

Te Paki: a spider hotspot revealed

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The Te Paki Ecological District is recognised as a hotspot of national significance for several broad taxa, including vascular plants and molluscs. Many other, less numerous, taxa present in the district also show significant levels of morphological and molecular divergence from species and populations elsewhere in the country. This deep phylogeographic rift is assumed to be the consequence of repeated isolation and connection of the Te Paki district with the rest of the North Island during the Pleistocene ice age. Two invertebrate pitfall trapping studies conducted over two years and encompassing 16 sites in three habitat types has revealed that the phylogeographic rift also applies to the spider fauna. Together with previously known endemics, a number of undescribed species of spider not recorded elsewhere were found. Te Paki endemic spiders are, in many cases, closely related to spiders of the Three Kings Islands to the north, and those of the northern North Island to the south. There is also evidence of taxonomic imbalance in the Te Paki spider fauna. For example, the diversity of some families (e.g. Hahniidae) is very high compared with other parts of the mainland. Although the diversity of spiders in general does not appear high compared to other parts of the country, the number of endemic species and their likely threat status indicates that the Te Paki Ecological District is a spider hotspot. The spider fauna of the Te Paki Ecological District is therefore in urgent need of further research.

