

Natural Basingstoke

Winter Tree & Shrub Identification

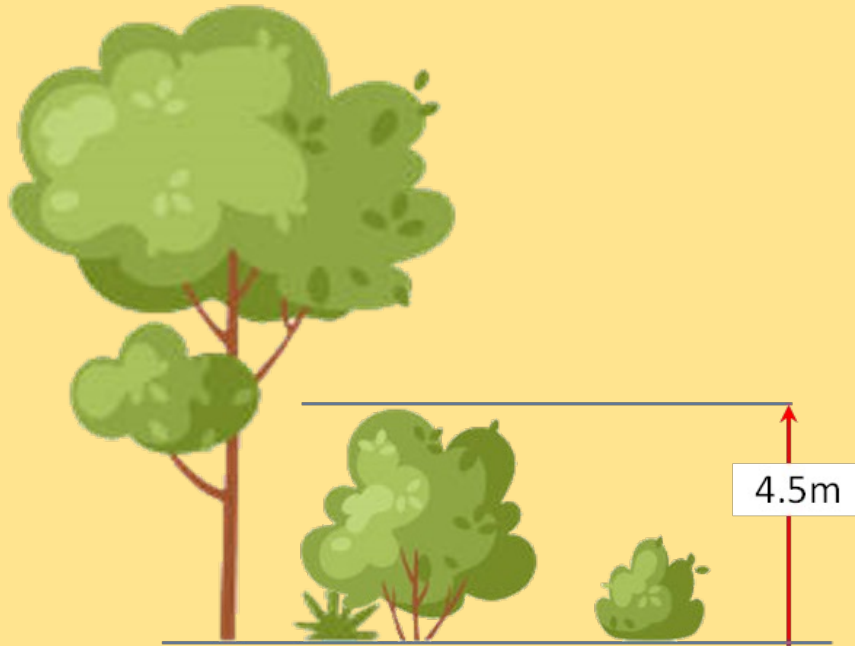


- Course Lead: Steve Goodwin (Natural Basingstoke, Advisor Board member for Invertebrates)
- This course assumes no previous knowledge!
- This course material is based on the FSC's "A Guide to the Identification of Deciduous Broad-leaved Trees in Winter"
- The Visual Key provided (Appendix A) is a summary guide – the FSC Guide has much more detail
- There is a Glossary at Appendix B

- We will have a brief run through the key
- You will have the opportunity to handle labelled specimens – using the key
- We will have a brief informal communal exam with unlabelled specimens!
- Into Down Grange Meadow to see what we can find and ID

- We will cover trees and woody shrubs that are likely to occur on our local conservation sites
- These can be:
 - Native
 - Naturalised
 - Introduced
- We will NOT cover:
 - Evergreen or partially evergreen species
 - “Ornamental” species that may have been introduced
 - Small shrubs, e.g., Bramble
- Note – The FSC Guide covers the whole of the UK – so there will be species that may not occur locally

- Difference between Trees and Shrubs



Points to Note

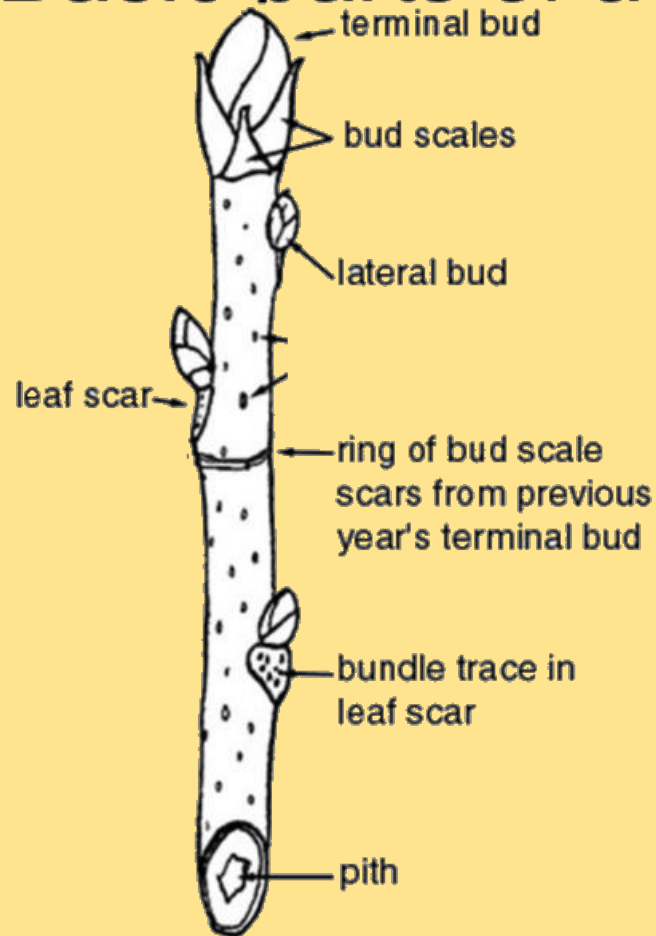
- All specimens need to be one or no more than two years old
 - Have a terminal bud(s) and a couple of lateral buds
 - If any fruit is still attached, these need to be noted:
 - Berry structure, individuals vs cluster
 - Size, colour of the state of the fruit, shiny & fresh, dried or shriveled
 - Any Catkins need to be noted
- Try to avoid fallen twigs, as buds and their scales can get knocked off
- Make a note of the bark from the main trunk
- Also make a note of habitat, ground conditions, soil, etc.
- A hand lens is useful, but not essential
- A good book on flora is also useful, but not essential

The Specimens

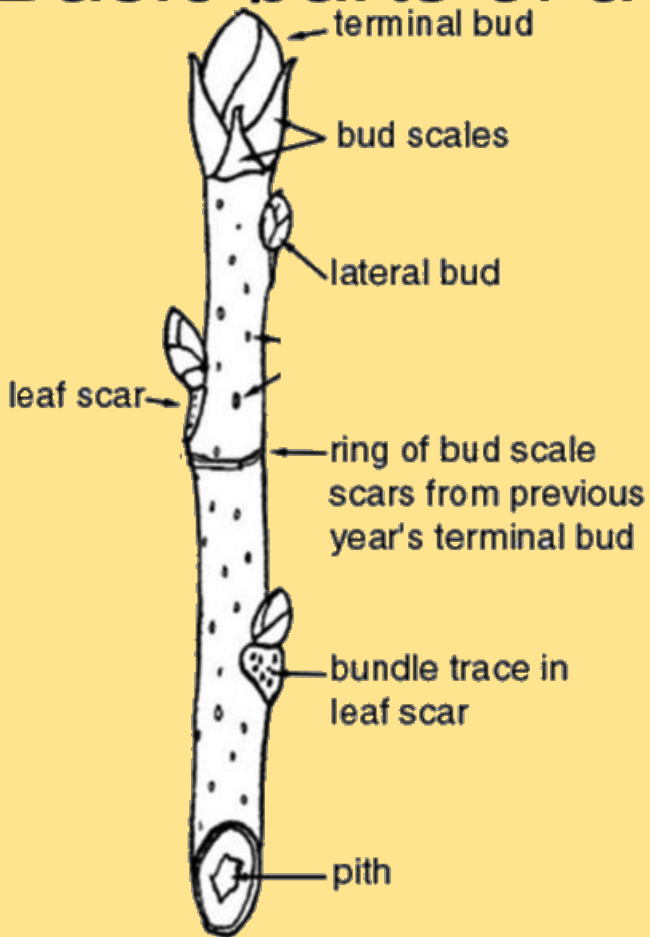
- Collected from a variety of sites
- 2-4 specimens per species
 - Illustrate a range of ages within a species
- Species can be collected together into four groups:
 - Opposite buds (White)
 - Spikey (Red)
 - Alternate &/or Spiral buds with few bud scales (Yellow)
 - Alternate &/or Spiral buds with more bud scales (Silver)

