

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

CONWY

CREUDDYN

Date of Notification: 17 December 2009

National Grid References: SH 800790, SH 802809, SH 806789,
SH 807796, SH 808793, SH 810796,
SH 811790, SH 811814, SH 817798,
SH 817818 & SH 821794 (11 sections)

OS Maps: 1:50,000 Sheet number: 115 & 116
1:10,000 Sheet number: SH77NE, H78SE,
SH 87NW &
SH 88SW

Site Area: 179.2 ha

Description:

Creuddyn is of special interest for its botanical and entomological features; semi-natural woodland, calcareous grassland, rare vascular plant assemblage including spiked speedwell *Veronica spicata* and grassland invertebrate assemblage.

The site is on two parallel ridges lying in a north east to south west orientation. The northern ridge overlooks Llandudno and the southern overlooks Llandudno Junction. The bedrock is Carboniferous Limestone except for the south end of Coed Bron-Garth where older, Silurian Mudstones occur. The soils are very shallow and shallow well-drained loamy soils derived from the bedrock often on steep or very steep slopes. Glacial till is of infrequent occurrence but there are some areas of wind-blown sand (loess) on the plateau to the south of the summit of Nant-y-Gamar. Rock outcrops and limestone terraces and cliffs, either natural or in disused quarries, occur frequently. Along both ridges there are small scattered areas of limestone pavement, some of which is under yew *Taxus baccata* woodland. The site is dry and free-draining throughout apart from small springs at Pant-y-ffynnon, Marl Hall and Coed-y-Pistyll. At the latter, a watercourse separates the woodland from the A470 Llandudno Link Road. The two ridges are each largely in the altitude range of 30 to 100 metres above mean sea level, but the northern exceeds this height at Nant-y-Gamar (122m) and the summit at Mynydd Pant which attains 130m. The majority of the site has a south or south-east facing aspect. The principal north-facing slopes occur at Nant-y-Gamar and Pant-y-Wennol. The semi-natural woodland is mostly present on the steepest rocky slopes, with the grassland mostly on the less steep slopes - often in glades or small pastures surrounded by the woodland.

The combination of bedrock, soils, topography and bioclimatic conditions interacting with past and present human activities has given rise to the mosaic of plant communities present;

semi-natural woodland, dominated by either broadleaves or yew, and several open calcareous grassland communities with patches of heath and scrub.

The semi-natural woodland occupies the majority of both ridges and consists largely of ash *Fraxinus excelsior* and oak *Quercus petraea* high forest with occasional stands showing evidence of old coppice re-growth. Other woodland communities locally present are dominated by either yew or beech *Fagus sylvatica*. The latter has been planted where soils are deepest and slopes least. The non-native canopy species, sycamore *Acer pseudoplatanus* is of frequent occurrence throughout, having now largely supplanted the place of elm. Wych elm *Ulmus glabra* now occurs locally as an undershrub or isolated small trees, as large trees of this species died in the elm disease epidemic of the 1970s and 1980s. Small-leaved lime *Tilia cordata* is of only sporadic occurrence. Stands of secondary woodland, where grazing has been abandoned for several decades, occur along the southern ridge. These are of silver birch *Betula pendula* or scrubby oak with associated hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and gorse *Ulex europaeus* scrub. Fringes of these woodland stands or shady hedgerows support the nationally scarce ivy broomrape *Orobanche hederæ*, a parasite on ivy *Hedera helix*.

Other canopy species not locally native to the site, for example, larch *Larix* spp., Corsican pine *Pinus nigra* and evergreen oak *Quercus ilex*, occur scattered in the woodland reflecting past plantings and bird-sown seedlings. Appropriate woodland management is gradually eradicating these species.

The woodland understorey and shrub layer, in which hazel *Corylus avellana* is dominant, has a rich diversity of other species such as wych elm, hawthorn, holly *Ilex aquifolium*, spindle *Euonymus europaeus*, privet *Ligustrum vulgare*, dogwood *Cornus sanguinea* and the uncommon spurge laurel *Daphne laureola*. Yew also occurs here frequently as a small tree or sapling particularly on the rockiest parts where there is limestone pavement.

