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## Dyffryn Teifi – Disgrifiad cryno

Teifi yw afon hwyaf y Gorllewin. Tardda ym Mhyllau Teifi ym mrynau Pumlumon, ac ymagora'n ddyffryn uwchlaw un o dirweddau cyforgors fwyaf cyfan ac ecolegol bwysig y Deyrnas Unedig, Cors Caron. Islaw'r Gors mae'r afon yn ymddolennu'n raddol, ond ymhellach ymlaen dechreuwa rychu i lawr i'r creigiau yma ac acw. O ganlyniad ceir glannau serth, coediog, gyda brigiadau eithinog, coed derw crog, coed conwydd a chwareli yn nhirwedd ehangach Dyffryn Teifi. Nodwedd anarferol yw bod grym y llanw yn ymestyn i geunant coediog, serth Cilgerran. Mae'r afon yn ymledu'n aber wrth dref Aberteifi, gan gyrraedd y môr, yn y diwedd, trwy fae tywodlyd bychan rhwng penrhynau creigiog.

Yn hanesyddol, bu'r afon yn ffin amddiffynnol: ond heddiw y mae'n gynefin pwysig, gwerthfawr ar gyfer rhywogaethau dyfrdrig. Mae'r dyffryn yn wledig, gan fwyaf, ac wedi'i gau ar gyfer amaethyddiaeth. Mae amrywiaeth eang o gaeau o wahanol feintiau, ac ardaloedd gyda gwrychoedd trwchus yn amgáu porfeydd, gan amlaf. Ceir trefi bychain Tregaron, Llanbedr Pont Steffan, Llanybydder, Llandysul a Chastell Newydd Emlyn, a

thref fwy Aberteifi, ar hyd ei glannau. Mannau pontio neu amddiffynnol fu llawer ohonynt, i ddechrau, ond y mae eu ffurf yn amrywio llawer. Mae tuedd i beintio bythynnod a rhestai â lliwiau amrywiol a llachar. Mae rhaeadrau Cenarth yn enwog am eu heogiaid, ac yn denu ymwelwyr, fel y mae adfail rhamantus Castell Cilgerran, a ddarluniwyd gan Turner. Yr afon hon yw un o'r manau prin lle parheir i lunio a defnyddio cwryglau.

## Summary description

The Teifi is the longest river in West Wales. It issues from the Teifi Pools on the adjacent Pumlimon upland area. It emerges into the Teifi Valley above the one of the most intact and ecologically important raised bog landscapes in the UK, Cors Caron. The river meanders gently but eventually becomes incised in places. Steeply incised wooded river banks, with gorse clad outcrops, hanging oak woodland, coniferous forests and quarries sit within the wider lowland landscape of the Teifi Valley. Unusually the tidal lower river extends into the thickly wooded, steep-sided Cilgerran Gorge. The river emerges and widens into an estuary at the town of Cardigan. It ultimately issues into the sea through a modest sized sandy bay between rocky headlands.

Historically the river has been a defensive line but today it is valued as an important habitat for water-dwelling species. The valley is predominantly rural and enclosed for agriculture. There are a wide variety of field sizes and areas with thick hedgerows, mainly enclosing pastures. The small towns of Tregaron, Lampeter, Llanybydder, Llandsysul, Newcastle Emlyn and the larger town of Cardigan lie along its course. Many of them grew up as bridging or defensive points, although their morphology varies a lot. There is a trend for painting cottages and terraces in varied and bright colours. The falls of Cenarth, famous for its salmon, attract visitors, as does the romantic ruin of Cilgerran Castle, painted by Turner. The river is one of the last places where the art of coracle-making is practiced.

