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COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

CARMARTHENSHIRE

**PYLLAU MACHYNYS
(MACHYNYS PONDS)**

Date of Notification: 1993

National Grid Reference: SS 512980

O.S. Maps: 1: 50,000 Sheet number: 159
1: 25,000 Sheet number: SS 59

Site Area: 6.4 ha

Description:

Situated on the glacial 'end moraine' which forms the backbone of the Machynys Peninsula on the northern shore of the Burry Inlet, just south of Llanelli, these ponds owe their origin principally to the flooding of clay pits in the catastrophic storm of October 1896. In the intervening period, uncommon plants and invertebrates have colonised the site from nearby freshwater and brackish marshes which were once found around the fringes of the now-reclaimed "Morfa-mawr (or "Great Saltmarsh") that lay alongside the higher ground of the Machynys moraine. These moderately nutrient-rich ponds, and the inter-connecting areas of fen and carr, have developed a distinctive and, for Wales, an uncommon community of invertebrates, which includes a high proportion of species which are regarded as indicators of habitat quality; there are also faunistic elements that are more characteristic of fens and marshes of lowland southern England and which are noticeably rare in Wales. The dragonfly fauna is particularly diverse. Machynys Ponds are additionally noted for their botanical interest.

The site comprises one large pond with a group of three smaller pools to the east, linked by fen-carr. The main pond holds various aquatic plants such as spiked water-milfoil *Myriophyllum spicatum*, Canadian waterweed *Elodea canadensis* and increasing rafts of the yellow-flowered fringed water-lily *Nymphoides peltata*. Beds of bulrush *Typha latifolia*, common reed *Phragmites australis*, sea club-rush *Scirpus maritimus* and grey club-rush *Schoenoplectus tabernaemontani* provide shelter and nest sites for waterfowl, with mute swan, tufted duck, coot and dabchick among the breeding species. The site also regularly supports significant numbers (in a county context) of passage and wintering coot, and the regionally uncommon gadwall has increased of late. Water rail, reed and sedge warbler, reed bunting and other passerines also nest in the rank fen vegetation.

The shallowest of the smaller ponds, which can almost dry up in some years, has growths of mare's-tail *Hippuris vulgaris* and lesser water-parsnip *Berula erecta* (both very local plants in south-west Wales) amongst taller vegetation of bulrush and young grey willow *Salix cinerea*; various-leaved water-starwort *Callitriche platycarpa*, brackish water-crowfoot *Ranunculus baudotii* and stonewort *Chara vulloaris* are also found here. On the open water there are dense drifts of ivy-leaved duckweed *Lemna trisulca* (here at its only known county site) and a

smaller population of frogbit *Hydrocharis morsus-ranae*, which is also rare in south-west Wales.

These smaller water bodies are united by areas dominated by several species of rush *Juncus* spp. and by bulrush, with expanses of herbaceous fen comprising water mint *Mentha aquatica*, false fox-sedge *Carex otrubae*, great willowherb *Epilobium hirsutum*, common fleabane *Pulicaria dysenterica*, gipsywort *Lyccous europaeus*, branched bur-reed *Sparganium erectum*, common marsh-bedstraw *Galium palustrre* and, at the edge of the ponds, water-plantain *Alisma plantago-aquatica*. The presence of parsley water-dropwort *Oenanthe lachenalii* (as well as sea club-rush) suggests some brackish influences in these fens.

There are discrete patches of wet carr, dominated by grey willow, but also with some goat willow *Salix caprea* and, on drier mounds, hawthorn *Crataegus monogyna*. Small areas of coarse vegetation occur around the easternmost ponds with, for example, wild parsnip *Pastinaca sativa*, common knapweed *Centaurea nigra* and creeping buttercup *Ranunculus repens* providing sources of nectar for the varied invertebrate fauna.

Machynys Ponds support an outstanding assemblage of dragonflies and damselflies, with fourteen species known to breed, including the declining, fenland hairy dragonfly *Brachytron pratense* and three species, which in Wales, are virtually confined to parts of the south coast - the black-tailed skimmer *Orthetrum cancellatum*, the ruddy darter *Symtetrum sanguineum* and the migrant hawkler *Aeshna mixta*. The variable damselfly *Coenagrion pulchellum* is another species that has been recorded; it is extremely local in Wales.

Provisional survey work has yielded many local or notable beetles, including *Elaphrus uliginosus*, *Stenophilus mixtus*, *Chlaenius nigricornis*, *Deleaster dichrous*, *Silis ruficollis*, *Anisosticta 19-punctata*, *Anthocomus rufus*, *Gymnetron veronicae* and *Cassida murraea*, some of which are of restricted occurrence in Wales. Aspects of the invertebrate fauna also provide evidence to suggest that some of the south coast Welsh fens, Machynys included, are biogeographically related to those of south and south-east England.

The diptera (flies) likewise include species of interest, with the fenland species *Tropidia scita* and *Lejogaster splendida*, and the large and scarce *Helophilus trivittatus*. Expectedly, there are several members of the hoverfly genera *Parhelophilus* and *Anasimyia* whose larvae are associated with bulrush, but the very local *Chrysogaster macquarti* is more usually found in mossy situations in upland bogs. The attractive larger brachyceran flies *Stratiomys potamida* and the scarcer *S. singularior* also occur; the latter is typically found in the brackish coastal marshes of southern Britain. There is also a varied assemblage of the smaller, often colourful, "soldier-flies", with *Oxycera trilineata*, *Odontomyia viridula*, *Beris fuscipes*, *Chorisops nagatomii* and *Nemotelus notatus* amongst the species noted. The sciomyzid (or "snail-killing") flies likewise have a diverse representation at this site, though no rare species have been recorded; the larvae of many species of these distinctive flies develop as internal parasitoids of molluscs.

The water spider *Argyroneta aquatica* (which is very local in much of Wales) and two molluscs which have declined due to drainage of wetlands - the striated whorl snail *Vertico substriata* and the moss bladder snail *Aplexa hypnorum* - have been noted in saturated vegetation around the ponds. Also found is the short-winged conehead *Conocephalus dorsalis*, a local coastal bush-cricket which occurs in the rush-dominated herbaceous fen at

Machynys Ponds. Casual recording of the moth fauna has also revealed the presence of two fenland species - the bulrush wainscot *Nonagria typhae* and, at one of its few known Welsh stations, Webb's wainscot *Archanara sparganii*. Day-flying six-belted clearwings *Bembecia scopicera* (a markedly local moth in Wales) frequent sheets of bird's-foot-trefoil *Lotus corniculatus* on drier land around the water bodies.

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