

Epiphyte biogeography and its importance to species conservation



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Understanding epiphyte distribution

- Improves understanding of factors influencing epiphyte autecology and their survival
- Helps identify priority sites for conserving the greatest number of epiphytic species and for targetted survey
- Helps select sites where epiphyte restoration could be undertaken



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New Zealand's herbaria house over one million specimens of plant, algae and fungi. The collecting information stored with these specimens provides an important picture of the distribution of New Zealand's flora.

The New Zealand Virtual Herbarium (NZVH) is an online resource that provides immediate access to this invaluable information.

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MUEHLENBECKIA ASTONII

This nationally endangered shrub has become a popular garden plant. Photo: Jeremy Rolfe

LATEST PLANT OBSERVATION

Cordyline australis was seen Flowering at Auckland Botanic Gardens by Bec Stanley on 20/11/2012.

FIND OUT HOW TO RECORD YOUR OWN OBSERVATIONS...

LATEST NEWS



NETWORK CONFERENCE 2013 - ANNOUNCEMENT

The Network will be holding its next plant conservation conference in Auckland from 23 - 26 May 2013. [Read more...](#)

SEARCH FLORA

Latin/Common Name...

Search

QUICK SEARCH

NATIVE FLORA

EXOTIC FLORA

THREATS

PUBLICATIONS

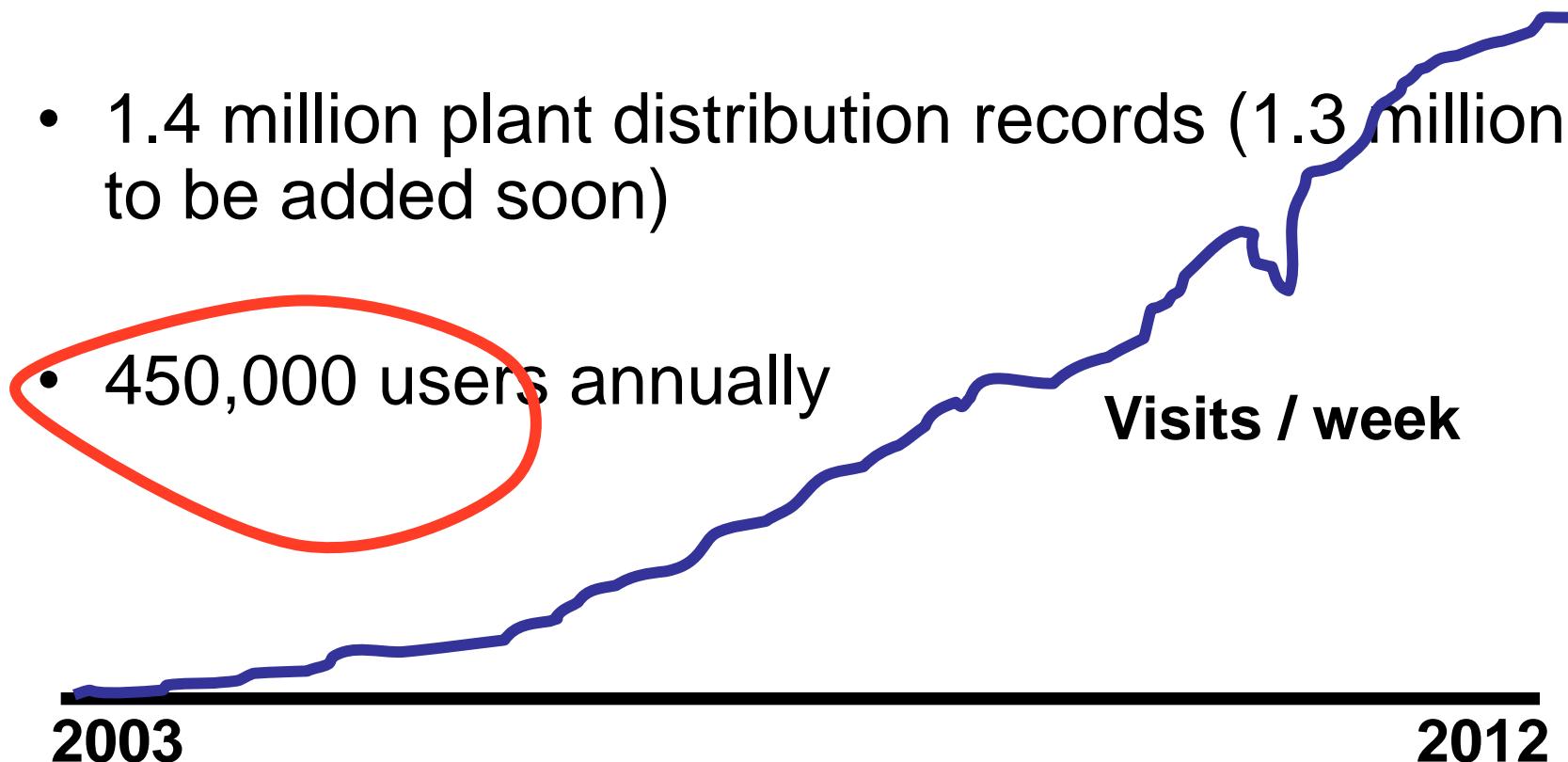
PLANT LISTS

ECOSYSTEMS

TEST YOUR PLANT KNOWLEDGE
try the **flora quiz**

NZPCN flora statistics

- Species pages for 7,500 plant species
- 24,000+ plant photographs
- 1.4 million plant distribution records (1.3 million to be added soon)