Key Characteristics
<b>Lowland river valley</b> – the longest in West Wales. A gentle vale with a widely river and many small tributaries.
<b>Raised bog landscape</b> – Cors Caron, in the upper valley, one of the largest, most intact and most important in Britain.
<b>Steep sided gorges</b> – sections of the lower valley, with waterfalls at Cenarth and the unique tidal Cilgerran Gorge.
<b>Woods on steep riversides</b> - gorse clad outcrops, hanging oak woodland, coniferous forests and quarries.
<b>Varied field patterns</b> – clusters of small, thickly hedged fields but other areas of open, larger, improved fields. Complex field patterns and a patchwork of fields and woods in places. Permanent grazing. Some post and wire fencing on the valley floors.
<b>Estuarine features in lower reaches</b> - a mosaic of marshland, reed beds and saltmarsh with extensive inter-tidal mud and sand flats.
<b>Settlements at river crossing points</b> – with stone bridges, and some historically defensive locations with castles.
<b>Traditional buildings</b> - simple in form, of local stone and slate, but modern buildings show greater variation in style and material. Trend to brightly colour old buildings.
<b>Mills</b> - fulling mills and factories at Drefach and Felindre illustrate the historic use of the river for power.
<b>18th century gentry residences and their historic parks and gardens</b> - distinctive features in places.
<b>Roads following the bottom of valley sides</b> - just above the floodplain – rock exposures are characteristic where the road has been carved through to make way.

**Views are typically focussed along the valley** - the steep valley sides and woodland providing constantly changing vistas. The presence of the adjacent Cambrian Mountains does not dominate the scene.

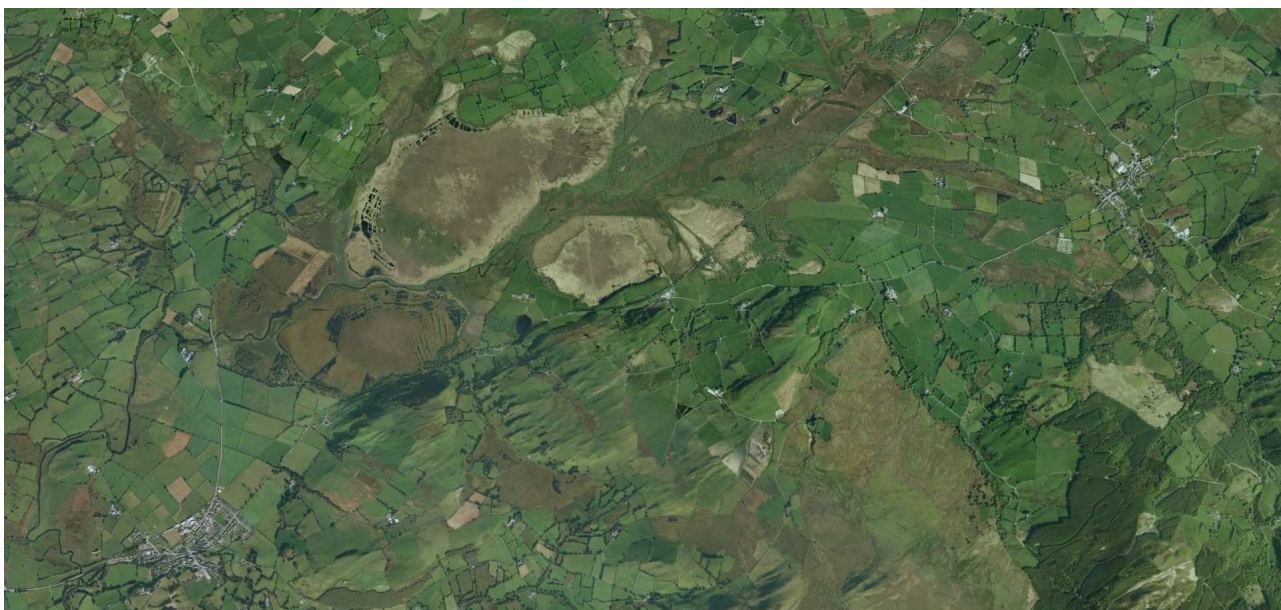
**The sense of naturalness associated with the river** – the common theme with its riparian habitats, hanging oak woodland on steep incised banks, a timeless rural tranquillity where it is away from settlement and roads.

