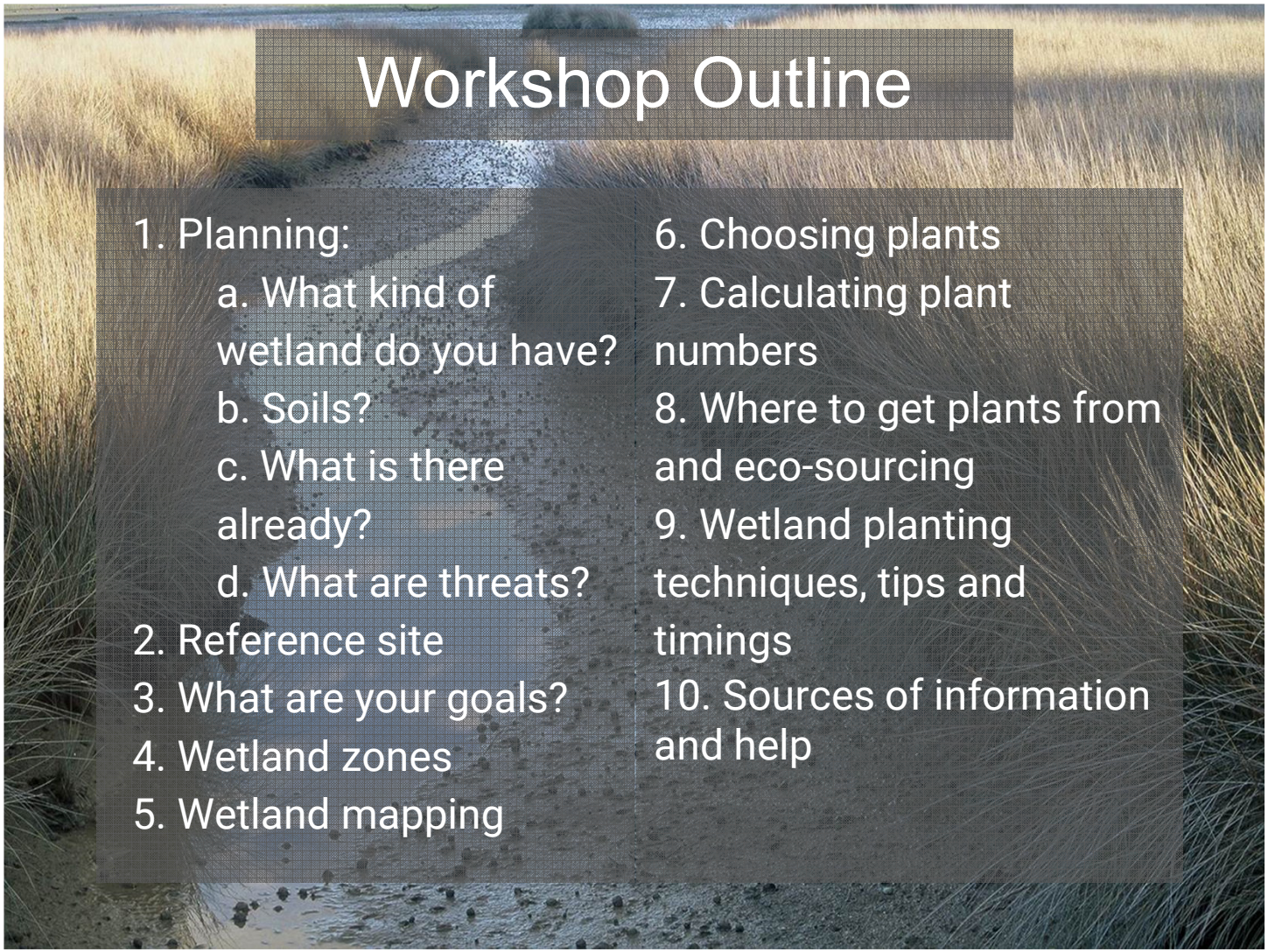
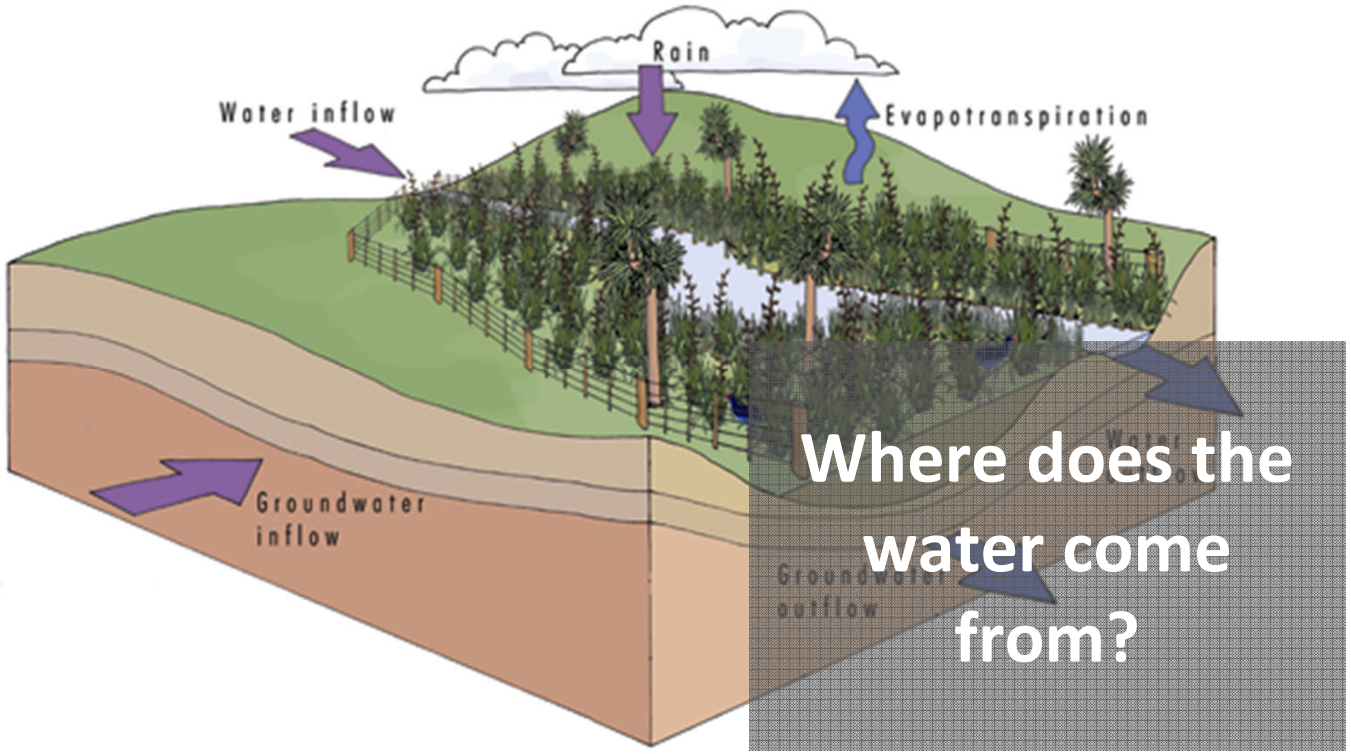