Naming of Parts - 1

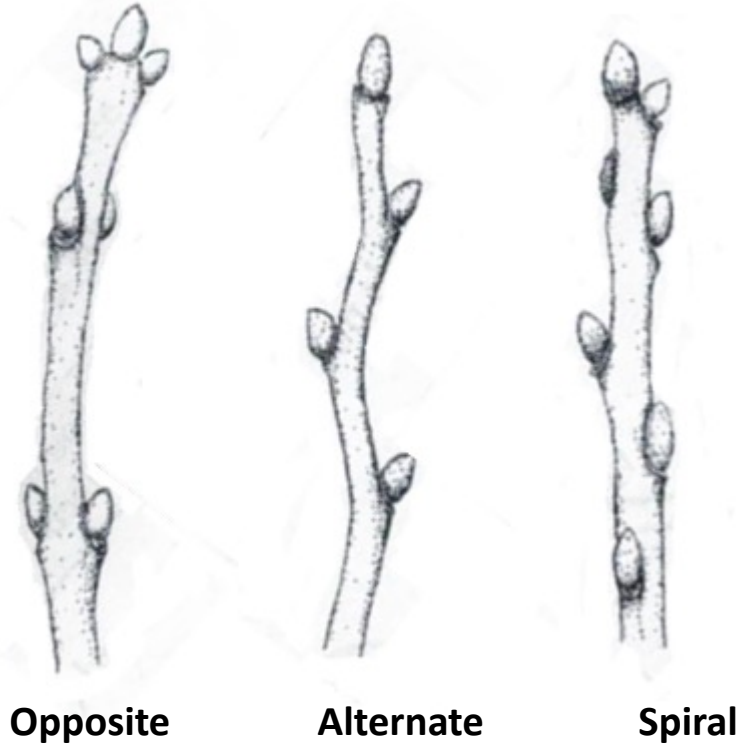
Basic parts of a twig



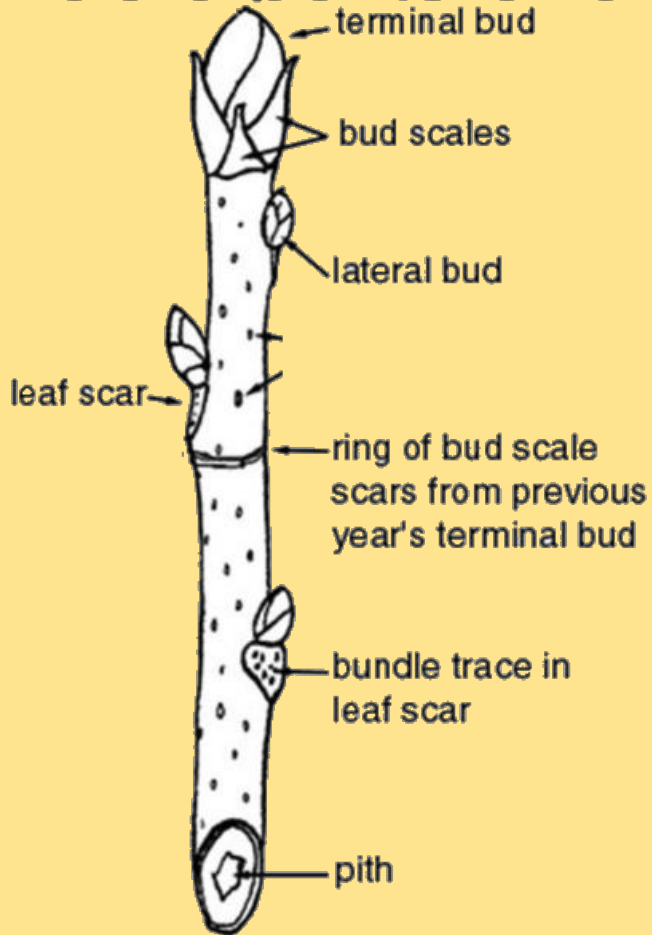
Basic parts of a twig



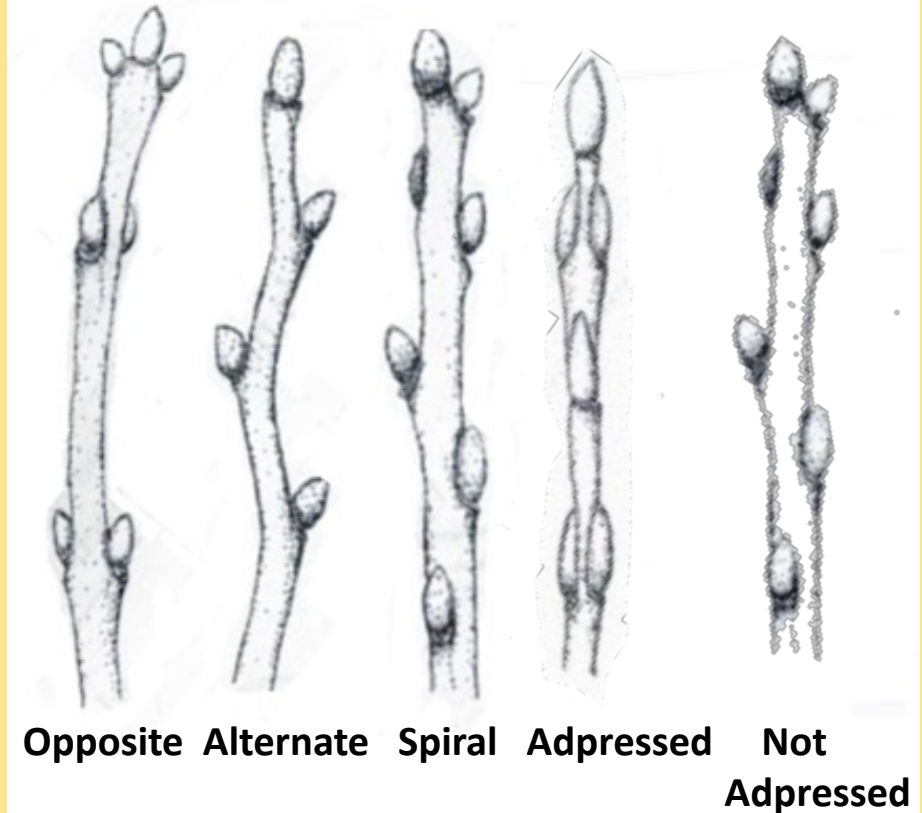
Bud Morphology



Basic parts of a twig

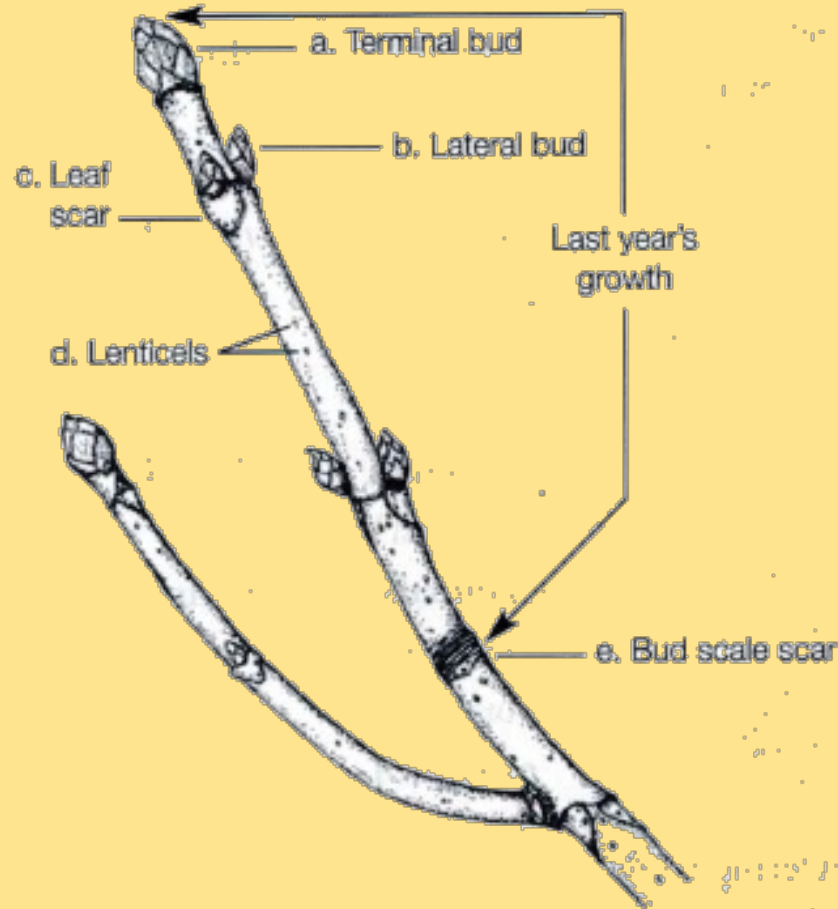


Bud Morphology



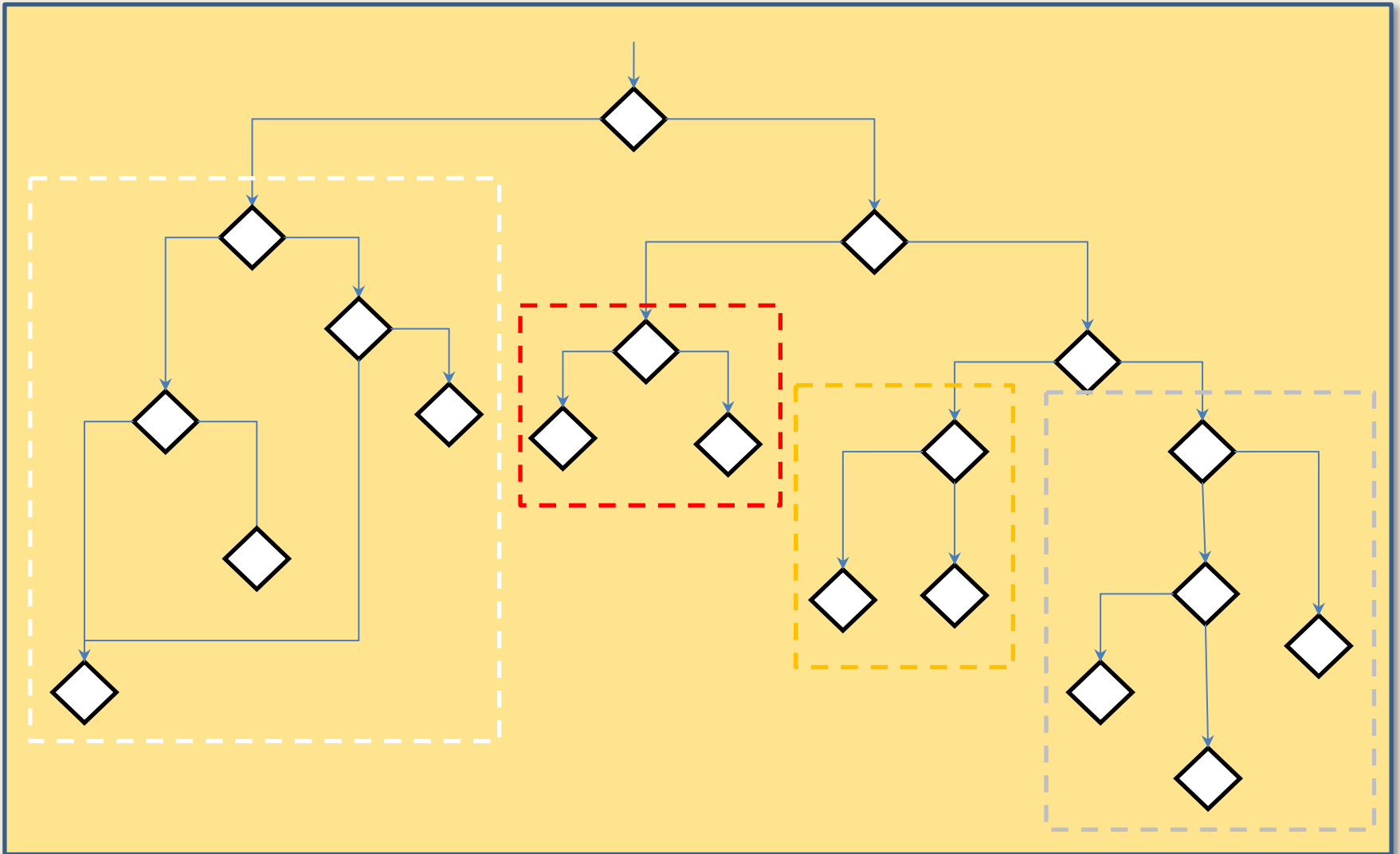
Naming of Parts - 4

Twig Morphology

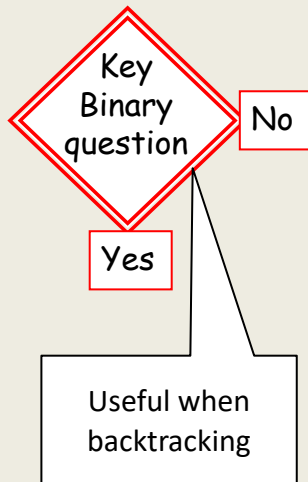
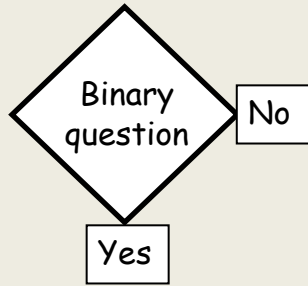


- Two common shrubs
- Walkthrough the analysis techniques
 - **Elder**
 - **Hazel**

The Visual Key



The Visual Key Support



Additional descriptions

Additional information

Summary descriptions

Story So far – Useful when backtracking

Warnings

Candidate Species

Qualifying descriptions of twigs and bark

Common name (*Genus species*)

Collections of related Species



Come to the end of a section – May need to backtrack and review previous answers

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Linking flows on subsequent pages