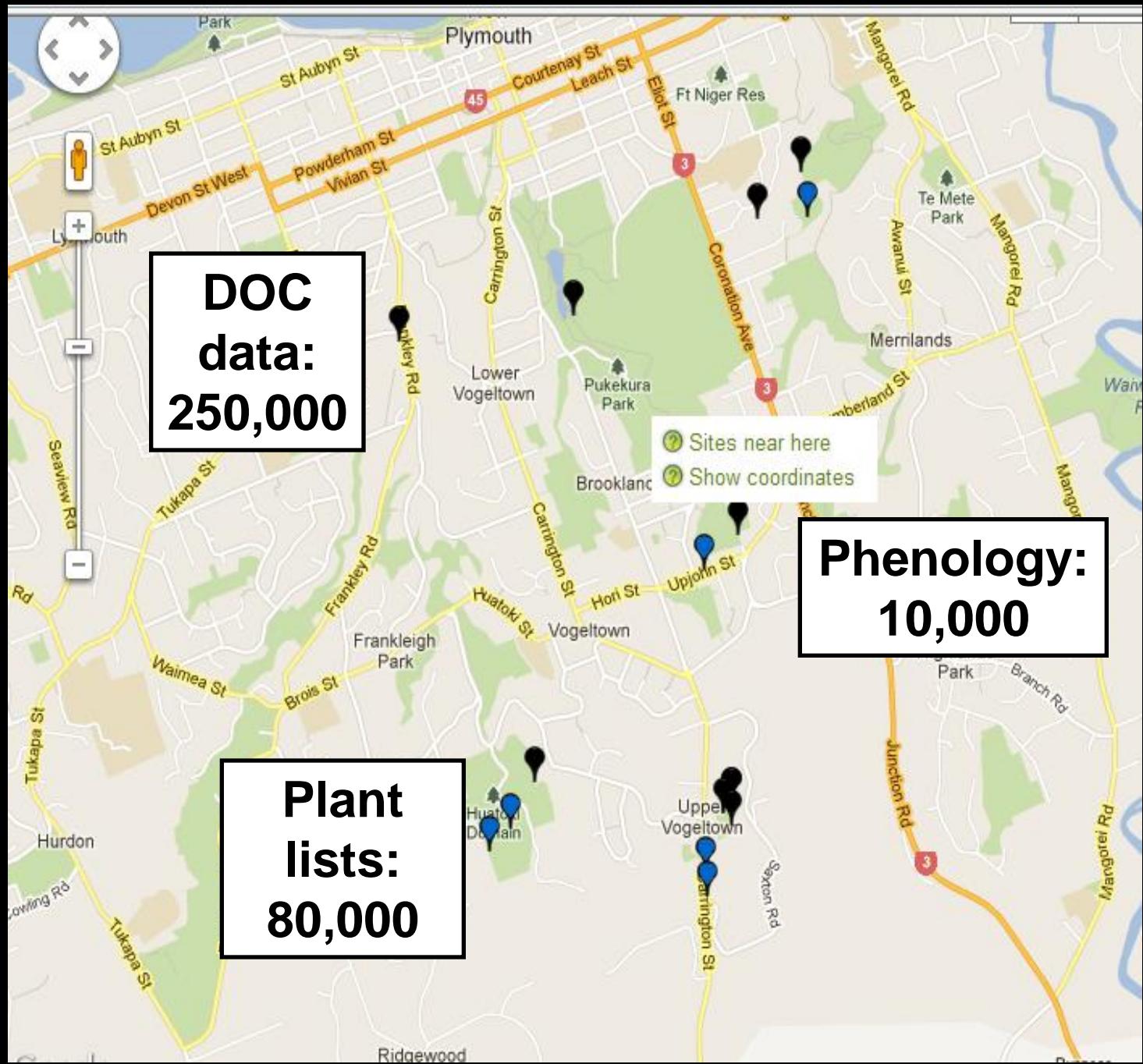


NZPCN epiphyte database

108 native vascular epiphytic plants recognised
Using WRB Oliver's classification:

- Typical (habitually epiphytic) – **58 taxa**
- Occasional (usually grow terrestrially but can grow to maturity from epiphytic location) – **19 taxa**
- Hemi (taproot epiphytes) - **11 taxa**
- Ephemeral (establish as epiphytes but die before reaching maturity) – **20 taxa**

Oliver, W. R. B. 1930: New Zealand
Epiphytes. *Journ. Ecol.* 18:1-50



SEARCH FLORA

CATEGORY

[All]

LATIN NAME

COMMON NAME

FAMILY NAME

STATUS

[All]

MAIN FLOWER COLOUR



[All]

OTHER FLOWER COLOUR

[All]

 ALL
 NATIVE
 EXOTIC

Search

Recent plant observations

- 1) *Calystegia marginata* was seen First fruiting at Auckland, Auckland City, Mt Albert, Jesmond Terrace, Auckland on 19/02/2013 .
- 2) *Earina autumnalis* was seen Flowering at Mt Karioi, Waikato District on 16/02/2013 .
- 3) *Samolus repens* var. *repens* was seen Flowering at Tomahawk Beach, Dunedin, Dunedin City on 13/02/2013 .
- 4) *Crassula moschata* was seen Fruiting at Tomahawk Beach, Dunedin, Dunedin City on 13/02/2013 .