Right plant right place – designing a successful wetland planting plan
Jason Butt & Melanie Dixon
thomas consultants
WETLAND TRUST
NATIONAL WETLAND TRUST OF NEW ZEALAND

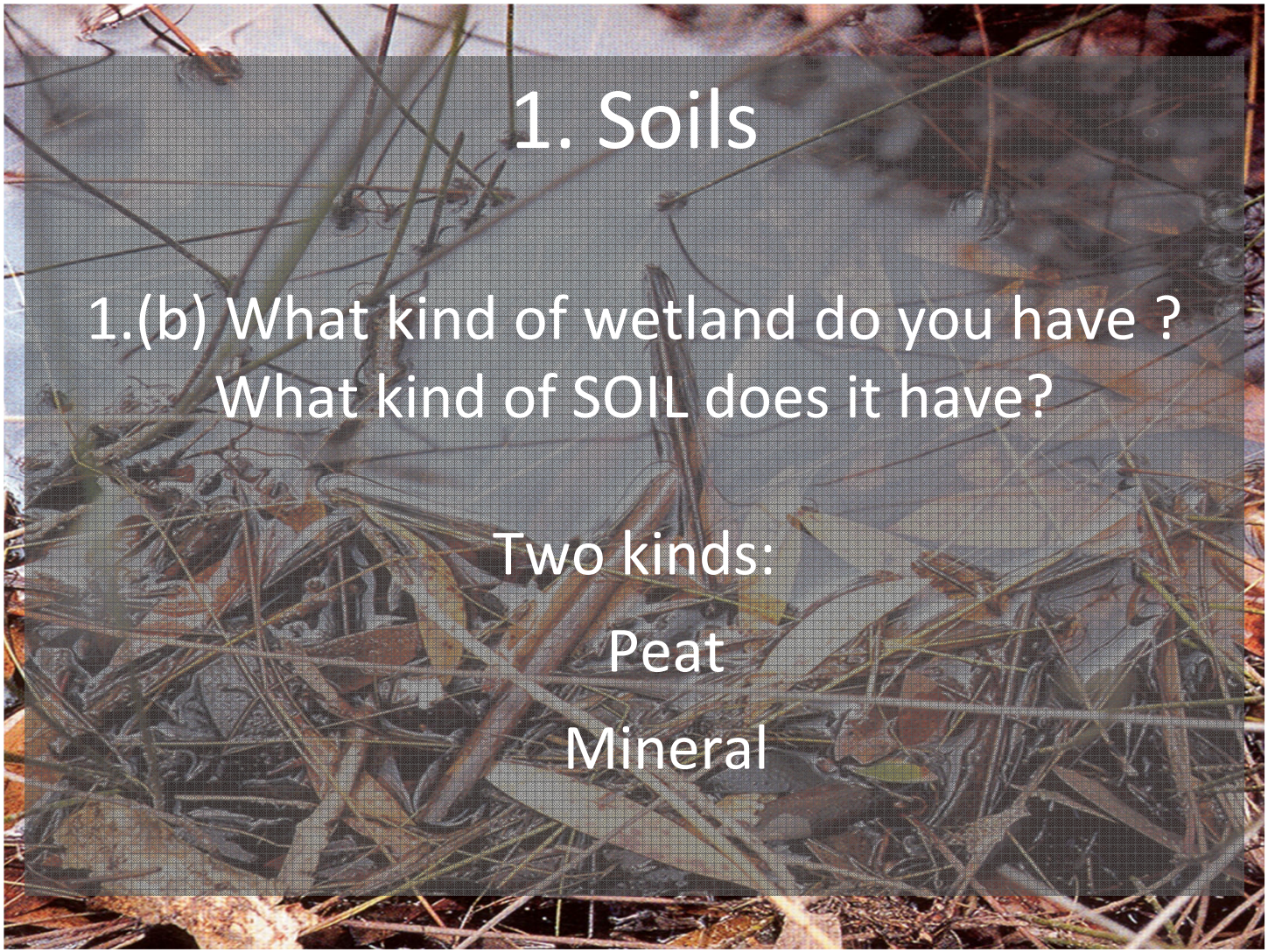


Workshop Outline

1. Planning:
    a. What kind of wetland do you have?
    b. Soils?
    c. What is there already?
    d. What are threats?
2. Reference site
3. What are your goals?
4. Wetland zones
5. Wetland mapping
6. Choosing plants
7. Calculating plant numbers
8. Where to get plants from and eco-sourcing
9. Wetland planting techniques, tips and timings
10. Sources of information and help

1.(a) What kind of wetland do you have ?





1. Soils

1.(b) What kind of wetland do you have ?
What kind of SOIL does it have?

Two kinds:

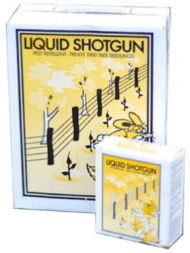
Peat

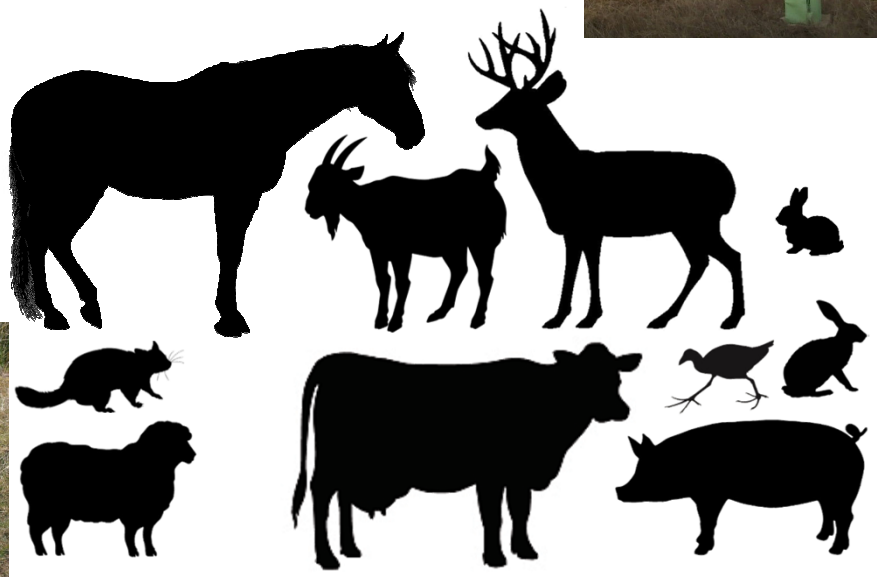
Mineral

1(c) Planning: What is already there

- Existing biodiversity – DON'T INADVERTENTLY GET RID OF IT!!!
- It is easy to overlook and sometimes remnant biodiversity doesn't look as expected.
- Forest and Bird is only a small part of the equation.
- Uncultivated soils/surfaces/sites often retain important biodiversity.

