ (39 genera, 216 species)

Superfamily **Blaberoidea** Saussure, 1864 (2 families)

Family **Ectobiidae** Brunner von Wattenwyl, 1865⁴ (224 genera, 2398 species)

Family **Blaberidae** Saussure, 1864 (165 genera, 1201 species)

Superfamily **Blattoidea** Latreille, 1810⁵ (3 epifamilies)

Epifamily **Blattoidea** Latreille, 1810 (3 families)

Family **Blattidae** Latreille, 1810 (44 genera, 609 species)

Family **Lamproblattidae** McKittrick, 1964 (3 genera, 10 species)

Family **Tryonicidae** McKittrick & Mackerras, 1965 (7 genera, 32 species)

Epifamily **Cryptocercoidae** Handlirsch, 1925 (1 family)

Family **Cryptocercidae** Handlirsch, 1925 (1 genus, 12 species)

Epifamily **Termitoidea** Latreille, 1802⁶ (9 families)

Family **Mastotermitidae** Desneux, 1904 (1 genus, 1 species)

Family **Archotermopsidae** Engel, Grimaldi & Krishna, 2009 (3 genera, 6 species)

Family **Hodotermitidae** Desneux, 1904 (3 genera, 21 species)

Family **Stolotermitidae** Holmgren, 1910 (2 genera, 10 species)

Family **Kalotermitidae** Froggatt, 1897 (21 genera, 456 species)

Family **Stylostermitidae** Holmgren & Holmgren, 1917 (1 genus, 45 species)

Family **Rhinotermitidae** Froggatt, 1897 (12 genera, 315 species)

Family **Serritermitidae** Holmgren, 1910 (2 genera, 3 species)

Family **Termitidae** Latreille, 1802 (238 genera, 2072 species)

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1. The Code of the International Commission of Zoological Nomenclature does not include rules for the construction of the names of orders and several names are currently in use for this group, in particular the name Blattaria. Blattodea is the author's preference because it is widely used and because the name ends with the suffix “-odea”, which is the same ending universally used for the name of its sister group, the Mantodea. The higher classification presented here follows Beccaloni (2007) and it excludes fossil taxa, since the taxonomic placement of many of these is uncertain. The counts of genera and species were taken from Krishna *et al.* (2013) for the termites and Beccaloni (2007) for the cockroaches. Note that 131 valid cockroach species are not currently assigned to a superfamily (Beccaloni 2007) so they are not included in these counts.
 2. Polyphagoidea Saussure, 1864 is a junior subjective synonym of Corydioidea based on the First Reviser Principle of the ICZN Code (see below).
 3. Polyphagidae Saussure, 1864 is a junior subjective synonym of Corydiidae. Brunner von Wattenwyl (1865) as First Reviser chose to use Corydiidae (based on Corydiens Saussure, 1864) as the name for the group rather than Polyphagidae (this name was first used in this form by Walker, 1868). Corydiidae was in common usage until Princis incorrectly synonymised it in 1950 (for details see Kevan 1977).
 4. An ICZN Ruling (Melville, 1982) states that the name Ectobiidae is to be given precedence over Blattellidae Karny, 1908 (the replacement name for Phyllodromiidae Brunner von Wattenwyl, 1865) whenever these names are used within a single superfamily.
 5. Although Blattoidea Latreille, 1810 is a junior subjective synonym of Termitoidea Latreille, 1802 (which is the oldest family-group name for this group), Blattoidea is in prevailing usage as the name for this superfamily and it has therefore been retained in accordance with Article 35.5 of the ICZN Code.
 6. These are the termites, which were formerly classified as order Isoptera (see Inward, Beccaloni & Eggleton 2007; Eggleton, Beccaloni & Inward 2007). The families listed here are those recognised by Krishna *et al.* (2013).

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