## Visual and Sensory profile

For much of its length this area is a broad sweeping vale with the river mainly incised further into an inner, more intimate, valley within, often hidden from the wider view. The slopes of the wider valley rise gradually to the adjacent upland of the Cambrian Mountains and merge with the plateau of Ceredigion and Carmarthenshire. Nowhere does the area feel busy. The roads that pass along and across the valley are not major transport routes, but link the small market towns and villages located every few miles, usually close to the main river. These settlements blend into their background, forming small tight-knit groups of buildings with a prominent church or castle, as at Llandysul and Newcastle Emlyn. In places the trend of painting houses in bright colour washes is a feature. The Derry Ormond Tower, though it looks like a factory chimney, gives a focus to the pleasant countryside, though some of the waterside mills and water-systems are overgrown but less than picturesque ruins.

Cors Caron is open, vast and wild, and is best appreciated from the former railway line that crosses the bog, now a footpath. Its flatness contrasts with the hills around and the rugged outline of the Cambrian Mountains to the south and east.

The lower, more incised river course passes through four small gorges – enclosed and intimate, where the sound of the river tumbling over rocks dominates, and reflected light dances on the trees. Cilgerran, with its romantic ruined castle, is a particular focus for visitors. Downstream of Cilgerran it takes on an entirely different character. Here the vale opens out and the river is tidal, with broad marshes and tidal creeks to the west. At its entrance to the sea the river broadens out into an estuary. Here there are dunes, salt marshes, sand spits and the extensive Poppit Sands, popular for bathing and walking. Caravans and boats and a string of houses make the north side the busiest.



Cors Caron raised bog, with the River Teifi snaking away on the left hand side. © Getmapping 2014



Cors Caron raised bog, a large, landscape-scale feature of the upper Teifi Valley. © John Briggs



Pontrhydfendigaid (in the upper Teifi valley) showing the setting of the valley in relation to the adjacent Cambrian Mountains. © John Briggs



The tradition of painting cottages and terraces in a variety of colours, this example being at Pontrhydfendigaid © John Briggs



Another example of the colour wash approach, this one being at Tregaron © John Briggs



Looking out from the Cambrian Mountains, into the Teifi Valley, which crosses from right to left, and to a distant backdrop of higher ground, the Bro Ceredigion character area. © John Briggs