Appendix A: The Visual Key

Bud Morphology

START

Are Buds Opposite?

Buds are Alternate or Spiral

See Panel 4

1

BEWARE - None of these illustrations are to (a consistent) scale!



Yes

Bud Scales?

Buds naked, lateral buds < 2mm



Proto-leaves

Young twigs red and hairless

Dogwood
(Cornus sanguinea)

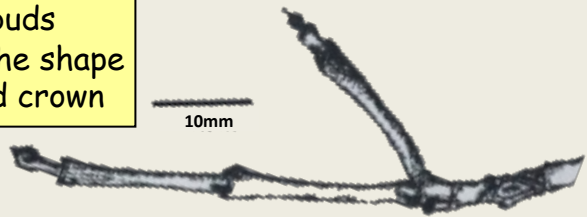
10mm

Twigs pale brown, often hairy

Wayfaring tree
(Viburnum lantana)

Terminal buds sometimes in the shape of a flattened crown

10mm



One or more bud scales or ragged, lateral buds > 2mm

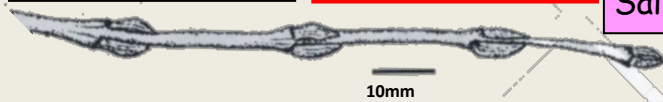


Buds Addressed?

Tip of bud touching stem

More than two bud scales

One or two visible bud scales



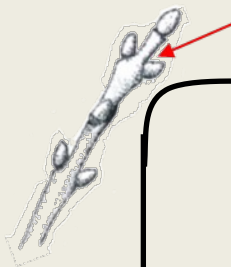
If in doubt assume not addressed

Buckthorn
(Rhamnus cathartica)

10mm

Purple Willow
(Salix purpurea)

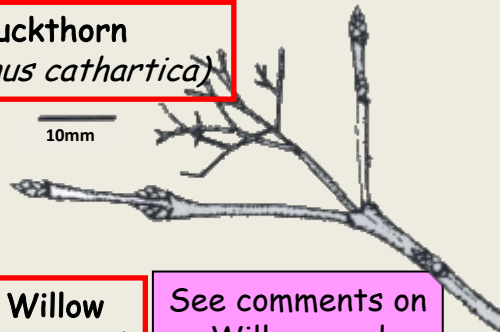
10mm



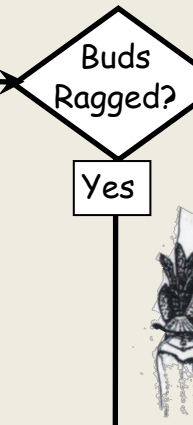
Gap between tip of bud and stem

Elder
(Sambucus nigra)

