**WOODLAND SURVEY**

**TRAINING COURSE NOTES**

# WOODLAND SURVEY TECHNIQUES

Two popular ways of surveying woods, Phase I and NVC (Phase II)

**Phase I**

Best way of mapping is to use aerial imagery followed by ground truthing

Woodland defined as ‘vegetation dominated by trees more than 5m high when mature, forming a distinct, although sometimes open, canopy’

**Categories;**

Broadleaved - less than 10% conifer

Coniferous - less than 10% broadleaved

Mixed - 10-90% of each

Large blocks should be mapped separately wherever possible

Species lists should include lists for canopy, understory and ground flora.

Distinction must be made between semi-natural and plantation. Most woods will fit into the semi-natural category, as this would include woodland with planted standards, mature coppice, under planted woods.

More info http://bit.ly/1QxCgu2

**NVC**

**Methodology**

Key to NVC is to map stands of homogenous vegetation, then take quadrats within each stand.

1. Work out where the stands of homogenous vegetation are.
2. Establish a canopy plot of 50x50m. Use a compass to orientate sides. For a permanent quadrat where orientation is vital measure out a diagonal of 70.71m and makes sides tight. Record all canopy species. Plot can be different dimensions to fit vegetation.
3. Measure out a 10x10m square and record understory (scrub) species (diagonal 14.14m).
4. Measure out a 4x4m square and record all species (diagonal 5.65m). If there is variation within the 50x50m plot then repeat these quadrats
5. Combine all data and analyse