Pastoral valley floor west of Cenarth © LUC



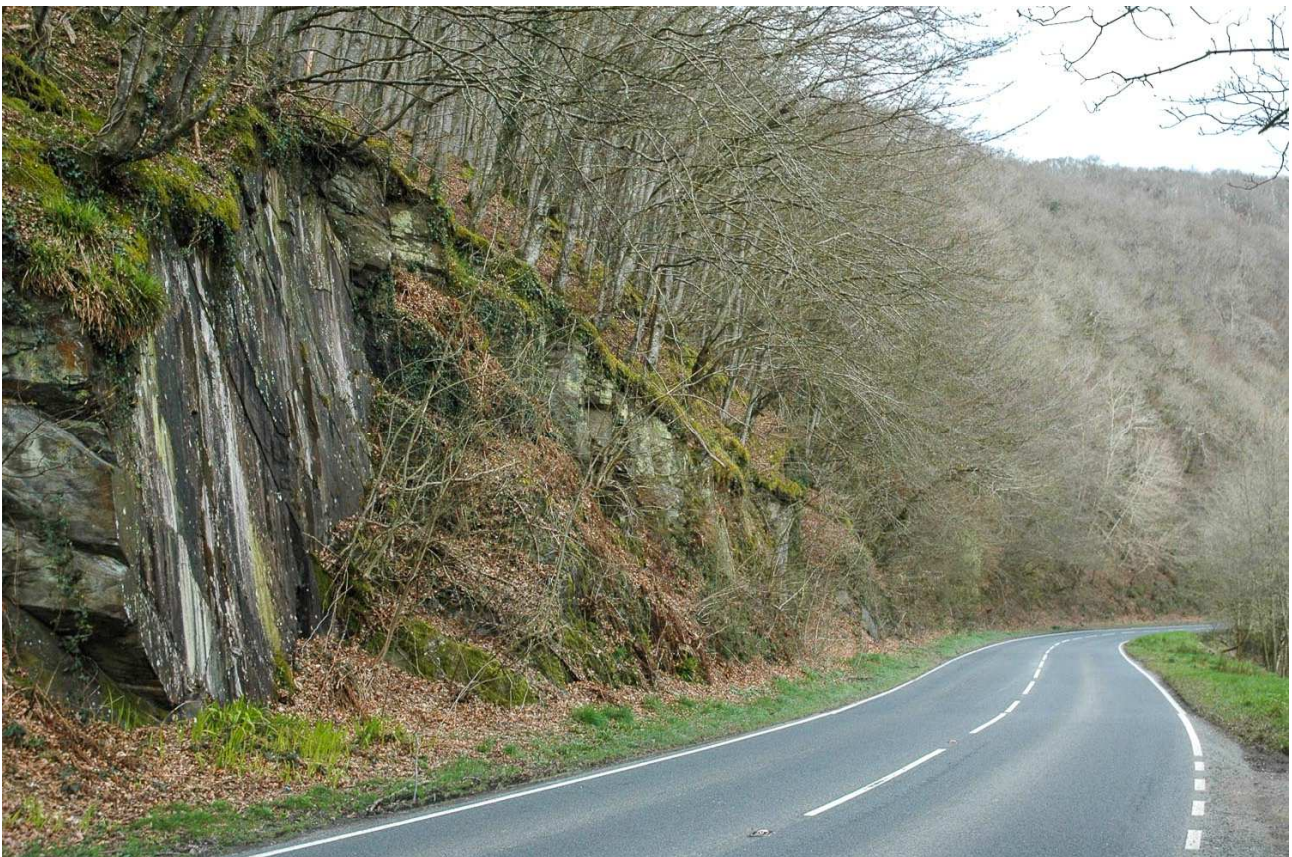
The meandering course of the Teifi running between Llandysul (right) and Newcastle Emlyn (left), highlighted by incised and wooded strips. Note also the huge variation in field size and hedgerow density, with clusters of enclosed, intimate fieldscapes, contrasting areas of open, improved land. Note also a number of small, incised tributary valleys with woodlands on steep sides. © Getmapping 2009



Cenarth Falls on the River Teifi near Newcastle Emlyn © LUC



Teifi Bridge at Cenarth © LUC



Steep Gorge sides on the A484 west of Cenarth © LUC



The lower Teifi Valley showing the long, meandering, incised estuary as well as the town of Cardigan.



The incised and woodland-fringed upper estuary of the River Teifi above Cardigan © Bronwen Thomas



The widening estuary of the River Teifi at Cardigan © Bronwen Thomas



## Geological Landscape influences

The area is generally floodplain and valley flanks. The upper valley is underlain by early Silurian rocks whereas the exposed valley sides and gorges of the lower valley are Ordovician. The sequence is dominated by turbidites, a sedimentary rock type consisting of repetitive sequences of sandstones, siltstones and mudstones, occurring in various proportions. The upper part of the Teifi Valley, extending north-east from Llanybydder, lies along the trace of the Teifi Anticlinorium which comprises an array of NE-trending folds. The eastern flank of the valley in this area is defined by the Teifi Fault which can be traced north-east as a strong topographic lineament along the transition with the Cambrian Mountains from Cwmann to Tregaron. This structure has clearly exerted a control on the orientation of the valley in this area. However, downstream of Maesycrugiau the course of Afon Teifi turns west through Llandysul, Henllan, Newcastle Emlyn and Lechryd, and then north-west through Cardigan to Cardigan Bay. These orientations cut across the NE-trending 'structural grain' defined by bedding, folds and faults, suggesting other dominant controlling mechanisms such as glacial and fluvial incision.

