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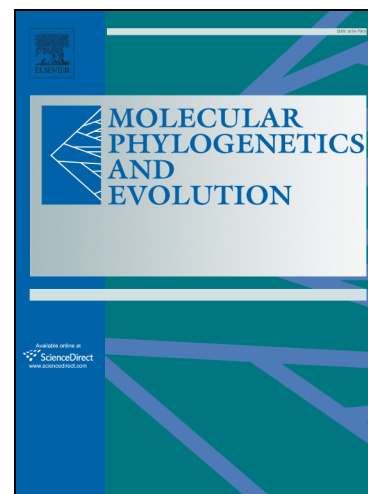
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About the origin of American *Onthophagus* (Coleoptera: Scarabaeidae). A critical appraisal of a recent paper by Breeschoten et al. (2016) on phylogenetics and biogeography.

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During the most recent years we have been experiencing a sudden increase of research articles based on DNA analysis in which the authors either reject or confirm hypotheses regarding the phylogeny and historical biogeography of *Onthophagini*. In order to effectively propose a truthful change in the scientific perspective of both research topics, we believe that all new studies must be extremely careful and accurate in taking into account the previous related literature. The phyletic and biogeographical relationships of American and Australian *Onthophagus* are discussed in a recent paper by Breeschoten et al. (2016). The authors write: “All New World species of *Onthophagus* formed a monophyletic group, and the Australian taxa are confined to a single or two closely related clades, one of which forms the sister group of the New World species”. Also, quoting Tarasov & Solodovnikov (2011), the authors emphasize the “grouping of these clades with Oriental taxa in the ‘*Onthophagus propria*’”. Nevertheless, ‘*Onthophagus propria*’ is a very doubtful taxonomic expression as it is not referable to any official taxonomic category. More importantly, the paper does not cite any previous study on American *Onthophagini* with the exception of a few very recent articles. As quite a number of previous pertinent studies is completely neglected, and in order to incorporate these new contributions to the very abundant literature on American *Onthophagus*, the following points must be necessarily considered.

First of all, the hypothesis that American *Onthophagini* belong to only one non-endemic monophyletic subgenus, *Onthophagus sensu stricto* as defined by one of us (Zunino, 1979), is firstly underlined by Zunino & Halffter (1981). In this paper, we suggest that more than one ancestor species of *Onthophagus* reached the Americas through northern connections between East Asia and northern North America during more than one invasion event. In addition, these biogeographical and evolutionary ideas about American *Onthophagus* and the affinities of American *Onthophagus* with *Onthophagus sensu stricto* groups from both the Oriental and Palaearctic Regions and the Chinese Transition Zone have been increasingly defined in a number of successive papers (Palestrini & Zunino, 1986; Zunino & Halffter, 1988; 1997; Halffter, 1991; 2003; Zunino, 2003). Moreover, based on previous literature (Zunino, 1979; Palestrini, 1980; Varola, 1980; Zunino & Halffter, 1981), Palestrini (1985) highlights that Australian as

well as American Onthophagini are closely related to the *Onthophagus sensu stricto* species from both the Oriental and Palaearctic Regions and Chinese Transition Zone. However, it is necessary to stress that neither the monophyletic origin of Australian and of American *Onthophagus* or any direct affinity between Australian and American *Onthophagus* was ever found by any of the authors cited above. This is in contrast with the hypotheses formulated in the paper by Breeschoten et al. (2016).

As a final remark, and beyond any other considerations, the fundamental importance of correct citations must therefore be unreservedly emphasized. While from a serious scientific research's framework authors are absolutely free to use and criticize previous relevant literature related to the subject they are discussing, it is utterly far from both a truthfully scientific and professional deontology to allow yourself to ignore it.

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