10mm



See comments on Willows and Sallows on panel 6

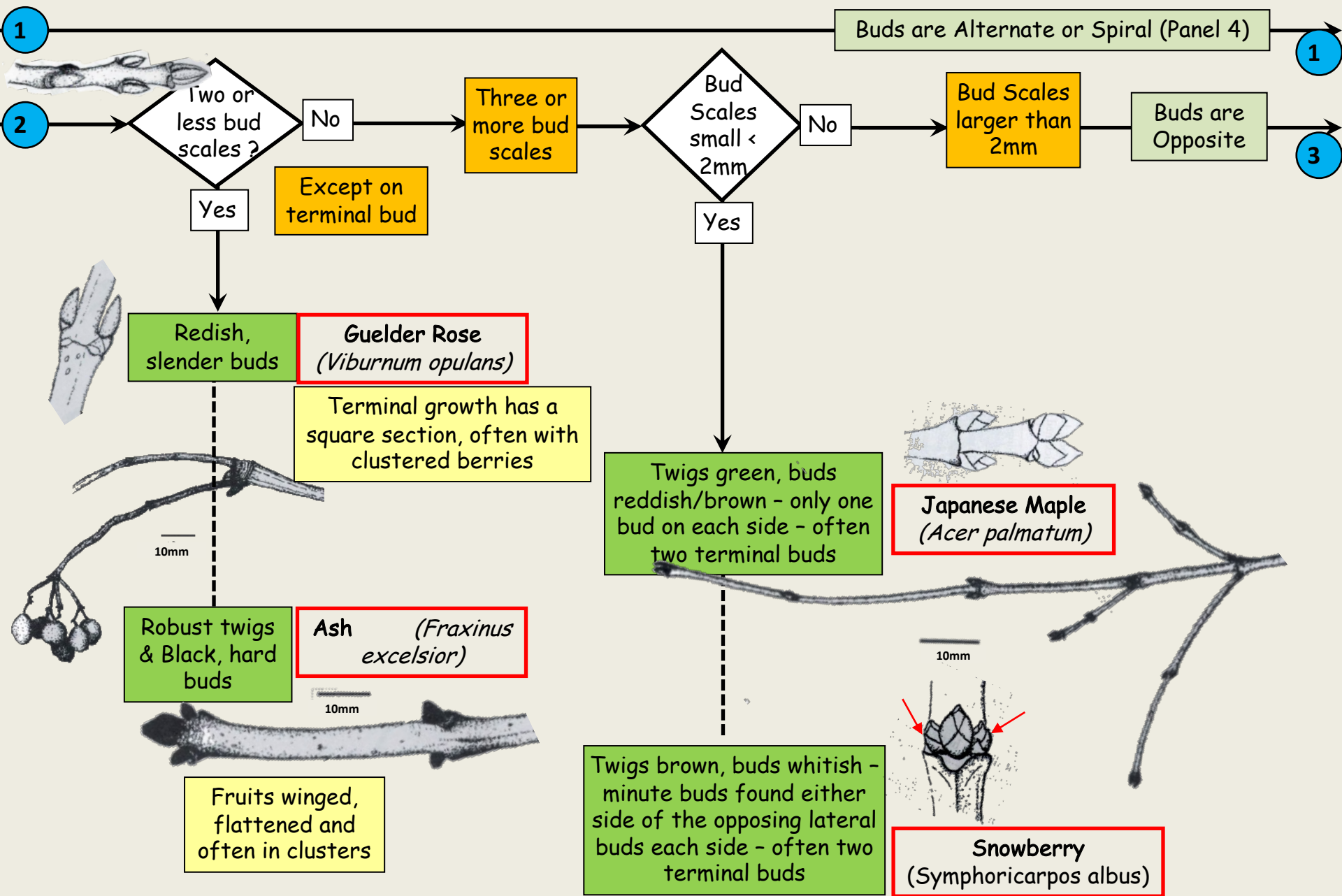


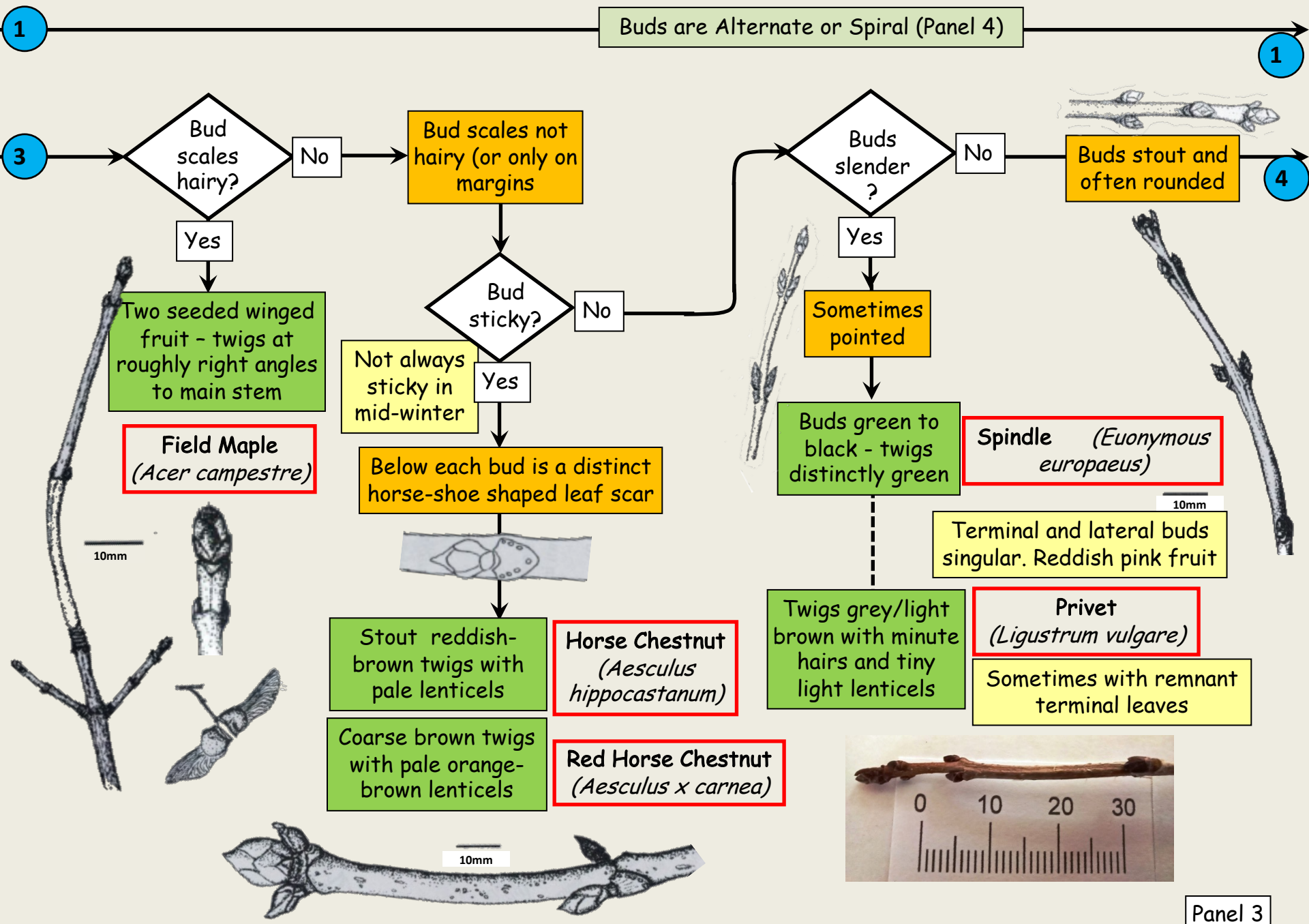
Buds Ragged?