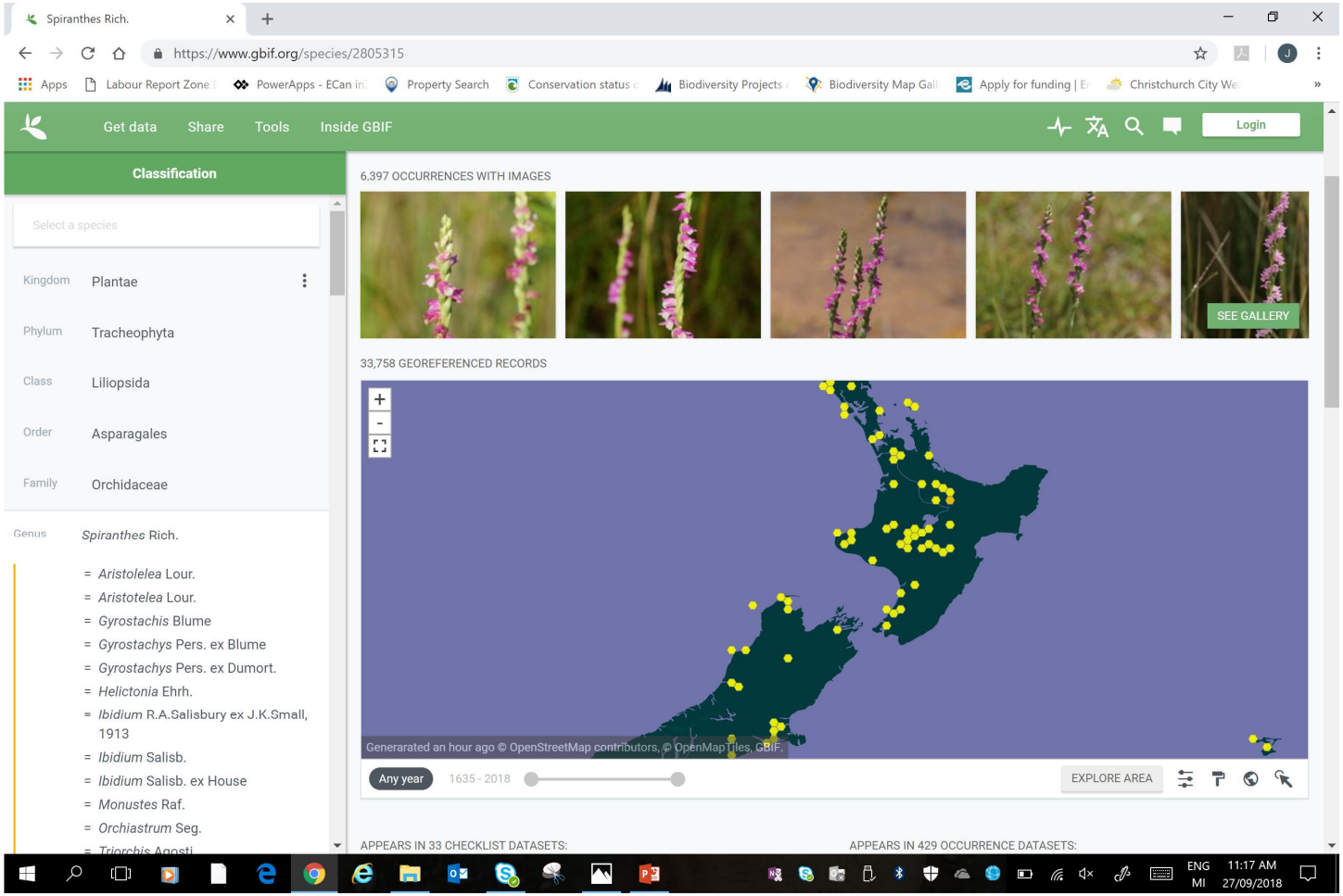
1(d) Threats and solutions





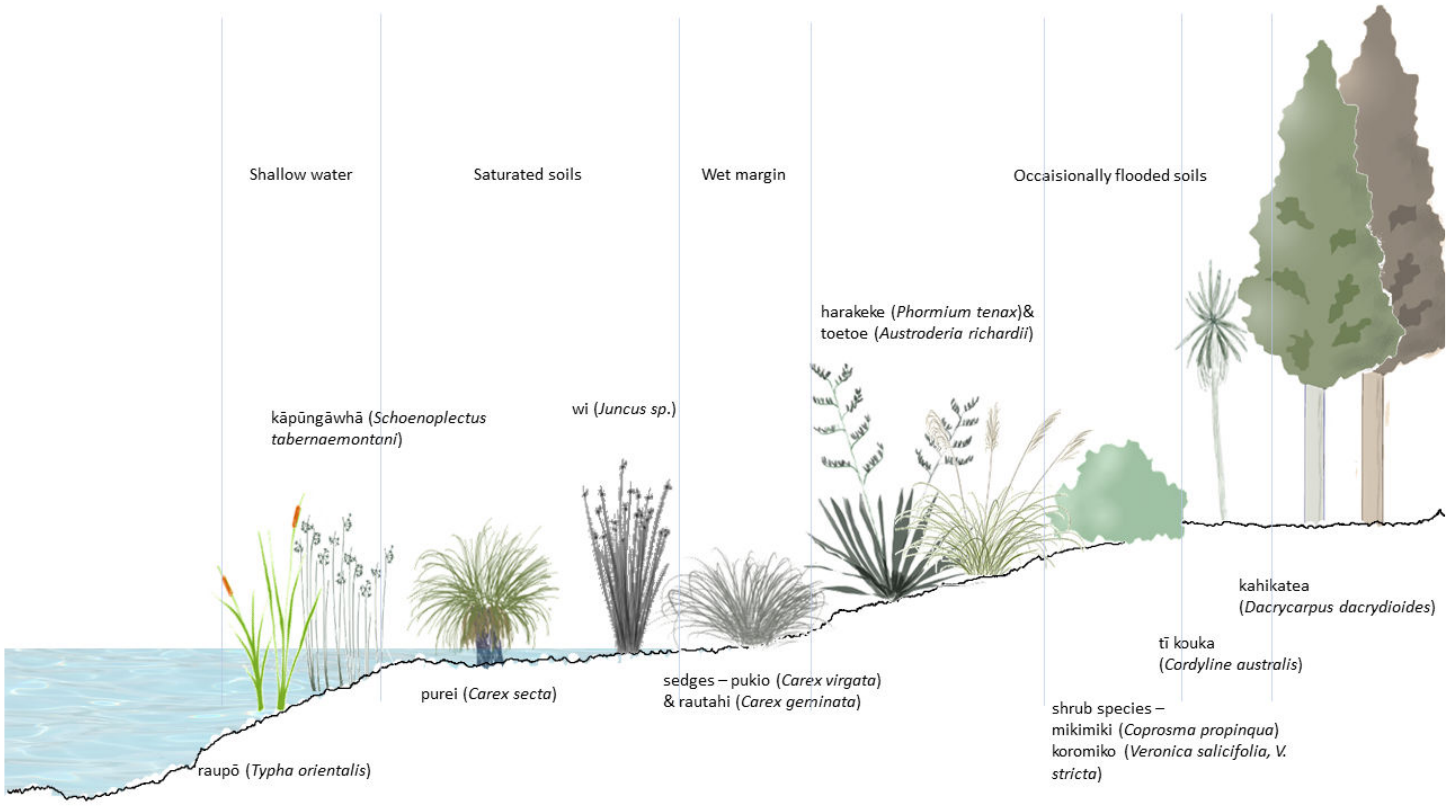

2. Reference site

2. Finding a reference wetland