- 5) *Pimelea villosa* was seen Flowering at Waithou Estuary, Kapiti Coast District on 11/02/2013 .
- 6) *Cotula coronopifolia* was seen Flowering at Waithou Estuary, Kapiti Coast District on 11/02/2013 .
- 7) *Solenogyne gunnii* was seen Fruiting at Auckland, Auckland City, Mt Albert, Gladstone School, Auckland on 11/02/2013 .
- 8) *Pennantia corymbosa* was seen Flowering at Whiskey Creek,, Gore Bay on 10/02/2013 .



SEARCH FLORA ▲

CATEGORY
[All] ▾

LATIN NAME
[]

COMMON NAME
[]

FAMILY NAME
[]

STATUS
[All] ▾

MAIN FLOWER COLOUR ?
[All] ▾

OTHER FLOWER COLOUR
[All] ▾

ALL NATIVE EXOTIC

YOU ARE HERE: FLORA SEARCH > FLORA DETAILS

Metrosideros robusta

GLOSSARY ON



▼ SHOW MORE PHOTOS

SPECIES

Metrosideros robusta



ETYMOLOGY

Metrosideros: iron heart
robusta: sturdy



COMMON NAME(S)

Northern rata



THREAT STATUS

Non Threatened

ASK A QUESTION

RECORD AN OBSERVATION

VIEW PHENOLOGY

VIEW DISTRIBUTION

EMAIL TO A FRIEND

DOWNLOAD FACTSHEET

COMMENT ON FACTSHEET

ADD TO BOOK

Metrosideros robusta (Hemi)



Gaps or
restoration
opportunities?