**Habitat types (these are further divided into 72 sub-communities)**

W1 Salix cinerea - Galium palustre woodland

W2 Salix cinerea - Betula pubescens - Phragmites australis woodland

W3 Salix pentandra - Carex rostrata woodland

W4 Betula pubescens - Molinia caerulea woodland

W5 Alnus glutinosa - Carex paniculata woodland

W6 Alnus glutinosa - Urtica dioica woodland

W7 Alnus glutinosa - Fraxinus excelsior - Lysimachia nemorum woodland

W8 Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland

W9 Fraxinus excelsior - Sorbus aucuparia - Mercurialis perennis woodland

W10 Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland

W11 Quercus petraea - Betula pubescens - Oxalis acetosella woodland

W12 Fagus sylvatica - Mercurialis perennis woodland

W13 Taxus baccata woodland

W14 Fagus sylvatica - Rubus fruticosus woodland

W15 Fagus sylvatica - Deschampsia flexuosa woodland

W16 Quercus spp. - Betula spp. - Deschampsia flexuosa woodland

W17 Quercus petraea - Betula pubescens - Dicranum majus woodland

W18 Pinus sylvestris - Hylocomium splendens woodland

W19 Juniperus communis ssp. communis - Oxalis acetosella woodland

W20 Salix lapponum - Luzula sylvatica scrub

W21 Crataegus monogyna - Hedera helix scrub

W22 Prunus spinosa - Rubus fruticosus scrub

W23 Ulex europaeus - Rubus fruticosus scrub

W24 Rubus fruticosus - Holcus lanatus underscrub

W25 Pteridium aquilinum - Rubus fruticosus underscrub

More info <http://bit.ly/1QDzBoL>

Typical Woodland Species

|  |  |  |  |
| --- | --- | --- | --- |
| **Forbs** |  | **Graminoids** |  |
| *Adoxa moschatellina* | Moschatel | *Anthoxanthum odoratum* | Sweet Vernal Grass |
| *Ajuga reptans* | Bugle | *Brachypodium sylvaticum* | False Brome |
| *Allium ursinum* | Ramsons | *Carex pendula* | Pendulous Sedge |
| *Anemone nemorosa* | Wood Anenome | *Dactylis glomerata* | Cock's-foot |
| *Angelica sylvestris* | Wild Angelica | *Deschampsia cespitosa* | Tufted Hair-grass |
| *Clematis vitalba* | Traveller's-joy | *Melica uniflora* | Wood Melick |
| *Conopodium majus* | Pignut | *Poa nemoralis* | Wood Meadow-grass |
| *Euphorbia amygdaloides* | Wood Spurge | *Poa pratensis* | Smooth Meadow-grass |
| *Ficaria verna* ssp. *fertilis* | Lesser Celandine |  |  |
| *Fragaria vesca* | Wild Strawberry | **Ferns** |  |
| *Galium aparine* | Cleavers | *Pteridium aquilinum* | Bracken |
| *Geranium robertianum* | Herb-Robert | *Dryopteris dilatata* | Broad Buckler-fern |
| *Geum urbanum* | Wood Avens |  |  |
| *Glechoma hederacea* | Ground Ivy | **Bryophytes** |  |
| *Hyacinthoides non-scripta* | Bluebell | *Atrichum undulatum* | Common Smoothcap |
| *Ilex aquifolium* | Holly | *Brachythecium rutabulum* | Rough-stalked Feather-moss |
| *Lamiastrum galeobdolon* | Yellow Archangel | *Campylopus atrovirens* | Bristly Swan-neck Moss |
| *Lonicera periclymenum* | Honeysuckle | *Cryphaea heteromalla* | Lateral Cryphaea |
| *Melampyrum pratense* | Common Cow-wheat | *Eurhynchium striatum* | Common Striated Feather-moss |
| *Mercurialis perennis* | Dog's Mercury | *Frullania dilatata* | Dilated Scalewort |
| *Neottia ovata* | Common Twayblade | *Homalothecium lutescens* | Yellow Feather-moss |
| *Orchis mascula* | Early-purple Orchid | *Hypnum cupressiforme* | Cypress-leaved Plait-moss |
| *Oxalis acetosella* | Wood-sorrel | *Isothecium myosuroides* | Slender Mouse-tail Moss |
| *Polygonatum multiflorum* | Solomon's-seal | *Kindbergia praelongum* | Common Feather-moss |
| *Potentilla sterilis* | Barren Strawberry | *Metzgeria furcata* | Forked Veilwort |
| *Sanicula europaea* | Sanicle | *Neckera crispa* | Crisped Neckera |
| *Stachys sylvatica* | Hedge Woundwort | *Ulota crispa* | Crisped Pincushion |
| *Stellaria holostea* | Greater Stitchwort |  |  |
| *Tamus communis* | Black Bryony |  |  |
| *Veronica chamaedrys* | Germander Speedwell |  |  |
| *Veronica montana* | Wood Speedwell |  |  |
| *Vicia sativa* | Common Vetch |  |  |
| *Viola riviniana* | Common Dog-violet |  |  |
|  |  |  |  |
| **Trees and shrubs** |  |  |  |
| *Corylus avellana* | Hazel |  |  |
| *Crataegus monogyna* | Hawthorn |  |  |
| *Cornus sanguinea* | Dogwood |  |  |
| *Ilex aquifolium* | Holly |  |  |
| *Quercus robur* | Pedunculate Oak |  |  |
| *Ruscus aculeatus* | Butcher's-broom |  |  |



*Luzula forsterii* (narrower basal leaves, flowers droop to one side)

*Calamagrostis epigejos*

(Bulky tussocks, leaves with sharp serrated edges and reed-like flowers)

*Poa nemoralis* (narrow leaves craped on ground, tramlines visible with lens)

*Deschampsia* *cespitosa* (tough harshly toothed leaves)

*Agrostis stolonifera*

(Occasionally creeping, spearlike leaves and ragged ligule)

*Milium effusum*

(Tall grass with large delicate panicles resembling Millet)

*Melica uniflora*

(Attractive nodding heads, looking like rice. Top of sheath formed into single bristle)

*Holcus mollis*

(Pale green, soft leaves and hairy knees)

*Bromopsis ramosa*

(Bristly stems, long droopy branched heads)

*Schedonorus* *giganteus* (Giant Fescue)

(Huge, shiny broad leaves and purple auricles)

*Luzula pilosa*

(stiff stalks with flowers radiating in all directions)

*Luzula sylvatica* (tough, broad waxy leaves forming mats)

*Carex remota* (fine leaves, spread out spikelets and bract longer than stem)

*Carex sylvatica* (pale leaves, smaller version of pendula)

*Carex* *pendula* (large, fibrous leaves and drooping heads)

Sedge (tussock forming)

Normal looking grass

Drooping tussocky grass

Erect dark green tussocky grass

Narrow shiny prostrate grass

Large erect clumps

Hairy leaves, nut-like fruits

*Holcus lanatus*

(Pale grey-green, soft leaves and stripy pyjamas)

**WOODLAND**