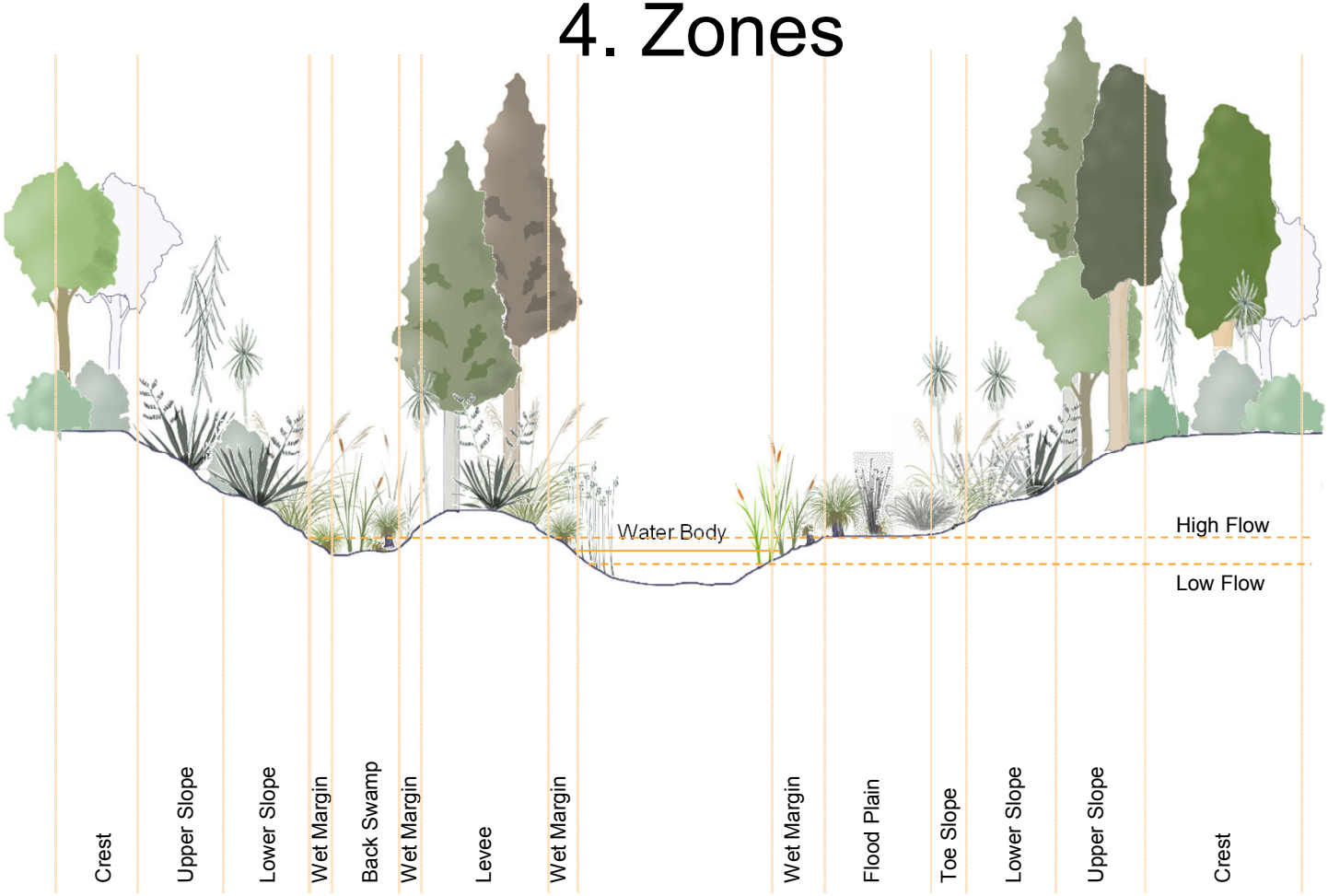



3. What are your goals?
Restoring a degraded wetland?
Habitat for birds or fish - including game birds?
Improving water quality?