No

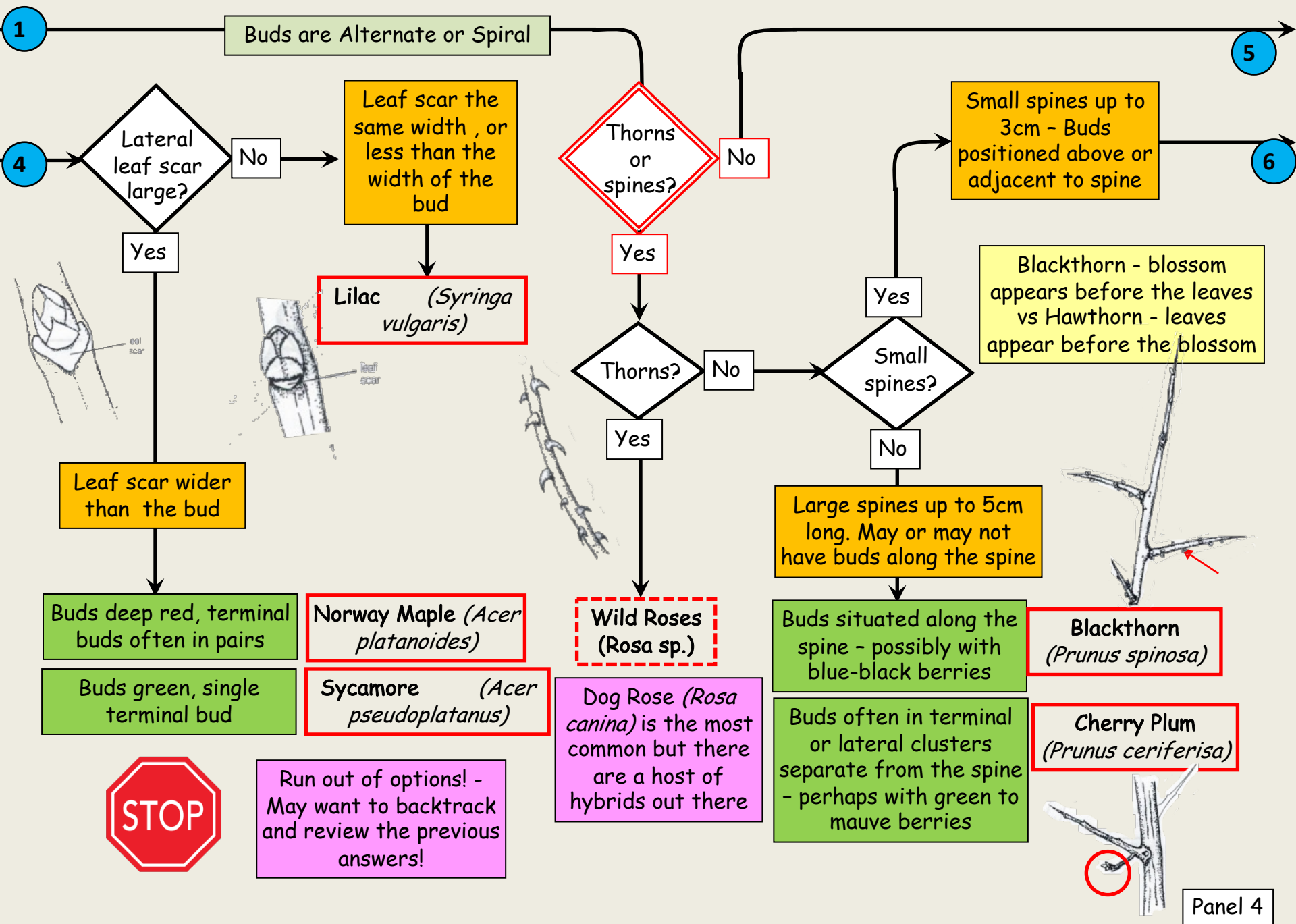
2

Panel 1

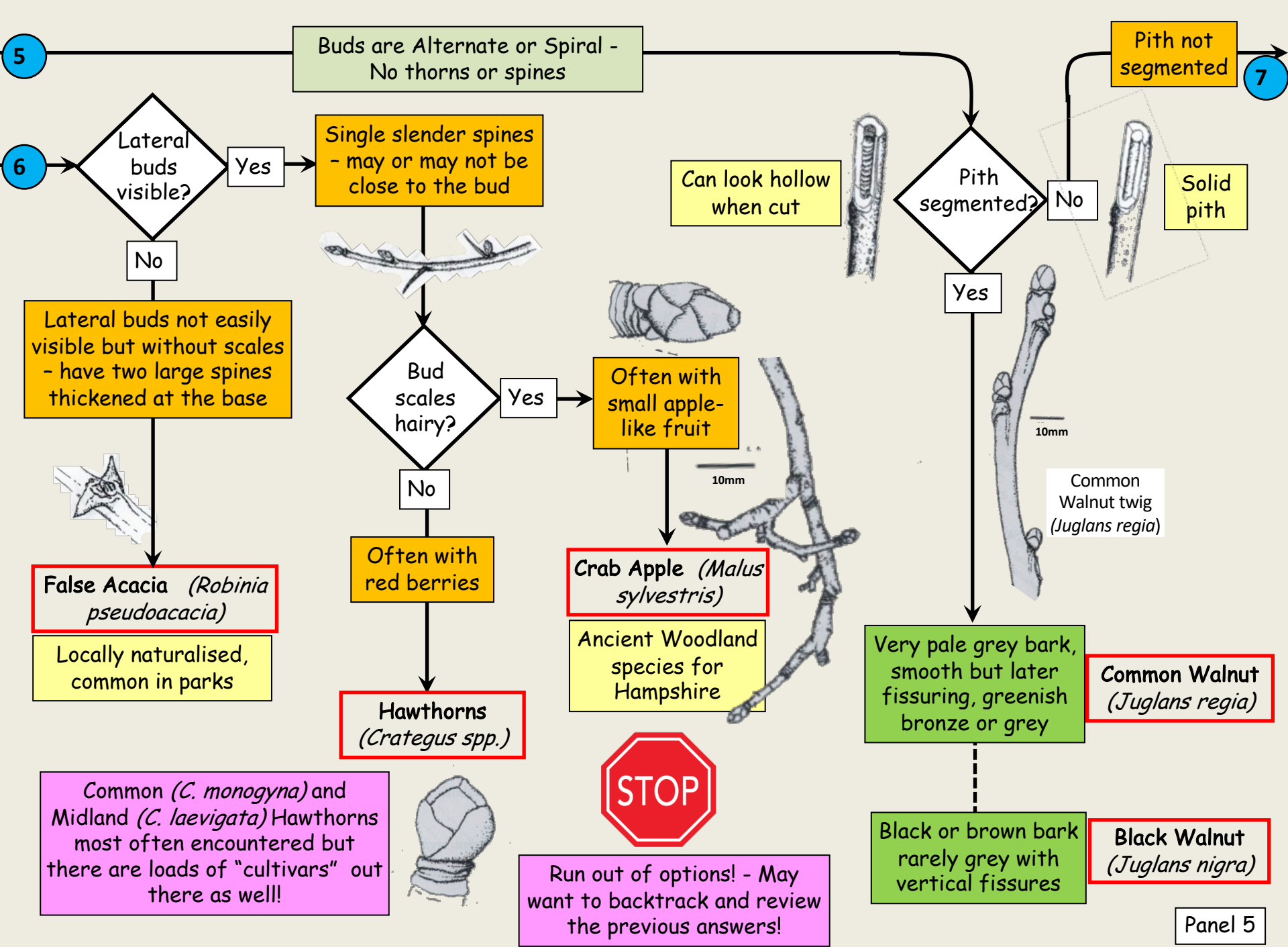


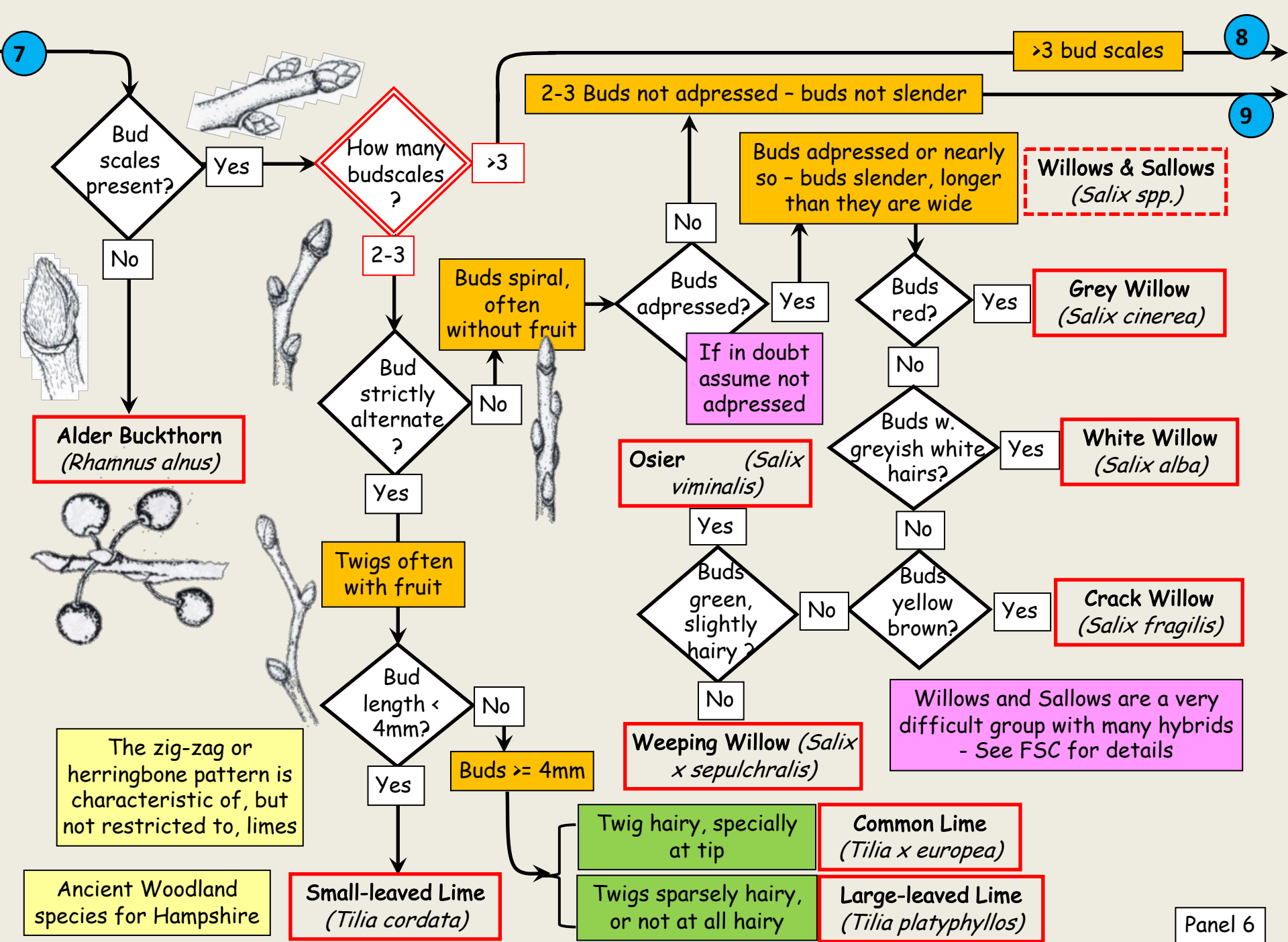


