



ENTOMOLOGICAL SOCIETY OF AMERICA

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Elucidating the classification of *Sarcophaga* using molecular data (Diptera: Sarcophagidae)

Tuesday, November 12, 2013: 10:36 AM

Meeting Room 4 ABC (Austin Convention Center)

Daniel Whitmore, Natural History Museum, London, United Kingdom

Thomas Pape, Natural History Museum of Denmark, University of Copenhagen, Copenhagen, Hovedstaden, Denmark

Eliana Buenaventura, Natural History Museum of Denmark, Copenhagen, Denmark

With approximately 850 valid species, genus *Sarcophaga* Meigen (Diptera: Sarcophagidae) is one of the megadiverse genera of true flies. Species of this genus are widespread, showing the greatest diversity in the Holarctic, Oriental and Afrotropical Regions. They are extremely uniform in their external appearance, and their correct identification usually relies upon a close examination of the terminalia. In the framework of ongoing studies on relationships within *Sarcophaga*, a series of field trips were carried out in 2011-2012 in Europe, the Afrotropics and Australia, with the aim of collecting a wide representation of species for molecular and morphological analyses. We extracted DNA from 137 species representing 48 subgenera from the Palaearctic, Afrotropical and Australasian Regions. We obtained 817bp COI sequences for 144 species, as well as 924bp 28S sequences for 105 species. Additional sequences were taken from GenBank. Altogether, 144 species of *Sarcophaga* were included in the analyses. The datasets were analysed both separately and combined using parsimony, ML and Bayesian approaches. Results confirmed the monophyly of some of the major subgeneric groupings previously defined by morphology, with a few notable exceptions. The subgeneric placement of a recently discovered morphologically outlying species from Turkey is discussed based on these preliminary molecular results.

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November 10 - 13, 2013

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Austin, TX

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