4. Zones

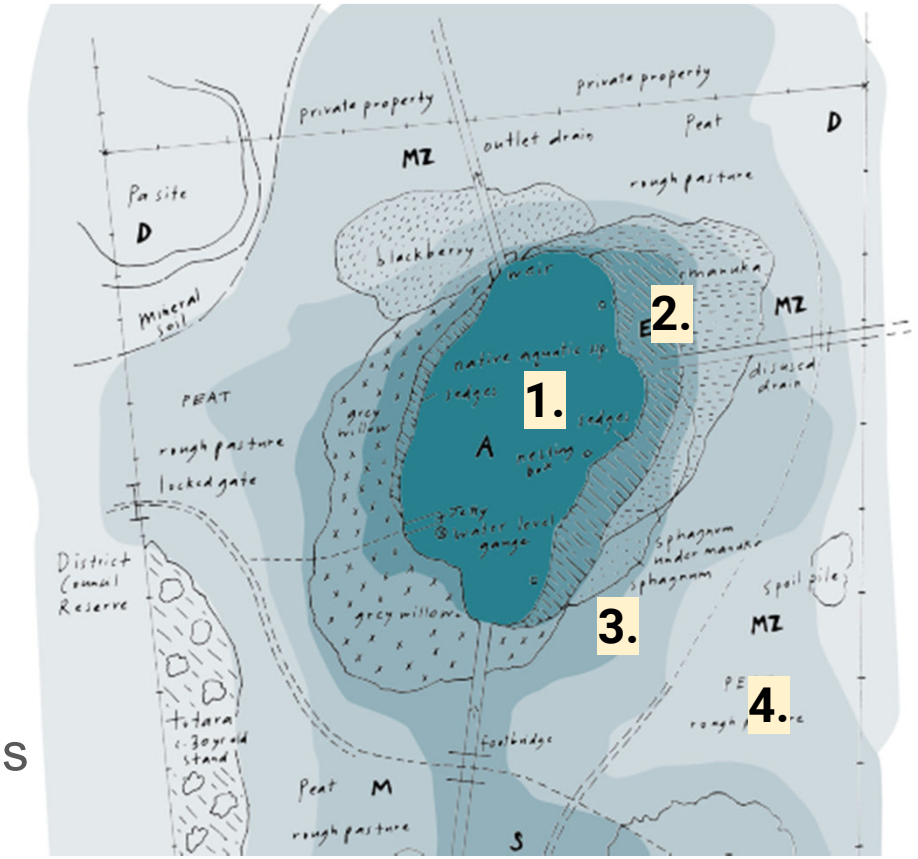

Shallow water
Saturated soils
Wet margin
Occaisionally flooded soils
harakeke (*Phormium tenax*)&
toetoe (*Austroderia richardii*)
kāpūngāwhā (*Schoenoplectus tabernaemontani*)
wi (*Juncus sp.*)
kahikatea
(*Dacrycarpus dacrydioides*)
tī kouka
(*Cordyline australis*)
purei (*Carex secta*)
sedges – pukio (*Carex virgata*)
& rautahi (*Carex geminata*)
shrub species –
mikimiki (*Coprosma propinqua*)
koromiko (*Veronica salicifolia, V. stricta*)
raupō (*Typha orientalis*)

4. Zones


Water Body
High Flow
Low Flow
Crest
Upper Slope
Lower Slope
Wet Margin
Back Swamp
Wet Margin
Levee
Wet Margin
Wet Margin
Flood Plain
Toe Slope
Lower Slope
Upper Slope
Crest

