

Sub-canopy (2 – 5m)

Canopy (5m+)

Using ordination analysis (PC-Ord), no large-scale differences in vegetation composition or structure were identified between territories. However, hihi territories within Bush 2 had decreased species diversity than other territories, with a decreased cover within the subcanopy and shrub layers. Hangehange (*Geniostoma ligustrifolium*), an important source of nectar and fruit for hihi, was reduced in availability in these territories. Likewise, the experimental addition of supplementary food into hihi territories had little effect on any breeding success and maternal investment parameters measured.

Importantly, however, hihi were observed to predominantly feed on insects during the breeding season, indicating that nectar and fruit may not be as important as assumed during this period. Therefore the fieldwork conducted with support from the Lucy Cranwell field grant, and the Auckland Botanical Society, has led to further research concerning the relationship between hihi and their floristic environment. Research into the differences in pollen

loads, and location of pollen loads between the three honeyeater species (tui, *Prosthemadera novaeseelandiae*, and bellbird, *Anthornis melanura*) on Tiritiri and Little Barrier Island is currently being conducted and analysed. Comparisons of vegetation composition will also be made with that collected on Kapiti Island (the second managed hihi population), and Little Barrier Island. In addition, the vegetation composition data collected during this study is contributing towards other thesis research being conducted on Tiritiri by University of Auckland students.

Neither New Zealand's flora, nor fauna exist in isolation (although it is becoming increasingly so). Therefore, to increase our understanding of either we must attempt to determine the dynamics between them. The fieldwork supported by the Lucy Cranwell Field grant has contributed to the further understanding of the relationships between hihi and their environment, and has allowed me to develop and understand and appreciate of the importance of both hihi for the forest, and forest for hihi.

## Field Trip: Lichens recorded at the Court property, Waitoki. 19/04/03

Carol Lockett

Lichens collected during the visit to Sandra and Robin Court's bush at Waitoki (Haines & Lockett 2004) on 19 April 2003 have been further studied. This is the updated list, the numbers referring to voucher specimens held in the herbarium at UNITEC. Identifications were carried out under the supervision of Dr Dan Blanchon, with nomenclature based on Galloway (1985) and Malcolm & Galloway (1997).

*Cladonia chlorophaea* (Florke ex Sommerf.) Spreng. - #001183

*Heterodermia leucomelos* ssp. *boryi* (Fee) Swinscow & Krog - #001146

*Hypogymnia lugubris* (Pers.) Krog - #001151

*Menegazzia* sp. - #001157

*Parmotrema chinense* (Osbeck) Hale & Ahti - #001145

*Megalospora* sp. - #001147

*Pseudocyphellaria carpoloma* (Delise) Vain. - #001153

*Pseudocyphellaria multifida* (Nyl.) D.J. Galloway & P. James - #001160

*Punctelia* sp. - #001144

*Ramalina celastri* (Spreng.) Krog & Swinscow - #001142

*Rimelia cetrata* (Ach.) Vale & A. Fletcher - #001158

*Rimelia reticulata* (Taylor) Hale & A. Fletcher - #001150

*Sticta* sp. - #001154

*Teloschistes xanthoroides* J.S. Murray - #001143

*Usnea rubicunda* Stirt. - #001156

*Usnea* sp. - #001148

As yet unidentified crustose type - # 001163

### References

Galloway, D. J. 1985. *Flora of New Zealand Lichens*. Government Printer, Wellington

Haines, L.; Lockett, C. 2004. Field trip: Waitoki, property of Sandra and Robin Court, Horseshoe Bush Rd. 19/04/03. *Auckland Botanical Society Journal* 59(1): 10-11.

Malcolm, W. M.; Galloway, D. J. 1997. *New Zealand lichens. Checklist, key, and glossary*. Museum of New Zealand, Wellington..

## Field Trip: Lake Ohau Central Otago, 3-10/01/04

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