Asplenium faccidum (Typical)



Gap or
restoration
opportunity?



Threatened vascular epiphytes in New Zealand

- *Ackama nubicola* (Nationally Critical)
- *Adelopetalum tuberculatum* (Naturally Uncommon)
- *Asplenium shuttleworthianum* (Naturally Uncommon)
- *Brachyglottis kirkii* var. *kirkii* (Declining)
- *Davallia tasmanii* subsp. *cristata* (Nationally Critical)
- *Davallia tasmanii* subsp. *tasmanii* (Naturally Uncommon)
- *Dracophyllum arboreum* (Naturally Uncommon)
- *Drymoanthus flavus* (Naturally Uncommon)
- *Epacris sinclairii* (Naturally Uncommon)
- *Hebe barkeri* (Nationally Critical)
- *Metrosideros bartlettii* (Nationally Critical)
- *Nephrolepis brownii* (Naturally Uncommon)
- *Pittosporum kirkii* (Declining)
- *Pterostylis silvicultrix* (Naturally Uncommon)
- *Tmesipteris horomaka* (Nationally Critical)
- *Xeronema callistemon* f. *bracteosa* (Naturally Uncommon)
- *Xeronema callistemon* f. *callistemon* (Naturally Uncommon)

	Typical	Occasional	Hemi-	Ephemera I	
Critical	<i>Tmesipteris horomaka</i>	<i>Davallia tasmanii</i> subsp. <i>cristata</i>	<i>Metrosideros bartlettii</i>	<i>Ackama nubicola</i> , <i>Hebe barkeri</i>	5
Declining	<i>Brachyglottis kirkii</i> var. <i>kirkii</i> , <i>Pittosporum kirkii</i>				2
Naturally Uncommon	<i>Adelopetalum tuberculatum</i> , <i>Asplenium shuttleworthianum</i> , <i>Drymoanthus flavus</i> , <i>Pterostylis silvicultrix</i>	<i>Davallia tasmanii</i> subsp. <i>tasmanii</i> , <i>Epacris sinclairii</i> , <i>Nephrolepis brownii</i> , <i>Xeronema callistemon</i> f. <i>bracteosa</i> <i>Xeronema callistemon</i> f. <i>callistemon</i>	<i>Dracophyllum arboreum</i>		10
Number	7	6	2	2	

Ackama nubicola (Nationally Critical, Ephemeral)



Habitat
protection and
long term
monitoring

Adelopetalum tuberculatum (Naturally Uncommon, Typical)



Brachyglottis kirkii var. *kirkii* (Declining, Typical)



Drymoanthus flavus

(Naturally
Uncommon, Typical)