Much of the present-day landscape is a product of glaciation when area was invaded by a Welsh ice sheet that moved south-west from upland source areas in the Cambrian Mountains, and also by an Irish Sea ice sheet which advanced southwards and eastwards from the coast. A thick lobe of faster-moving Welsh glacier ice is believed to have occupied the upper Teifi Valley, possibly downstream as far as Llandysul, creating a broadly U-shaped valley profile. At its maximum extent, the Irish Sea ice sheet advanced onto the coastal margin of Ceredigion and into the lower Teifi Valley in the Cardigan area, extending upstream as far as Pentrecagal, east of Newcastle Emlyn. This ice sheet deposited a distinctive till composed of a calcareous clay containing marine shell fragments, dredged from the sea floor over which the ice sheet moved, and far-travelled rock types such as granite, limestone and sandstone, which can be matched to source areas in North Wales, the Lake District and Scotland.

A large glacial lake, Llyn Teifi, was impounded between the Welsh and Irish Sea ice sheets, possibly extending upstream to beyond Llandysul at its maximum extent. Sediments deposited on the floor of this lake comprise fine clays and silts as well as 'dropstones' derived from icebergs released into the lake from the Irish Sea ice sheet. Thick deposits of stratified and well-sorted sands and gravels occur in the lower reaches of the Teifi Valley and represent the deposits of deltas or alluvial fans that advanced into Llyn Teifi from the Welsh and Irish Sea ice sheets. Deltaic Welsh ice deposits occur at Llandysul, Pentre-cwrt and near Henllan, and have been traced downstream as far as Cwm Cou near Newcastle Emlyn. The quarried sand and gravel deposits and spectacular conical-shaped hill of Banc-y-Warren near Penparc, at the transition with Ceredigion Coast, were produced by outwash from the Irish Sea ice sheet. Banc-y-Warren is an SSSI on account of its geomorphological significance. Hummocky mounds and terraces of glacial deposits occur at many places in the Teifi Valley, for example at Tregaron, Pencarreg, Llanfair Clydogau and Abercarfan. Some of these features represent moraines that formed at the front of a valley glacier either during pauses in retreat or during temporary re-advances. Peat- or water-filled depressions occur on the surfaces of some of the moraines and are interpreted as kettle holes formed by the melting of buried masses of ice left by the retreating glacier. Llyn Pencarreg (SN 537 457), which is about 0.5km across, developed within the Pencarreg moraine and is the largest kettle hole in the Teifi Valley.

An important feature of the Teifi Valley landscape is the presence of narrow, rock-lined gorges at Llanllwni, Craig-Gwrtheyrn, Llandysul, Allt-y-Cafan, Henllan, Newcastle Emlyn, Cenarth, Cilgerran and Cardigan. Many of the gorges are closely associated with abandoned pre-glacial meanders that are filled with glacial deposits. The origin of these gorge landforms remains controversial but is likely to have been due to erosion by subglacial meltwater; indeed, it has been estimated that between 28 and 33 million cubic metres of rock were removed during the formation of Cenarth Gorge! The latter forms a key component of the Teifi SSSI.

