

## **Machynys - its Landscape and Wildlife**

Machynys Golf Club is a well-known and popular venue for those wishing to enjoy a game of Championship golf or to savour the varied cuisine of its restaurant, with its first-floor commanding views over the Llanelli and Gower coasts. Less well-known is the important assemblage of wetland wildlife that is found there. This results from the extensive landscaping project that preceded the opening of the golf course and which gives it a distinctive 'feel' of water bodies and reed-beds, set in a coastal 'levels' landscape with extensive vistas and open skies.

The area where the golf course now stands was, historically, part of the very extensive 'Morfa Mawr' saltmarsh – an area that stretched from Seaside (Llanelli) all the way to Bynea – with these saltmarshes comprising the northern side of the Burry Inlet. Similar saltmarshes still survive on the southern part of the estuary – at Llanrhidian for example. The name 'Morfa Mawr' is readily translated – 'morfa' means 'saltmarsh' (literally 'sea' ('mor') 'place' ('fa')), whilst 'mawr' simply means 'large'; so, 'The Great Saltmarsh'. The neighbouring district of Morfa still retains its saltmarsh-origin name.

Not all of the area was saltmarsh, as during the latter part of the Ice Age the glaciers deposited substantial clay and boulder hillocks along the northern side of what is now the Burry Inlet. Typical of these low hills is the hill where Machynys Farm once stood and which is now covered by a new housing development; other examples include High Street on the inner side of Seaside, Llanelli or, in the opposite direction, where the Wildfowl and Wetland Trust's Penclacwydd Centre is situated.

The low-lying marshes in between these low hills would have been flooded at high equinoctial tides leaving such minor hills as effectively temporary islands and, due to the flood risk, it was on these low hills that early farmsteads were sensibly situated. The latter part of the name 'Machynys' may derive from 'ynys' (= 'island'), though it also may possibly be from a personal name - 'Cynys'. At this stage it is worth emphasising that the local derivation of 'Mach' does not come from a contraction of 'mynach' ('monk') – that is just local folklore, originating from a remark made by a 19<sup>th</sup> Century local historian with, it seems, a limited grasp of Welsh.

The place-name element 'mach' is known from other localities – Machynlleth on the mid-Wales coast and Machen on the Gwent Levels are two that come to mind. Specifically 'mach' means a 'plain' or flat area of land and the highly respected Welsh place-name expert Professor David Thorne has previously explained this origin.

One can imagine an area of saltmarsh extending from Llanelli – when the village of Llanelli was behind and uphill of where the present day Parish Church is located – to the eastern area of what is now Bynea. This saltmarsh would have been communal grazing ('common-land') in medieval and probably earlier times, with piecemeal drainage at its landward margins. The main east-west road from Loughor, the course of which is certainly pre-Roman (that is why the Romans established a fort at Loughor to safeguard the crossing point) avoided the low coastal marshlands but instead took a route that fringed higher ground crossing the minor Afon Dafen at its lowest practical crossing point (where the Halfway Hotel now stands) and onwards to cross the larger Afon Lliedi just beyond Bryntirion in the Old Mill area of town. The old road ascended higher ground (to become Old Road) before heading westwards towards Trimsaran, Kidwelly and, ultimately, Carmarthen.

I digress...back in our coastal area it was not until 1807 when Carmarthenshire's first 'Enclosure Act' allowed the construction of the 'Great Embankment' or bulwark (sea-wall) that the low-lying coastal hinterland was relatively safeguarded. New access roads – often straight as with Trostre Road or at Erw-las (in Llwynhendy) were laid out across this newly-won area and the land sold off for farming or other uses.

Evidently, this first bulwark (often corrupted to 'bullworks' locally), which was built of stone and clay, was insufficient on occasion to prevent catastrophic flooding – as in January 1846, October 1896 and, to a lesser extent, in September 1903, when severe damage was done to the Morfa area as well as further east in Llwynhendy and Bynea. Since then, the seawall has been strengthened (in the early 1980s) but undisputed evidence of climate change and sea level rise may give justified concern for the long-term viability of low-lying coastal areas.

