

Cockroaches of Afrotropical subfamily Oxyhaloinae (Blattodea: Blaberidae) are widely known due to the popularity of Madagascar hissing cockroaches as pet species. It is thus surprising that evolutionary relationships and cytogenetical characteristics of this group haven't been studied in detail yet. The first molecular-phylogenetic analysis focused exclusively on Oxyhaloinae and based on 29 samples representing 24 species is provided herein. Karyotypes of 12 species that have never been cytogenetically studied before are described and additional karyotype information for 4 species with known chromosome number is provided. Moreover, intraspecific chromosome number polymorphism was observed in two species. The first application of molecular-cytogenetic methods within Blattodea in form of fluorescent in situ hybridization using 18S rDNA probe is performed in 16 species. Intraspecific 18S rDNA loci number variation was observed in four species. All cytogenetic characteristics are discussed in the context of obtained phylogenetic hypothesis and put in a frame of recent knowledge.