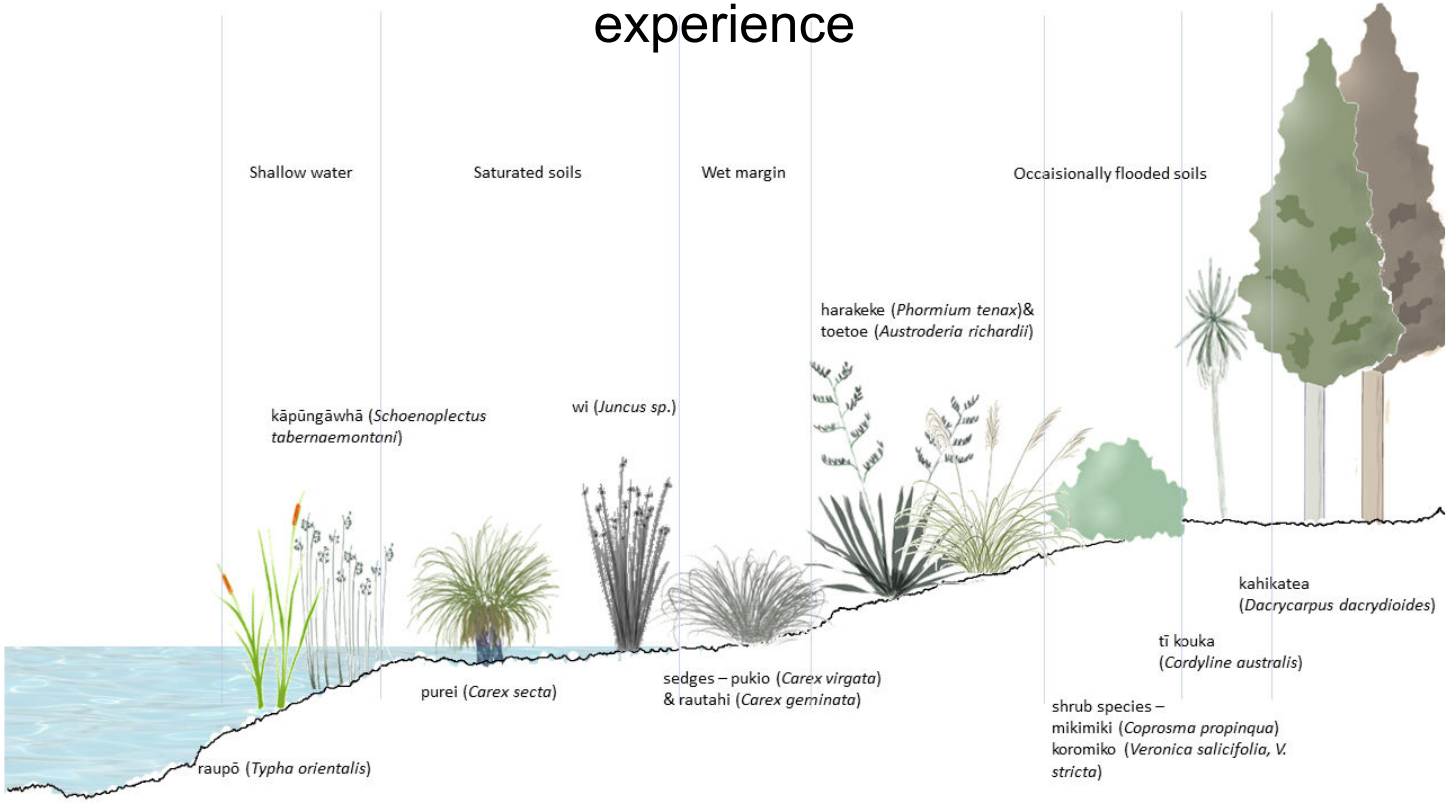
5. Wetland mapping

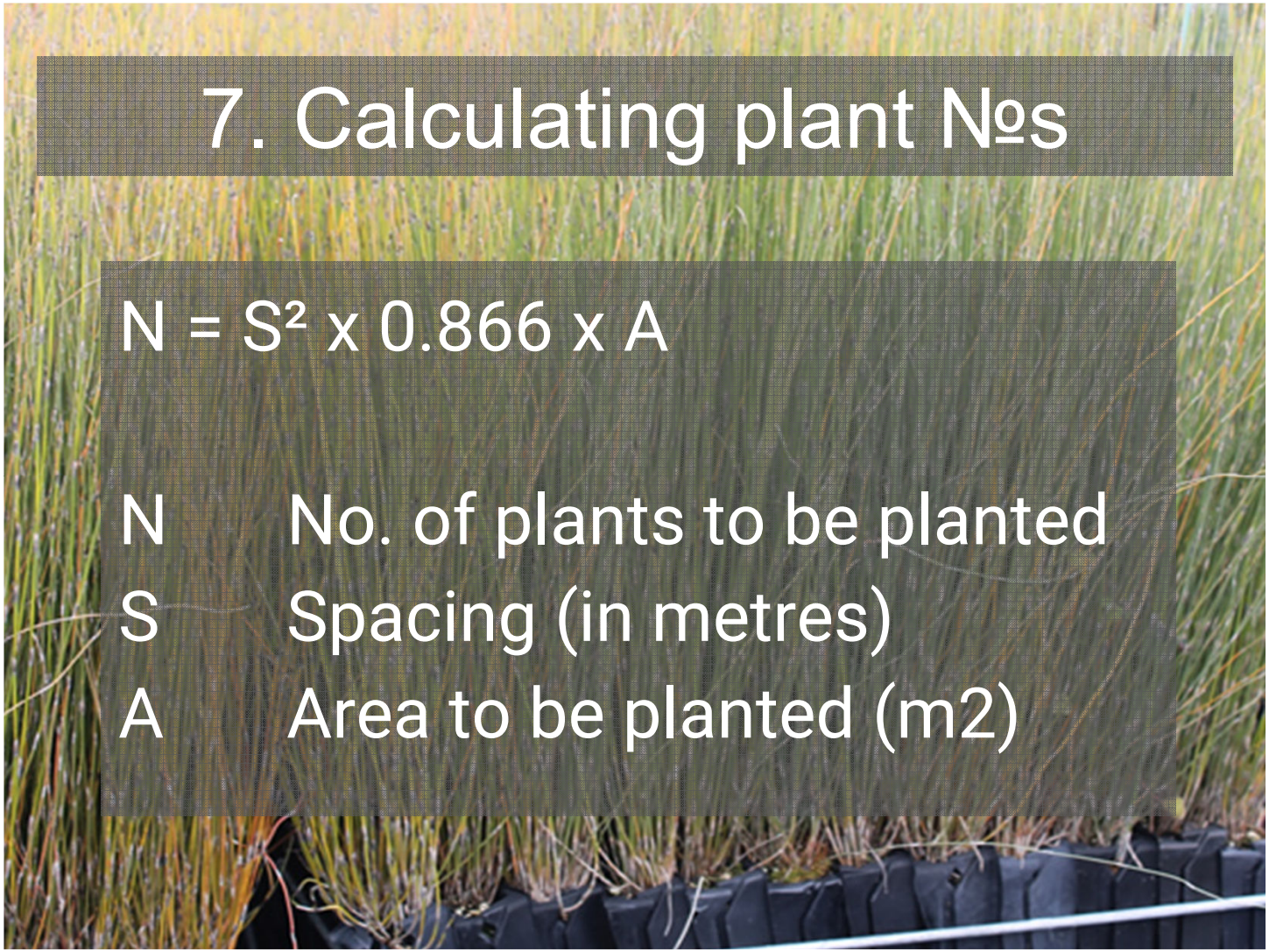
Source: Wetland Restoration: A Handbook for NZ Freshwater Systems