The design and development of Machynys Golf Course was approximately concurrent with the development of the Millennium Coastal Park and associated areas, a major scheme that was implemented in the late 1990s-early 2000s. The majority of coastal golf courses are on sand dune areas, especially the more stabilised rear areas of the dunes where the combination of flatter, free draining areas and undulating dunes offer various golfing opportunities.

At Machynys, the topography was entirely different, with a mostly flat landscape crossed by drainage ditches and with some water bodies so at the outset, it was realised that an entirely different 'golf landscape' was a possibility. The golf course designers decided 'to work with the landscape', creating a 'modern links style' golf course with a number of new water bodies ranging from large lakes to smaller ponds and marsh land areas with excavated spoil from the new man-made lakes being used to contour and shape the landscape vary the height and keep greens and tees out of the floodplain.

This approach not only blended in well with the coastal location and the seaward views beyond but also provided 'ecological continuity' of wetland habitats with the substantial WWT Penclacwydd wetland centre to the east and other ponds and lakes in the western part of the Millennium Coastal Park, giving the Llanelli coast 'a necklace of lakes', as it was dubbed at the time.

The consequence of this is that Machynys Golf Course has been a very significant contributor to the enhancement of wetland biodiversity in Carmarthenshire and beyond and this has been maintained by the enlightened efforts of the management and staff at the golf course. The majority of the wildlife present co-exists with the day-to-day running of the course though there are occasions when measures need to be taken to minimise wildlife damage or disruption such as when Greylag Geese flocks choose a particular area to rest or roost – their messy droppings are not insignificant!

Another more easily rectified problem is when a Mute Swan and cygnets may choose to exit a pond at a strategic golfing point – here sensible low protection fencing and the cutting back of pond-side vegetation elsewhere can resolve the issue. However, the rest of the wildlife seem to 'fit in' with the golfing usage and indeed normally rather flighty wildfowl may habituate to the presence of close-by humans, offering good views of each other!

The ponds regularly support numbers of wildfowl that include Tufted Ducks, Pochard and Gadwall, accompanied by overwintering flocks of Coots. Grebes include the Little Grebe and the more flamboyant Great Crested Grebe, a species that has elaborate courtship ceremonies in late winter

and spring when the pair face each other and display on the surface of the pond. The Little Grebe more usually betrays its presence by its `whinnying` calls. Grey Herons are regular and, far more rarely, the elusive reed-bed specialist - the Bittern – may occur in winter. The even rarer Purple Heron was once noted. Black Terns sometimes turn up on spring or autumn passage.

Before the establishment of the golf-course there were several ponds at Machynys. The main pond was – expectedly – known as `Machynys Pond` and is designated SSSI status, it comprises one large pond with several much smaller adjacent ones. All these ponds still remain and are located between the golf club building and the housing on the low hill to the west.

There were also other ponds – utilised as a source of cooling water – in the proximity of industrial premises, but these were infilled during the late 1980s. At the same time, Machynys Pond was extended, particularly on its northern edges and a brand-new and extensive pond was dug out towards the headland of Penrhynwgwyn with its shingle beach. This latter pond is significantly more brackish (salty) than the other ponds in and around the golf course, though all have elements of salinity, which affects the mix of aquatic plants that grow in and around them. Incidentally, the original Machynys Pond was excavated to provide clay for nearby brickworks.

On the original Machynys Pond the breeding bird assemblage was quite limited, with a single pair of Mute Swans accompanied by several pairs of Coots and Moorhens. From the late 1980s, Tufted Ducks, Dabchicks (Little Grebes) colonised and they were followed soon after by pairs of Greylag Geese, and sometimes breeding Gadwalls and Pochards. Reed and Sedge Warblers, accompanied by Reed Buntings comprised the `small bird assemblage` of marginal vegetation; often heard but rarely seen is the Cetti's Warbler, a resident warbler (most are migratory) that only colonised the UK in the late 1970s. It has a loud, indeed `explosive` song that can be heard throughout the year, emanating from dense cover. Herons and Little Egrets (the latter, like the Cetti's Warbler, a beneficiary of a warming climate) are regular and, as already noted, on one occasion a Purple Heron (a Mediterranean species) turned up.