In the ash and oak woodland the herb layer is varied. Dog's mercury *Mercurialis perennis* and ivy are conspicuous components for most of the year. In the spring a rich vernal flora appears and this includes wood anemone *Anemone nemorosa*, sanicle *Sanicula europaea*, lords-and-ladies *Arum maculatum*, primrose *Primula vulgaris*, herb-Robert *Geranium robertianum*, enchanter's nightshade *Circaea lutetiana*, wood avens *Geum urbanum*, woodruff *Galium odoratum* and early-purple orchid *Orchis mascula*. Ramsons *Allium ursinum* carpet the ground on the spring-fed slopes of Marl Hall and Coed-y-Pistyll. Bluebell *Hyacinthoides non-scripta* flourishes on the less base-rich soils in Coed Bron-Garth. Temporary gaps in the canopy have their field layer overwhelmed by bramble *Rubus fruticosus* agg..

Where yew dominates the woodland over rock outcrops or limestone pavement, the shrub and herb layers are sparse with only a few scattered holly and spindle and patches of dog's mercury and ivy. Isolated trees of sycamore and oak frequently overtop the yew.

A dense stand of beech is present along the north side of Coed Gaer but elsewhere beech is present as scattered past forestry plantings in Marl Hall Wood and Coed Bron-Garth. In all instances the shrub layer beneath the beech canopy is very sparse and there is much leaf litter with only a few bryophytes such as *Mnium hornum*, *Isoetes macrospora*, *Hypnum cupressiforme* and *Ctenidium molluscum* on rock outcrops and where light filters to the ground.

Small parts of both ridges are occupied by grassland, where grazing is maintained by sheep and/or rabbits. Associated with the grassland is heath, comprising heather *Calluna vulgaris*, bell-heather *Erica cinerea* and western gorse *Ulex gallii*. Where grazing intensity is least or, either in areas of lesser grazing intensity or where burning or cutting are no longer practised, some of the heath is becoming overtaken by an unwelcome succession to scrub of either hawthorn or blackthorn intermixed with gorse and young trees of silver birch, ash and sycamore.

An open short turf amongst rock outcrops and bare ground occupies the rockiest and thinnest soils on the drought-prone edges and tops of the south-facing limestone cliffs and steepest slopes. This contains sheep's fescue *Festuca ovina*, crested hair-grass *Koeleria macrantha*, meadow oat-grass *Avenula pratensis* and quaking-grass *Briza media* with abundant herbs that include wild thyme *Thymus polytrichus*, salad burnet *Sanguisorba minor*, carline thistle *Carlina vulgaris*, common rock-rose *Helianthemum nummularium*, kidney vetch *Anhyllis vulneraria* and the nationally scarce hoary rock-rose *Helianthemum oelandicum* ssp. *incanum*. Mosses such as *Weissia controversa* and *Trichostomum brachydontium* are also common in this short turf.

A closed sward of grasses and sedges occupies the less steep slopes away from cliff and crag tops where the soils are of moderate depth. This is the most extensive of the grassland communities present. It includes sheep's fescue, crested hair-grass, quaking grass, common bent *Agrostis capillaris*, spring sedge *Carex caryophyllea* and glaucous sedge *Carex flacca* with the herbs common rockrose, salad burnet, wild thyme, common bird's-foot-trefoil *Lotus corniculatus*, lady's bedstraw *Galium verum*, dropwort *Filipendula vulgaris*, and harebell *Campanula rotundifolia* the most frequent of the many species present. Mosses common in this sward include *Rhytidiadelphus squarrosus*, *Hypnum lacunosum*, *Dicranum scoparium* and *Scleropodium purum*. Spring squill *Scilla verna* is locally abundant in this community, although overall the site does not exhibit a maritime influence.