Following the melting of the glaciers by about 16,000 years ago, cold-climate (periglacial) conditions persisted for several thousand years leading to the downslope movement of glacially deposited materials and the formation of distinctive, frost-shattered gravel deposits. Pingos, which probably developed as ice-cored mounds during periglacial conditions, occur locally, for example west of the Roman fort at Llanio and near Waungilwen. However, with climatic improvement at the start of the Holocene, about 11,500 years ago, the modern river system became established. The Afon Teifi channel has progressively cut down through the glacial deposits to create flights of elevated terraces on a floodplain that is characterised by an impressive array of river landforms including meanders, ox-bow lakes and bars of exposed river sediment. Although the present-day source of the Afon Teifi lies at Teifi Pools in the adjacent Cambrian Mountains, geomorphological evidence suggests that originally the source lay farther north in the Pumlumon mountains. However, headward erosion of the Ystwyth and Rheidol valleys resulted in a two-stage capture of the former headwaters of the Afon Teifi leaving abandoned, high-level valleys (wind-gaps) south of Devil's Bridge, in the adjacent Rheidol and Ystwyth Hills and Valleys, and at Ysbyty Ystwyth. Although the timing of this process is unknown, it is likely to have been assisted by glacial meltwater.

The environmental and vegetational changes that have occurred during the Holocene are recorded by peat deposits in the three raised, rain-fed bogs at Cors Caron, near Tregaron. These bogs developed upon the site of a former lake that was impounded by a broad arcuate moraine of glacial debris. Boreholes have shown that lake clays and muds are overlain by several metres of peat, the upper sections of which provide important evidence (e.g. pollen) for human activities such as forest clearance during the Iron Age and the introduction of arable farming during Medieval times. Both the bog landforms and the transecting Teifi river channel form key elements of Cors Caron SSSI.

## Landscape Habitats influences

Throughout its length, the Teifi forms an outstanding and valuable network of fens, mires, species-rich pasture and wet woodland habitats, culminating in the estuary at Cardigan. The whole length of the river, from source to sea, is protected as a Site of Special Scientific Interest. The river itself is an important habitat for water dwelling species. It is a stronghold for otter, and a famous salmon fishery.

The Teifi flows through and drains Cors Caron, one of the finest raised bog systems in Britain, and one of only two remaining in Wales (along with Borth bog/Cors Fochno). The bog covers a huge area – around 816 acres – is 6km in length and is home to a wide range of plants, bird and invertebrate fauna. It shows a rich development sequence from aquatic habitat through floodplain fen to ombrotrophic mire. The bog has an extensive covering of heather and deergrass, and supports many unusual plant species, such as bog asphodel, sundews and cladonia lichens, and is an important breeding site for otters.

The middle reach of the river, between Tregaron, Lampeter and Llandysul, forms a wide and meandering agricultural patchwork of small fields, wet pastures and small areas of wet woodland and willow carr. It is subject to regular flooding in winter. Llyn Pencarreg is a small oligotrophic lake in the Teifi valley south of Lampeter, locally important for the diversity of wintering waterfowl and breeding pochard. Cilyblaidd is notable for the mosaic of wetland habitats contained within a very small area, including mire, fen, base-rich flush and wet woodland. It is home to an interesting and varied mollusc fauna.

The lower reaches of the river, between Llandysul, Newcastle Emlyn and Cardigan, flows through a narrow gorge, clothed in sessile oak woodland. Cenarth Falls is a particularly well-known location, where the river flows a series of rapids and pools, made famous by the traditional coracle fishermen, fishing for salmon and trout. Old Cilgwyn and Cae Heslop is one of the few sites in Wales protected for the variety of deadwood invertebrates, associated with the many ancient trees.

At its mouth, it flows through a wide estuary, bordered by a large area of freshwater marshland, alder and willow carr, reedbeds and tidal mudflats, and home to the Wales Wildlife Centre. The water attracts a large number of wildfowl, with important numbers of water rail in winter. Reed, sedge and cetti's warblers breed in the reedbeds. The marshes support a rich assemblage of dragonflies, with waders along the mudflats. The area is grazed year round by water buffalo to help maintain the vulnerable habitats.

## Historic Landscape influences

The area forms a natural boundary between what is now Ceredigion and the areas to the south, and has been at times heavily fortified. Key historic features within the Teifi Valley today are castles, hillforts along the valley sides and stone bridges in the valley bottom. Many of these are Scheduled Ancient Monuments, for example Cardigan Castle, Pistog Castle, Lampeter Castle mound, Castell Olwen hillfort, and the stone bridge at Cenarth.