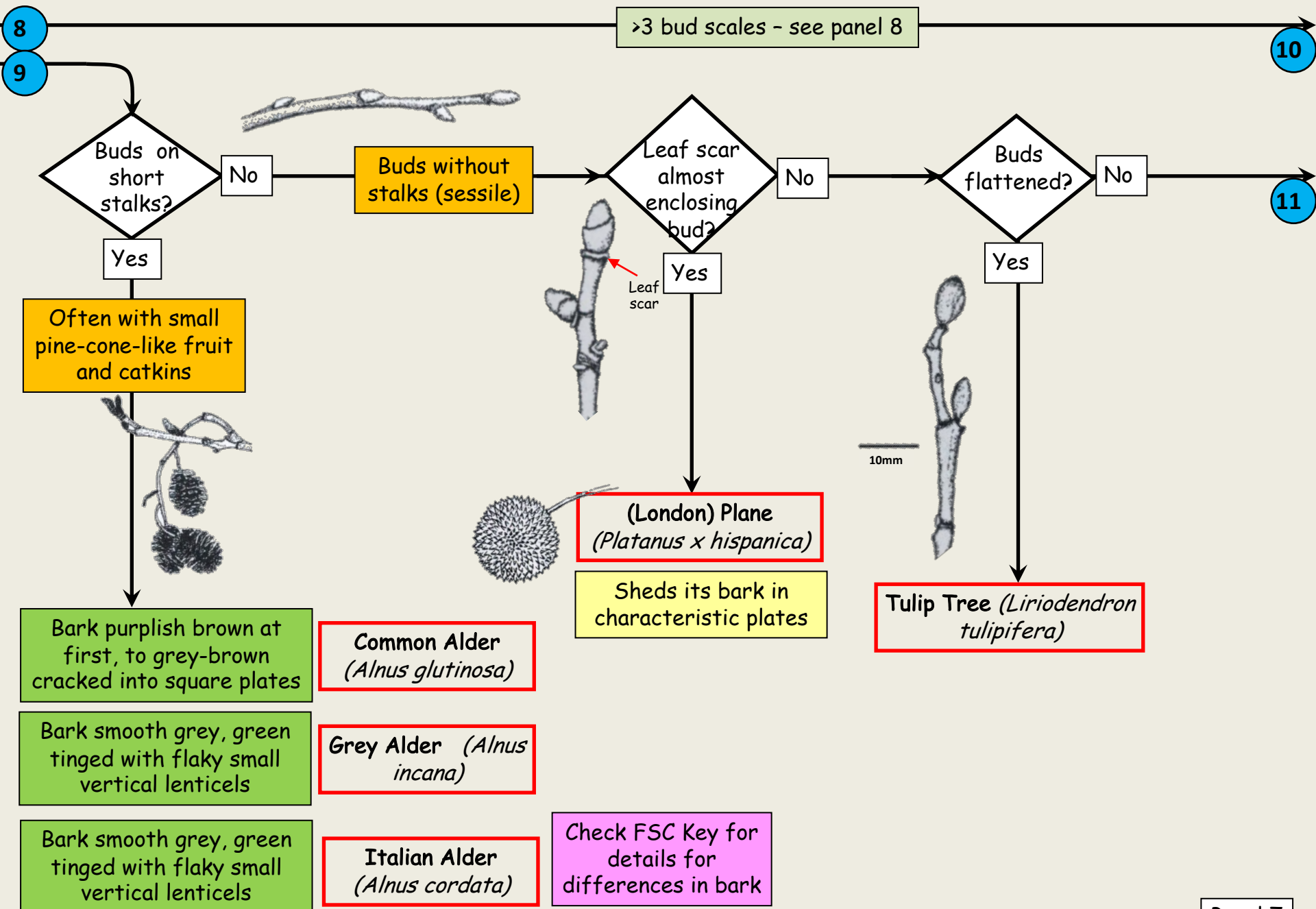
Panel 3

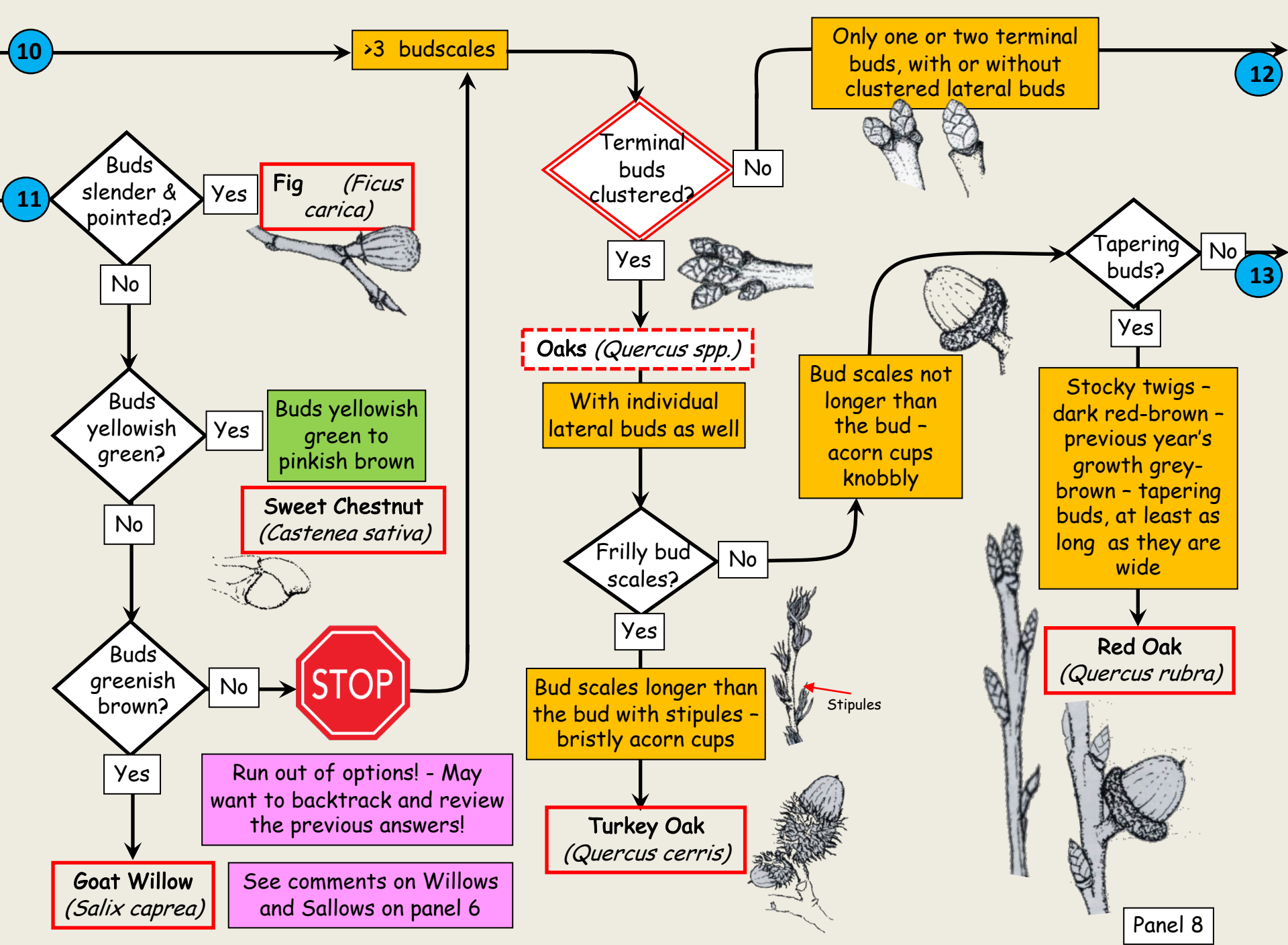


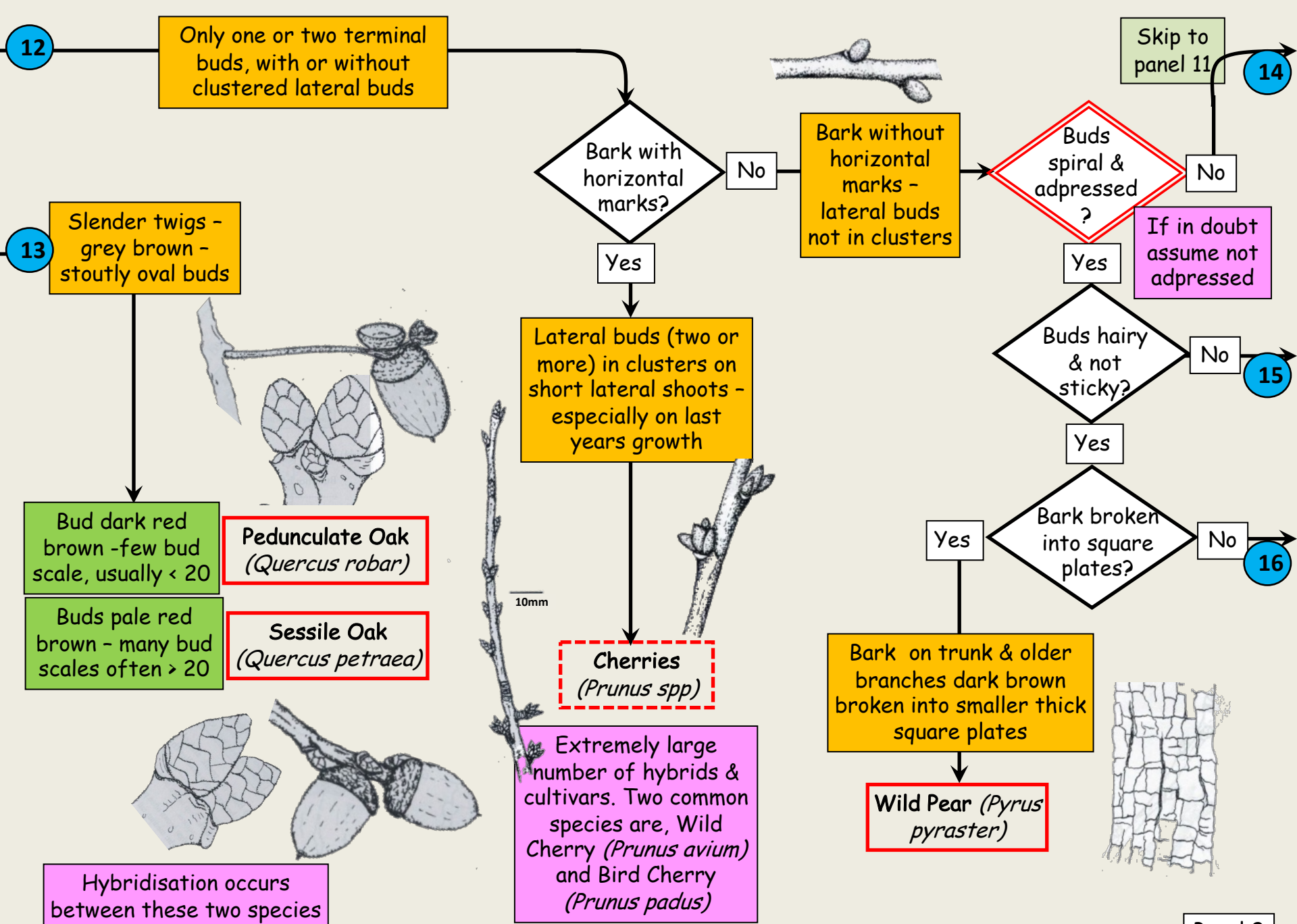
Panel 4