Where grazing is least intense a taller rank sward is present where downy oat-grass *Helictotrichon pubescens*, red fescue *Festuca rubra* and cock's-foot *Dactylis glomerata* are the principal grasses. Herbs in this sward are relatively few with common rock-rose, wild thyme and mouse-ear hawkweed *Hieracium pilosella* the main representatives. Patches of gorse *Ulex europaeus*, hawthorn and blackthorn scrub and secondary woodland dominated by ash and sycamore are present around the peripheries of the tall rank sward.

Small patches of limestone pavement occur along both ridges. The grikes (fissures in limestone rock formed or widened by the dissolvent effect of rain) contain a rich flora that includes juniper *Juniperus communis*, traveller's-joy *Clematis vitalba*, blackthorn, hawthorn, ivy, wild privet *Ligustrum vulgare*, wild madder *Rubia peregrina*, wood anemone, lords-and-ladies, dog's mercury and herb-Robert. The ferns maidenhair spleenwort *Asplenium trichomanes* and hart's-tongue *Phyllitis scolopendrium* also thrive in the deep shade inside the grikes.

Rare vascular plants on the site that have a disjunct distribution in the British Isles include hoary rock-rose, spiked speedwell, Nottingham catchfly *Silene nutans* and hutchinsia *Hornungia petraea*. A northern element is represented by spring sandwort *Minuartia verna* and dark-red helleborine *Epipactis atrorubens*. Other rare and scarce species of note include spring cinquefoil *Potentilla neumanniana*, dwarf mouse-ear *Cerastium pumilum*,

pale St. John's-wort *Hypericum montanum*, white horehound *Marrubium vulgare* and a whitebeam *Sorbus rupicola*. All these are confined to skeletal, thin-soiled and frequently droughted sites and rock outcrops.

The calcareous grasslands support an assemblage of invertebrates. The majority of the most significant species are confined to the hot, south and west-facing slopes particularly where mosaics of low scrub and herb-rich grassland develop under reduced grazing pressure. Past recording has revealed the presence of a diverse moth fauna including square spot dart *Euxoa obelisca*, pretty chalk carpet *Melanthia procellata*, light feathered rustic *Agrotis cinerea*, juniper pug *Eupithecia pusillata*, juniper carpet *Thera juniperata*, cistus forester *Adscita geryon*, horehound plume moth *Wheeleria spilodactyla* and white-spotted sable *Anania funebris*. Plant-feeding beetles are also well-represented, with scarce species such as the weevils *Ceutorhynchus resedae*, *Trachyphloeus asperatus* and *Tychius squamulatus* and the leaf beetles *Cryptocephalus aureolus* and *Chrysolina oricalcia*.

The site supports small numbers of hibernating lesser horseshoe bat *Rhinolophus hipposideros* in the several caves and mine shafts.

Remarks:

1. The site supports 'Tilio-Acerion forests of slopes, screes and ravines', 'Taxus baccata woods' and 'Semi-Natural Dry Grassland' habitats as described under Annex 1 of the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). These are a component part of the Creuddyn Peninsula Woods / Coedwigoedd Penrhyn Creuddyn Special Area of Conservation (SAC).
2. This site incorporates Coed Bron-Garth SSSI, Gloddaeth SSSI, Marle Hall Woods SSSI and Pydew SSSI, all of which were first notified in 1960 for their limestone flora and insect interest. They were subsequently modified in 1978 and then re-notified in 1982 under the Wildlife and Countryside Act, 1981.
3. Spiked speedwell is a Schedule 8 species in the Wildlife and Countryside Act (as amended).
4. Nottingham catchfly and dwarf mouse-ear are Near Threatened (NT) on both the Great Britain (GB) and Wales Vascular Plant Red Data Lists (VPRDL). Spring sandwort is NT on the GB VPRDL and Vulnerable (VU) on the Wales VPRDL. Dark-red helleborine is Endangered (EN) on the Wales VPRDL. The whitebeam is VU on the Wales VPRDL. Pale St. John's-wort is NT on the GB VPRDL.

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