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Planthopper-Palm relationships: The case of the Sikaianini (Hemiptera: Fulgoroidea: Derbidae)

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Within planthoppers (Hemiptera, Fulgoromorpha), Derbidae is a worldwide distributed family that is mostly associated with monocots, and particularly palms – Arecaceae. Within Derbidae, the tribe Sikaianini Muir, 1917 comprises a few, but widely distributed taxa, in the Afrotropical (Sierra Leone, Ghana, Seychelles), Australasian (American Samoa, Fiji, New Caledonia, Queensland, Solomon Islands), Indo-Malayan (Philippines, Taiwan), Nearctic (Florida, Mississippi, Illinois, North Carolina, Delaware), and Neotropical (Saint Lucia) regions, with most of the genera and species recorded from the Philippines. This rather large distributional pattern not only questions the monophyly of the tribe and the relationships between its members, but also how this phytophagous group was able to evolve in so different regions and respectively adapt its diet to host-plants.

We present evidence that the Sikaianini are monophyletic and that the Zoraidini Muir, 1913 are their sister group. We also discuss host plant relationships of Derbidae. In more detail, we analyze for Sikaianini, their diet pattern and its evolution in time and space, particularly in relation with Arecaceae.