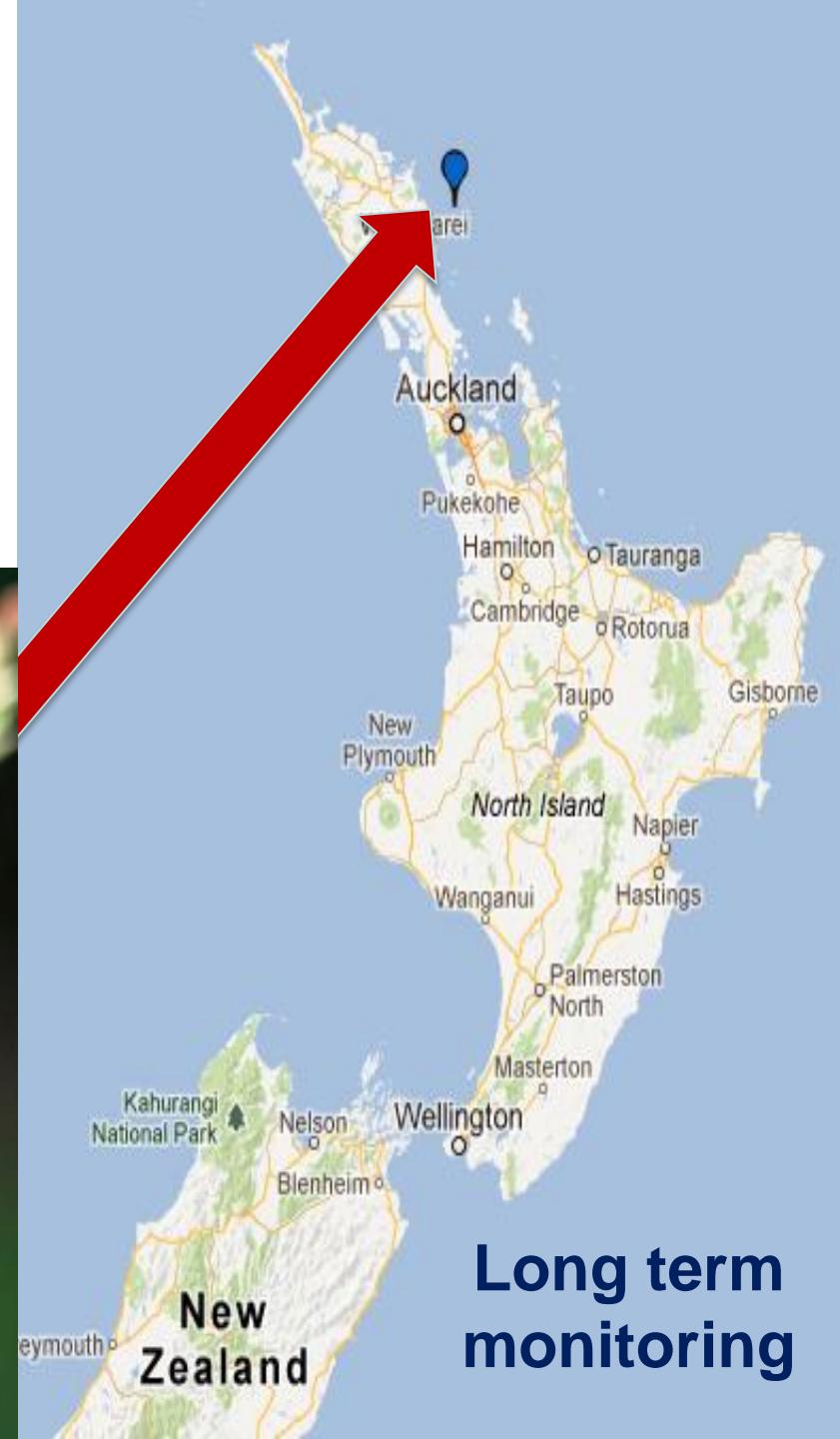
Further
survey



Pittosporum kirkii (Declining, Typical)