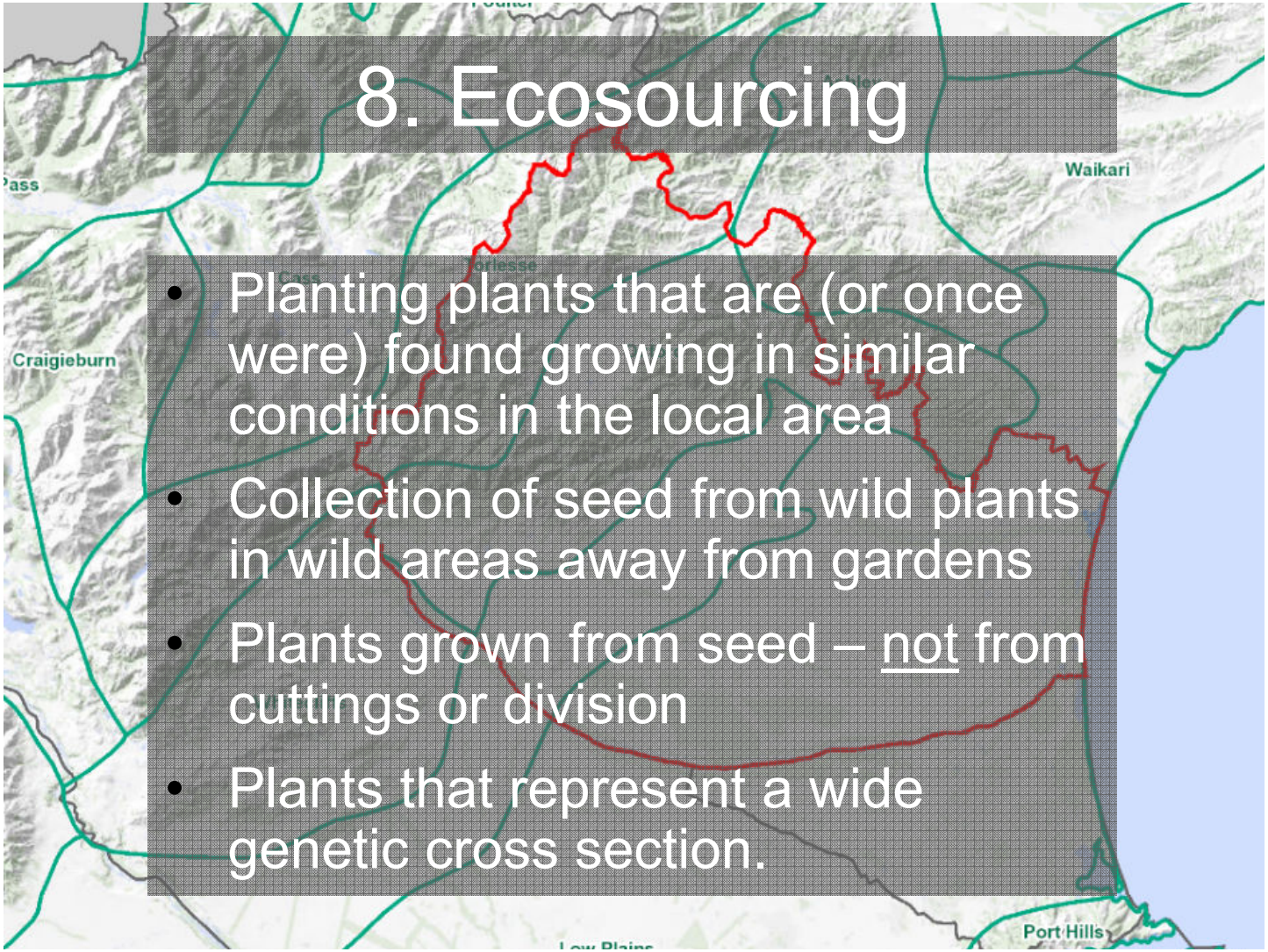
6. Choosing plants

Chose plants based on zones, wetland type and local experience




7. Calculating plant №s
N = S² x 0.866 x A
N No. of plants to be planted
S Spacing (in metres)
A Area to be planted (m2)

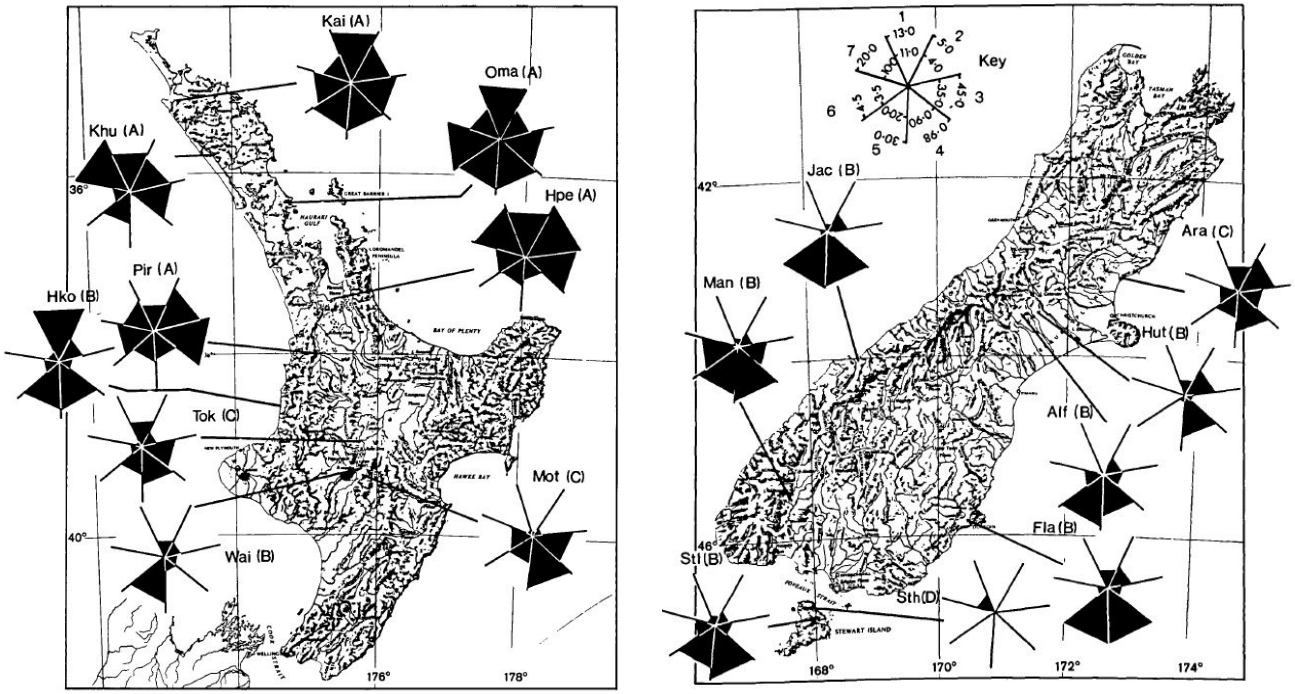

8. Where to get plants from?
• Nurseries that use ecosourcing principles
• Collection of seed from wild plants in wild areas away from gardens and pass on to nursery if no nurseries in area.
• Do not dig up seedling from your garden or other wetlands.