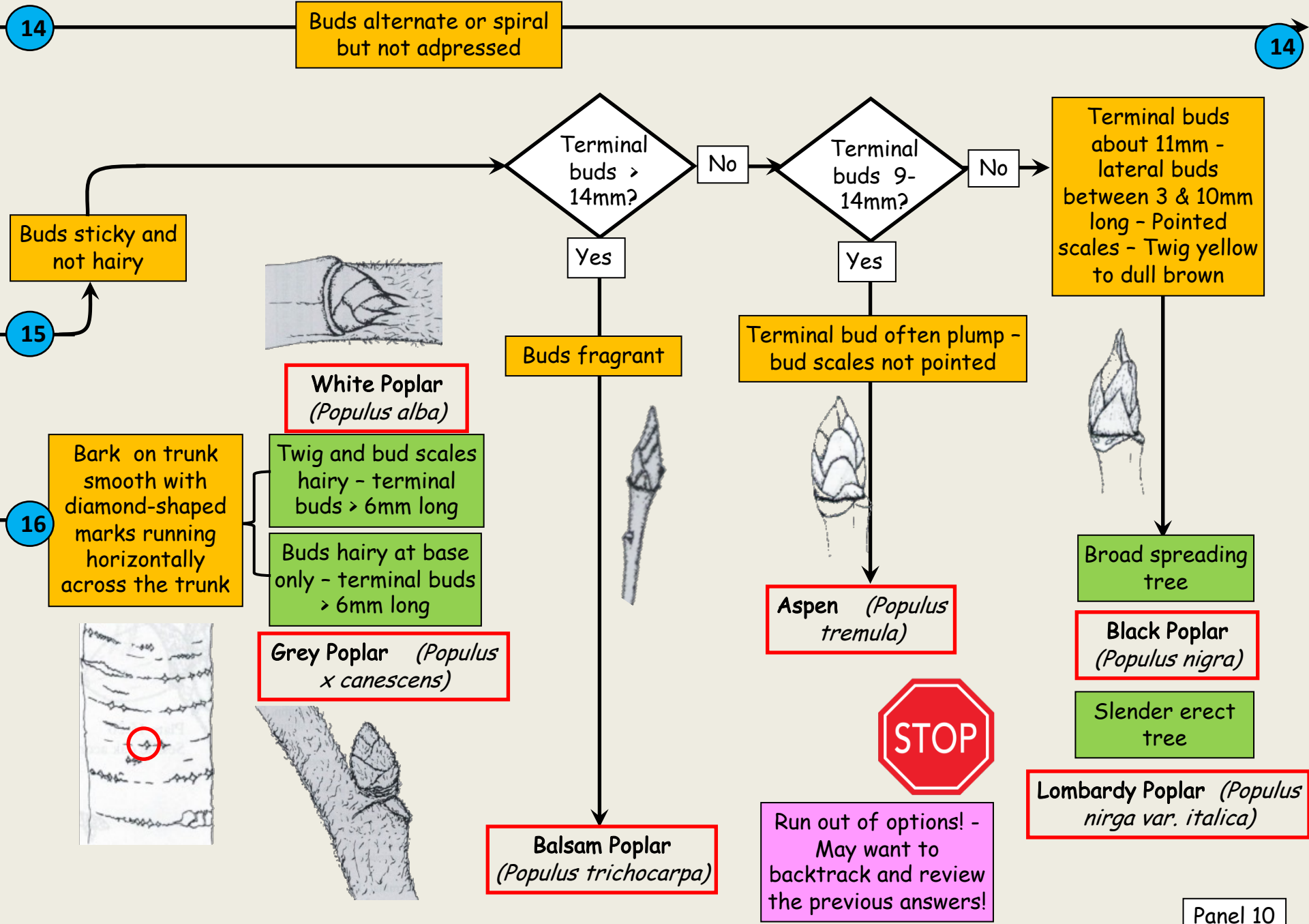










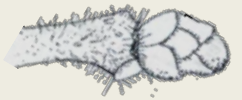


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Buds slender & pointed?

