ARPHA Conference Abstracts 2: e37366
doi: 10.3897/aca.2.e37366

Conference Abstract

Phylogeny of carabid beetles based upon DNA sequences (Coleoptera: Carabidae)

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Received: 15 Jun 2019 | Published: 18 Jun 2019

Citation: Maddison D, Will K, Moore W, Kanda K, Gill A, Perez S, Sproul J, Pflug J, Boyd O, Gomez R, Miller K, Wild A (2019) Phylogeny of carabid beetles based upon DNA sequences (Coleoptera: Carabidae). ARPHA Conference Abstracts 2: e37366. https://doi.org/10.3897/aca.2.e37366

Abstract

I will present results from our phylogenetic study of the family Carabidae, based on DNA sequences of six gene fragments for about 550 carabid species representing about 80 tribes, as well as transcriptomic data and hybrid capture genomic data for a representative sampling of lineages. Many of the morphologically delimited groups are confirmed as monophyletic, as are relationships discovered in previous sequence-based studies (e.g., Brachinini is sister to Harpalinae (sensu Erwin 1985), which combined are sister to Moriomorphini; Pseudomorphini are embedded within Harpalinae, and are related to graphipterines and orthogoniines). But there are also surprising results, such as the unexpected placements of Agonicini, Celaenephes, and Bradycellus. As analyses of the data have not yet been completed, there will be additional discoveries this summer, about which I will report in my talk.

Keywords

Carabidae, transcriptome, hybrid capture, phylogenomic

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Presented at

19th European Carabidologists Meeting