

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

CARMARTHENSHIRE

DINEFWR ESTATE

Date of Notification: 1999

National Grid Reference: SN 615224

O.S. Maps: 1: 50,000 Sheet number: 159
1: 10,000 Sheet number: SN 62 SW

Site Area: 223.7 ha

Description:

Dinefwr Estate is of special interest because of its lichen and invertebrate assemblages which are principally associated with the parkland and woodland trees. The woodland and oxbows on the floodplain are also of special interest for their plant assemblages. The Estate is located immediately west of the town of Llandeilo and adjacent to the Afon Tywi. A large part of the site is a deer park, which is one of the finest examples in Wales of a pasture woodland with large veteran trees. The site is underlain by rocks of Ordovician age of which the Llandeilo series are also of special interest. Glacial drift covers the solid geology to a variable extent with river alluvium on the Tywi floodplain.

BIOLOGY:

Lichen communities developing on the parkland and woodland trees are of considerable importance. Over 160 species have been recorded to date, many of which are indicative of woodlands which have a long history of ecological continuity. These include lichens such as *Catillaria atropurpurea*, *C. pulverea*, *Lecanactis* spp., *Schismatomma niveum* and *Thelotrema lepadinum*.

Also present are *Lobaria pulmonaria* and *Stricta limbata*, species which are very sensitive to atmospheric pollution. Nationally scarce species such as *Gyalidiopsis muscicola*, *Phyllopsora rosei* and *Lecidea doliformis* are also present as is the Red Data Book species *Collema fragrans*. This species is usually found on the nutrient rich bark of trees such as elm but has suffered a dramatic decline in recent years due to Dutch Elm disease.

The over-mature nature of the trees together with a preponderance of standing and fallen dead wood is also ideal habitat for invertebrate species. Dinefwr Estate is of national (UK) importance for its community of saproxylic (dead wood) invertebrates, mostly beetles. These comprise specialised and fastidious invertebrates which are of extremely localised occurrence and are intimately associated with sites supporting a continuum of decaying timber. The few localities where populations of these rare or scarce species persist are generally relict patches of pasture-woodland, including ancient deer parks as at Dinefwr (the deer park was created in its present form by enclosure in 1660).

Amongst the rare species noted are *Atheta picicornis* and *Stephostethus alternans* (recorded here new to Britain), and others such as *Abraeus granulum*, *Atheta cribrata*, *Cryptophagus micaceus* and *Paraphytomyza buhri* are not recorded elsewhere in Wales. Other rarities include *Pyrrhidium sanguineum*, *Dirhagus pygmaeus* and *Athyroglossa ordinanta*.

The woodland units are mainly located on the steeper slopes around the remains of the castle and the church. The south-facing Castle Woods is dominated by ash *Fraxinus excelsior* with a characteristic ground flora of dog's mercury *Mercurialis perennis*, lesser celandine *Ranunculus ficaria* and wood millet *Milium effusum*. Ferns are abundant in this area, eg. soft shield fern *Polystichum setiferum*, and Hart's tongue *Phyllitis scolopendrium*. Oak dominated areas are found to the east of Castle Woods and at South Lodge Wood. Here pendunculate oak *Quercus robur* forms a closed canopy, and the shrub layer consists mainly of hazel *Corylus avellana* with occasional rowan *Sorbus aucuparia* and hawthorn *Crataegus monogyna*. The ground flora is dominated by bluebell *Hyacinthoides non-scripta*, bramble *Rubus fruticosus*, ivy *Hedera helix* and bracken *Pteridium aquilinum*. The Bog Wood is an alder carr bordering the south-west margin of the Deer Park. It includes a moderately good range of damp woodland species such as water mint *Mentha aquatica*, yellow iris *Iris pseudacorus* and common marsh-bedstraw *Galium palustre*.

Part of the Heronry is flushed with base-rich water. Patches of brown mosses, including *Drepanocladus revolvens* and *Calliargon cuspidatum*, opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium* and other wetland herbs occur along the flush lines. One of the flushes exhibits tufa development and supports the nationally scarce craneflies *Pilaria fuscipennis* and *Diogoma glabrata* and the soldierfly *Oxycera pardalina*.

Oxbow lakes occur in the flood plain of the Afon Tywi. Numerous waterfowl use these waterbodies throughout the year, but the main interest is botanical. Species of open water include the pondweeds *Potamogeton crispus*, *P. berchtoldii* and *P. pusillus*, whilst the bladder sedge *Carex vesicaria* and bladderwort *Utricularia* spp. occur in the reedswamp.

GEOLOGY:

The site includes a number of exposures demonstrating various horizons, faunas and facies types in the Llandeilo. The Lower Llandeilo *Sowerbyella* Limestones (rich in brachiopods and trilobites) and the Basal Sands (developed as impure limestones and shales) are well exposed.

Middle Llandeilo flaggy silts and limestones yielding trinucleid trilobites, and Upper Llandeilo flaggy silts with a prolific trilobite fauna can also be studied here.

The site is extremely important for the study of the Llandeilo facies type and paleogeography. These are key sections in the historical type area for the Llandeilo Series.

Remarks:

The site abuts onto the Afon Tywi SSSI (and candidate Special Area of Conservation).

Most of the site is owned by the National Trust. Castle Woods, Church Wood and South Lodge Wood is owned by the Wildlife Trust-West Wales. The remainder of the site is in private ownership.

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