No

Buds spherical, flattened or pear-shaped - almost as long as they are wide



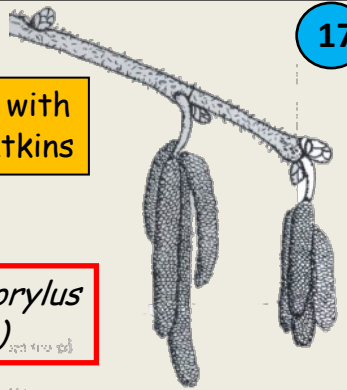
No

Buds flattened (raisins)?

Yes

Buds green - with or without catkins

Hazel (*Corylus avellana*)



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Yes

Buds at least as long as they are wide

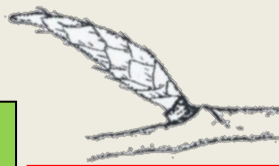


Catkins present?

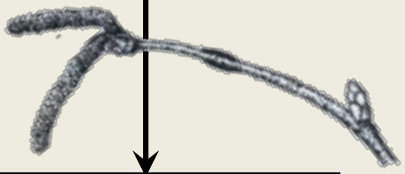
No

Buds straight and pointed - NEVER addressed - scales brown to dark - four-lobed spiky seed case

Common Beech (*Fagus sylvatica*)

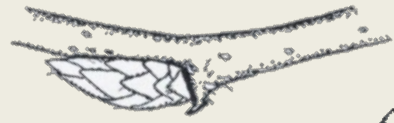


Yes



Buds slightly curled or pressed against the stem - scales green with brown edges - usually ribbed nutlets hanging in clusters

Hornbeam (*Carpinus betulus*)



Terminal twigs often hairy - NEVER with whitish warts

Downy Birch (*Betulus pubescens*)

Terminal twigs NEVER hairy - always with whitish warts

Silver Birch (*Betulus pendula*)

Buds rounded or pear-shaped - without catkins - twigs not always hairy

Bud scale or edge hairy?

No

Yes

Buds not spherical

Terminal buds <= 5mm?

No

Yes

Buds red to pinkish?

No

Yes

Crab Apple (*Malus sylvestris*)



See Panel 4 and FSC Key for more details

Only edges of bud scale hairy

Whole of bud scale (including edges) hairy

Terminal buds longer than 5mm

Buds brown to dark brown

Bud and slender twig sparsely hairy covered in orange hairs - bud chocolate brown and off centre form the leaf scar - bud 3-5mm long

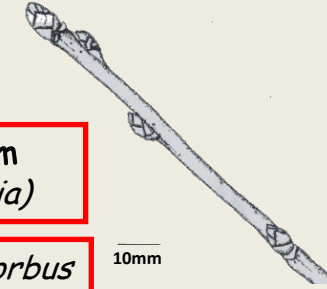
Bud and stout twig densely hairy covered in orange hairs - bud red to dark brown - bud <3mm long

Whitebeam (*Sorbus aria*)

Rowan (*Sorbus aucuparia*)

10mm

10mm

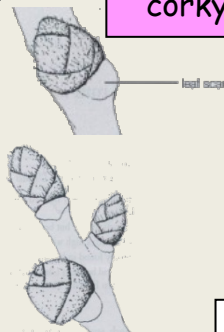


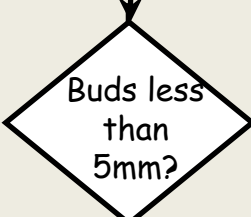
Elms - a difficult group but often have "Herringbone" branches and "corky" wings



Wych Elm (*Ulmus glabra*)

English Elm (*Ulmus procera*)

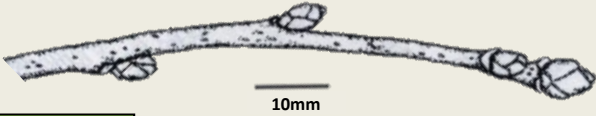




No

Buds rounded scales green with or without brown tips - no semi-circular leaf scar

Wild Service
(Sorbus torminalis)



Buds pointed - scales brownish to red/green - leaf scar semi-circular

Black Mulberry
(Morus nigra)

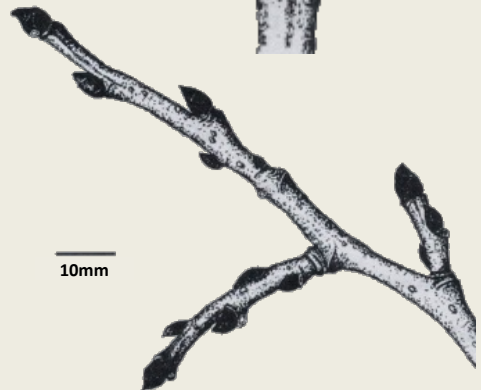


Yes

Pinkish, red buds

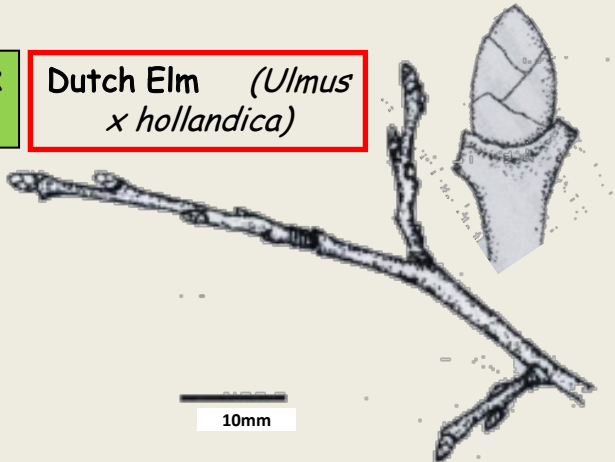
Hawthorns
(Crataegus spp.)

See Panel 4 and FSC Key for more details
(Also check for spines)



Buds brown/dark brown

Dutch Elm *(Ulmus x hollandica)*



May want to backtrack and review the previous answers!

Appendix B: *Glossary*

Glossary

Adpressed – buds lying flat against the twig.

Alternate – arranged successively on opposite side of the stem.

Auxiliary – bud which is borne on or from the side of the twig (See Lateral).

Bark – outermost tissue of the stem.

Bud – compacted undeveloped shoot – can develop into a shoot, a flower or a leaf.

Bud Scale – scale that covers and protects the developing bud.

Burr – a woody outgrowth from the bark of certain trees.

Catkin – a hanging spike of small flowers.

Decussate – each pair of opposite buds are set at 90° to the pair above and below. (See also *Spiral*.)

Epicormic – new shoots appearing directly from the trunk.

Fastigate – each individual twig follows and upward trend of the main stem so there are no large branches, and the tree never forms a true crown.

Fruit – the ripened ovary of a flower formed following fertilisation of the ovule. The product of a single flower which may consist of a one or more seeds.

Glabrous – hairless.

Inflorescence – all the flowers on one twig.

Internode – the length of stem between two nodes.

Lateral – bud which is borne on or from the side of the twig.

Lenticel – a warty or corky mark on the surface of branches or twigs which provides a pore for air to reach the tissue beneath the bark layer.

Native – considered to have to have been present in Britain before the land bridge to the Continent was flooded.

Naturalised – of foreign origin but established and reproducing itself as a native.

Nutlet – a one-seeded part of a fruit which breaks off at maturity.

Node – point at which a leaf joins the stem.

Ovoid – egg shaped (three dimensional).

Petiole – the stalk of a leaf.

Pubescent – a covering of fine hairs.

Pollard – lopping of a tree about 2-3 metres above ground, to encourage new shoots.

Pith – the central tissue of the stem.

Pedunculate – carried on a peduncle, or stalk.

Opposite – growing in pairs at the same level on opposite sides of the stem.

Ovule – female part of the flower which, after fertilisation, forms the seed.

Sessile – unstalked (without a peduncle).

Spine – a sharp, stiff woody outgrowth, usually not greatly widened at the base of thorn.

Spiral – an arrangement of buds in an elongate circle around the stem.

Stipules – a leaf-like growth at the base of the leaf-stalk.

Terminal – bud borne at the end of the stem

Thorn – a fleshy outgrowth, usually widened at the base

Warts – caulms or growth found on twigs or branches