Little Egret

Photo: Wayne Davies

Mammals include the ubiquitous Fox passing through or hiding in the thickets by day, brief sightings of Weasels and the occasional presence of Otters, though it is highly likely that the latter – being nocturnal and elusive – is present more often than supposed. Grass Snakes are present but strangely perhaps, no Frogs. It could be that the salt-marsh rather than freshwater origin of the area explains that absence.

People sometimes forget about the great diversity of life that is represented by the various insect families and Machynys certainly does well in that respect. I shall confine discussion to just two groups – the dragonflies and Lepidoptera (butterflies and moths).

Dragonflies, and their smaller relatives, the damselflies are an interesting group of insects that are associated with water bodies, as the early stages are aquatic prior to metamorphosis when they change into the adult form. Dragonflies are the larger species, which rest with their wings spread out at approximately right angles to the body, whereas the smaller damselflies rest with their wings folded lengthwise along their bodies.

All may wander as adults away from areas of water when they seek their prey of smaller insects and many species are quite colourful. As there are comparatively few British species, they represent a good group of insects for a beginner to become interested in, with several good field guides on the market. Perhaps surprisingly, given their size, their jaws are too weak to penetrate human skin (they do not possess the specialised biting jaws of the troublesome much smaller gnats and midges etc).

The dragonflies and damselflies will be conspicuous at Machynys from spring to autumn with the first species normally to emerge being the Large Red Damselfly (which is actually quite small) in April, followed by the larger fenland hairy dragonfly, a Machynys speciality) and, later, by a wide range of species including the blue-coloured Emperor Dragonfly which constantly patrols the water

surface with a slightly drooping tip to its abdomen in high summer. The orangey darters last well into late autumn.



Above: Hairy Dragonfly.

Photo: Ian Morgan





Emperor Dragonfly

Photo: Wayne Davies.



Common Darter dragonfly

Photo: Ian Morgan

Being coastal in location, Machynys golf course holds a decent array of butterflies, these being favoured by the conservation-minded large 'out of play' native areas and retention of 'roughs' that are periodically cut for golfing purposes but, by default, also provide conditions where the food-plants of the caterpillars can also thrive. A good example is provided by the low-growing plants of Bird's-foot Trefoil, a distinctive yellow-flowered member of the pea family and which is the larval food-plant of many of the blue butterflies.

Temporarily uncut areas of rough grass (of various native species) likewise provide food for the caterpillars of the distinctive Marbled White – an overall white butterfly with black reticulations on its wings and a relative of the various 'browns' (eg the common Meadow Brown) rather than the notorious Large Whites of garden cabbages.

Moths, in contrast, are mostly unseen due to their primarily nocturnal habits though some can be seen by day. Of the diurnal (daytime) moths, the spectacular Scarlet Tiger can be spotted around the edge of wetland areas at Machynys – it is quite a local and uncommon species and there are other day-fliers such as the burnet companion or the Mother Shipton moth which has markings that resemble a witch's face on its wings!



Scarlet Tiger moth

Photo: Ian Morgan

The night-time moths are much more diverse but they require specialised techniques to survey and this has been periodically carried out at Machynys by leaving moth traps out overnight. The traps attract the moths by virtue of a blue light which leads the moths down into a box where old egg cartons have been left on which they can settle. The next morning – very early the next morning! – the traps are inspected and the unharmed moths identified (or photographed if necessary) and then released.

Machynys has been shown to hold a very diverse mix of wetland species – those associated with marshes and fens which feed on plants such as reeds, bulrushes and other wetland plants. Some quite rare (in a Welsh context) moths have been noted. In addition to these wetland moths, species of coastal habitats and migrant moths can turn up in the Machynys golf course traps and, in time, it is anticipated that a very substantial list will be achieved for the site.

**Summary:** Machynys golf-course is a *de facto* nature reserve as well as being a successful golf course and it certainly contributes significantly to wildlife conservation in a local and a wider context. This success is due to its coastal location and also its unique design features of wetlands and water bodies, coupled with enlightened and sympathetic management. Full marks to Machynys golf club!



Bee Orchid at Machynys

Photo: Ian Morgan





Above: Machynys golf course during its establishment and construction of its new water bodies.  
Aerial photo from the east, 2000.