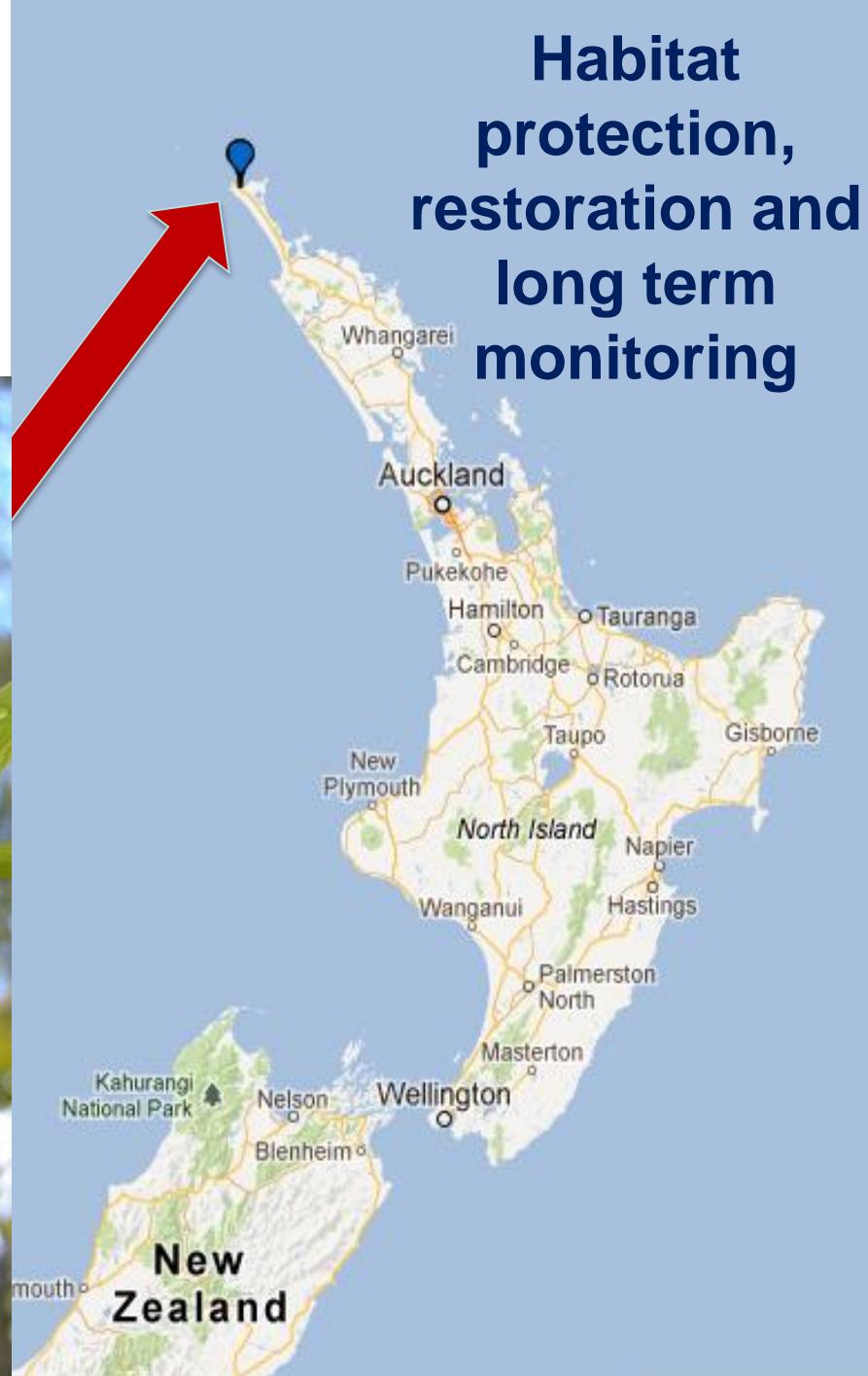
Xeronema callistemon f. bracteosa and *callistemon* (Naturally Uncommon, Occasional)



New
Zealand

Long term
monitoring

Metrosideros bartlettii (Nationally Critical, Hemi)





Re-establishing a threatened epiphyte: *Metrosideros bartlettii*



Approx. 25 adult
trees left in the wild

Eight more threatened epiphytes:

***Three Kings*:** *Davallia tasmanii* subsp. *tasmanii*
(Naturally Uncommon, Occasional)

***Puketi Forest*:** *Davallia tasmanii* subsp. *cristata*
(Nationally Critical, Occasional) -

***Chathams*:** *Dracophyllum arboreum* (Naturally
Uncommon), *Hebe barkeri* (Nationally Critical),
Pterostylis silvicultrix (Naturally Uncommon)

***Kermadec islands*:** *Nephrolepis brownii* (Naturally
Uncommon), *Asplenium shuttleworthianum*
(Naturally Uncommon)

***Banks peninsula*:** *Tmesipteris horomaka*
(Nationally Critical)

Map ook

| Home | F

Search Fl

Category

[All]

Latin Name

Common N

Family Nam

Status

[All]

Main Flower

[All]

Other Flower

[All]

[All]

Native

Exotic

START SEARCH

List all:

Vascular pl

Non Vascu

Fungi

Quick Link

Distribution

Record a p

Record ph

Flora Quiz



Threatened epiphytic vascular plants in New Zealand



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Help us improve the Network's distribution database

- Register on the Plant Network website:
 - www.nzpcn.org.nz
- Record observations of threatened epiphytes
- Record phenological observations – flowering and fruiting

Contributing observations to the Network's distribution database will:

- Improve management of wild species
- Improve understanding of changing status and phenology of these taxa
- Provide those involved with ecological restoration of native species and ecosystems with useful data for:
 - Seed collection
 - Seed banking
 - Long-term monitoring of population condition