In more peaceable times, the valley came to be favoured for gentry residences. A number of these are now designated as historic parks and gardens, for example the late 18th century picturesque landscape and castle at Castell Malgwyn, the early 19th century pleasure grounds at Coedmore and Alltyrolyn, the formal terraced garden at Maesyrcrugiau Hall and the Cockerell-designed garden with prominent landmark tower at Derry Ormond. The river also became a commercial corridor, navigable up to the slate and slab quarries at Cilgerran which produced roofing slates, flagstones, gravestones, window sills and hearths, and a source of power for mills, foundries and saw-mills. Teifi valley timber, especially Bronwydd or Coetmor oaks, were used for ship-building at Cardigan, Newquay, Aberaeron and Aberystwyth, thereby reinforcing a strongly regional culture and strengthening the links between inland and coastal parishes. The water-powered concentration of fulling mills and factories at Drefach and Felindre is now recognised as a Landscape of Special Historic Interest, but there was once hardly a stretch on the middle part of the Teifi where there was no mill.

The historic settlement pattern still exists today with the main settlements (Cardigan, Newcastle Emlyn, Llanysul, Llanybydder, Lampeter, and Tregaron) where old stone bridges cross the Teifi. Main roads follow the bottom of the valley sides, just above the floodplain – rock exposures are characteristic where the road has been carved through the narrow rocky gorges. Buildings are typically simple in form, built from local stone or white or colour rendered, and with slate roofs. Modern buildings include suburban style

bungalows, saw mills, water pumping stations and sewage works. The valley is well used for recreation with fishing and walking being popular. The wildlife park south of Cardigan is also a recreational and visitor attraction.

## Cultural Landscape influences

The Teifi and its towns form a rich and varied cultural landscape. Tregaron is associated with Twm Sion Cati (c. 1530-1609), an entirely real landowner and genealogist who has been elevated into the Welsh Robin Hood; amongst others those who grew up there are Henry Richard 'the apostle of peace' (1812-1888), MP for Merthyr Tydfil, and Ambrose Bebb (1894-1955), the historian and lecturer. It was also believed to be a centre for the Free Wales Army in the 1960s and 1970s. Llanddewi Brefi enjoys some (perhaps short-lived) fame as the village in the Little Britain comedy TV programme, the joke revolving around the fact that one Daffyd (sic) Thomas believes himself to be "the only gay in the village" despite abundant evidence of the contrary! Reactions have been mixed but irritation is more to do with the actors' inability to spell or pronounce 'Dafydd' and 'Myfanwy'. The small town of Lampeter is famous for its college, the first degree-awarding institution in Wales, offering BA and BD degrees from 1822. From having given good service to the Anglican communion in Wales for many years, it has gone on to become a small but fully-fledged university body. The town is also home to a large Polish population. Llanybydder was the birthplace of Lewis Glyn Cothi (fl. 1447-1486), one of the greatest of the Welsh bards of his century. Llandysul is home to the Welsh-language publishing house Gwasg Gomer. At the mouth of the Teifi, the walled town of Cardigan and its castle built by Gilbert Clare were the scene of battles in the Medieval period involving the Welsh, the Normans and the Norsemen of Dublin; Robert Fitzstephen (died c. 1183), constable of the castle, was one of the conquerors of Ireland. The wharves and other buildings at the mouth of the Teifi recall its long history not only of warfare but also of trading, ship-building and commerce. The town is a regional culture centre, home to Theatr Mwldan.

The Teifi is one of the few names identifiable from Ptolemy's first-century Geography, where it is called the Tuerobis.



Looking south with rising Cambrian Mountains to the left and Cors Caron raised bog occupying the large flat area to the distant right. © John Briggs