

SALTICIDAE AND THE HOLARCTIC FAUNA. Norman I. Platnick

When Jerzy Prószyński's monograph on Holarctic Salticidae was published last year, my appreciation of the tremendous contribution to salticid systematics that it makes prevented me from commenting publicly on some other aspects of his paper which I see as less valuable. However, since D. B. Richman's laudatory review of the paper in the first issue of PECKHAMIA does not distinguish between its splendid systematics and its highly dubious biogeography, I am prompted to respond. In particular I wish to take issue with Prószyński's statement that "The Salticidae faunae of the Nearctic and Palaeartic regions have apparently a different origin and share only 5% of the analyzed species, there is no Holarctic Region as far as Salticidae are concerned." Prószyński's argument reminds me of that of those workers who, discerning readily two, three, four, or more distinct monophyletic groups of arthropods, argue that Arthropoda is therefore not a monophyletic taxon. Clearly, to demonstrate the non-monophyly of Arthropoda it is necessary to show not only that there are monophyletic subgroups of arthropods (all higher taxa having such subgroups), but that one or more of these subgroups is more closely related to a non-arthropod taxon than to the other subgroups. Prószyński finds that only 5% of his analyzed species have Holarctic distributions and therefore concludes that there is no Holarctic salticid fauna. When studying faunas, it is questions of relationship rather than

identity that are significant. If 100% of their salticid species were shared by the Nearctic and Palaeartic, we would have to conclude that those two faunas do not exist and that we are dealing with only one fauna. If, however, 0% of the salticid species are shared, we cannot conclude that we are *not* dealing with a single (subdivided) fauna. Suppose, for instance, that there was a single Holarctic region and fauna at one time, and that this fauna was subsequently divided (say, by the separation of Eurasia and North America by the developing Atlantic Ocean). Given enough time, we might well find 0% specific overlap between the two continents, but we would still find that species or groups in North America have their closest relatives in Eurasia. In short, to say that there is no Holarctic salticid fauna is to say that the closest relatives of the Nearctic salticids are found not in the Palaeartic region, but somewhere else (be it in Brazil or Tanzania, on Sumatra or Mars). This Prószyński has not demonstrated, nor given our current knowledge of plate tectonics, is he ever likely to succeed in demonstrating. I would contend that in salticids, just as in other groups of terrestrial organisms, there *is* a Holarctic fauna reflecting an ancestral Laurasian biota now subdivided on different continents (Platnick 1976).

REFERENCE:

PLATNICK, N.I. 1976. Drifting spiders or continents?: Vicariance biogeography of the spider subfamily Laroniinae (Araneae: Gnaphosidae). Syst. Zool. 25: 101-109.