

The spider tree of life. What does it mean for the New Zealand fauna?

Cor Vink *¹

¹ Canterbury Museum, Christchurch

After a gestation period of over ten years, a massive phylogenetic analysis of spiders has been published (Wheeler et al. 2016). The phylogenetic analysis was performed on a dataset of 932 spider species, representing 115 families, 700 known genera and additional representatives of 26 unidentified or undescribed genera. The dataset includes DNA sequences from three mitochondrial genes (12S, 16S, COI) and three nuclear genes (histone H3, 18S, 28S). These were analysed by multiple methods, including constrained analyses using a highly supported backbone tree from transcriptomic data. Most of the higher-level structure of the spider tree was well supported. Of particular relevance to the New Zealand fauna is the support of a large group termed the marronoid clade, which includes the families Amaurobiidae, Desidae, Dictynidae, Hahniidae, Stiphidiidae, Agelenidae and Toxopidae. These families have been redefined and New Zealand genera have been moved around between them. Numerous New Zealand species in the marronoid clade can be a source of misery when trying to identify them to family but now many can be cast into Desidae, which has been redefined to include five subfamilies, four of which are found in New Zealand: Amphinectinae, Ischaleinae, Porterinae and Desinae. Wheeler WC, Coddington JA, Crowley LM, Dimitrov D, Goloboff PA, Griswold CE, Hormiga G, Prendini L, Ramirez MJ, Sierwald P, *et al.* (2016) The spider tree of life: Phylogeny of Araneae based on target-gene analyses from an extensive taxon sampling. *Cladistics*. DOI: 10.1111/cla.12182