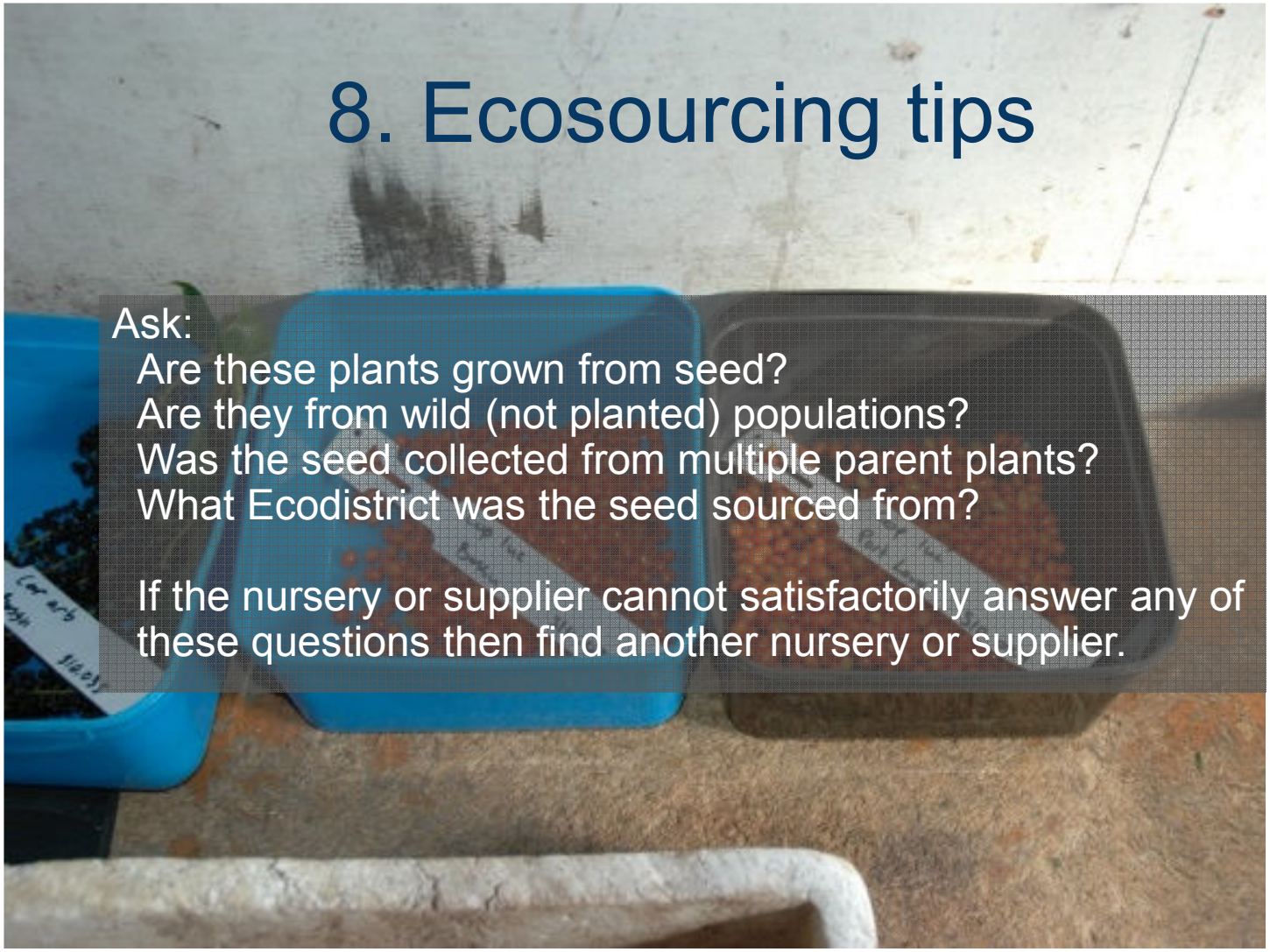
8. Ecosourcing

- Planting plants that are (or once were) found growing in similar conditions in the local area
- Collection of seed from wild plants in wild areas away from gardens
- Plants grown from seed – <u>not</u> from cuttings or division
- Plants that represent a wide genetic cross section.

8. Morphological diversity of mānuka



Yin Ronghua , A. F. Mark & J. B. Wilson (1984) Aspects of the ecology of the indigenous shrub Leptospermum scoparium (Myrtaceae) in New Zealand, New Zealand Journal of Botany, 22:4, 483-507

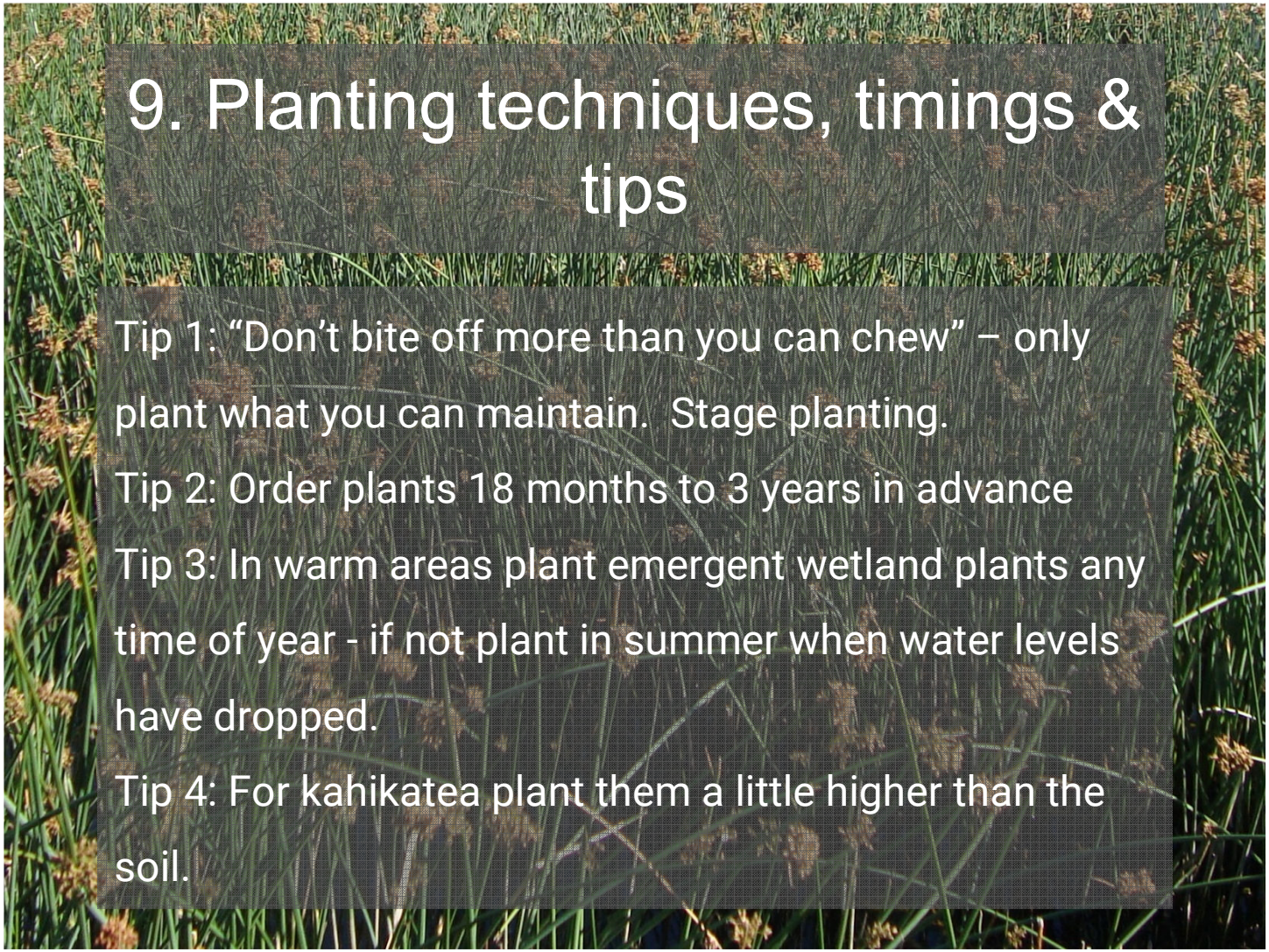


8. Ecosourcing tips

Ask:

Are these plants grown from seed?
Are they from wild (not planted) populations?
Was the seed collected from multiple parent plants?
What Ecodistrict was the seed sourced from?

If the nursery or supplier cannot satisfactorily answer any of these questions then find another nursery or supplier.



9. Planting techniques, timings & tips

Tip 1: “Don’t bite off more than you can chew” – only plant what you can maintain. Stage planting.

Tip 2: Order plants 18 months to 3 years in advance

Tip 3: In warm areas plant emergent wetland plants any time of year - if not plant in summer when water levels have dropped.

Tip 4: For kahikatea plant them a little higher than the soil.

10. Sources of information and help

Books
Regional or local councils
Nurseries
Local environmental groups & landowners
Mana whenua (local iwi or rūnanga)
Fish and game
Visit local wetlands

And… NWT Symposia