
Afon Vyrnwy, Powys

[SJ 250 207] and [SJ 279 206]

J. Lewin

Highlights

At this GCR site, terraces cut into Devensian materials are characterized by exceptionally preserved palaeochannels, revealed especially as crop marks in aerial photography. These are probably the best preserved in Wales, and show the complex changes in channel patterns that have occurred since deglaciation.

Introduction

In the vicinity of its junction with the Tanat, the Vyrnwy Valley contains a flight of terraces up to around 10 m above present river level. These features are not unlike those preserved on the Rheidol (*q.v.*) although section exposures are not good and the details of sequences are different. The distinctive feature of the Vyrnwy terraces is, however, revealed especially following dry weather conditions, when crop marks delimit an extensive series of palaeochannels and other surface sedimentation features. The degree of visible palaeochannel remnant is variable, both according to crop type in any particular year, and also because cultivation has now restricted remains to a few fields in particular.

Palaeochannel evidence is rather rarely available in Britain (other examples include the Kennet and the North Esk — see Cheetham, 1980, and Maizels, 1983b). The blanket of fine alluvial materials over many terraces, probably resulting from post-deforestation alluviation, makes these difficult to discern. The Vyrnwy–Tanat confluence area has received close attention from archaeologists because of preserved Iron Age and Roman remains; their work has included aerial photographic surveys which have shown up palaeochannels to an exceptional extent. So far, rather limited analysis of contemporary channel dynamics has been published (Lewin, 1987; Taylor and Lewin, 1997), but a number of sections have been excavated and the materials dated. The restriction of such evidence to fields that have not been deep-ploughed, points to the fragility of palaeochannel remains, and the site merits careful conservation so that these remnants are not eradicated altogether in the future.

Description

The site comprises a set of fields, on several terrace levels, within which palaeochannel remains are well-preserved. These terraces relate to the Tanat and to the main Vyrnwy between the Tanat–Vyrnwy junction and the eastern extremity of terrace features near the Morda junction (Figure 3.25). Gradients are somewhat steeper than that of the present river. The highest terrace level (*c.* 10 m above present river) contains closed depressions with ponds and has a 'mottled' appearance on aerial photography (Lewin, 1992, fig. 10.3). Such features suggest kame terrace morphology and ice marginal deposition. At Carreghofa there is also evidence of a large palaeomeander at the same altitude, this probably representing the earliest 'post-glacial' alluvial channel.

Three main terrace levels occur in an incision sequence before the contemporary floodplain is reached. Again, these have preserved palaeomeander channels, although along the Tanat there is some evidence of braided channels. These are dated as mid-Holocene, and there are remains of a probably briefly occupied Roman camp on the lowest terrace surface, with evidence of near-contemporaneous fluvial infilling in a Roman ditch some metres higher than the present channel.

The present Tanat has been artificially straightened and is incised; the Vyrnwy, above its junction with the Morda, remains a laterally mobile river, producing point bar sediments and, following an extreme flood in 1947, a cutoff immediately down-valley of the Tanat junction (Lewin 1992, fig. 10.4). Downstream of the Morda, the channel is laterally stable and of very low gradient on what is believed to be a former lake floor (Thompson, 1982). Here, medieval

ridge-and-furrow features closely approach the present channel, which is now embanked for flood protection purposes (Lewin 1992, fig. 10.5). Terrace features are absent here (Taylor, 1993; Taylor and Lewin, 1997).

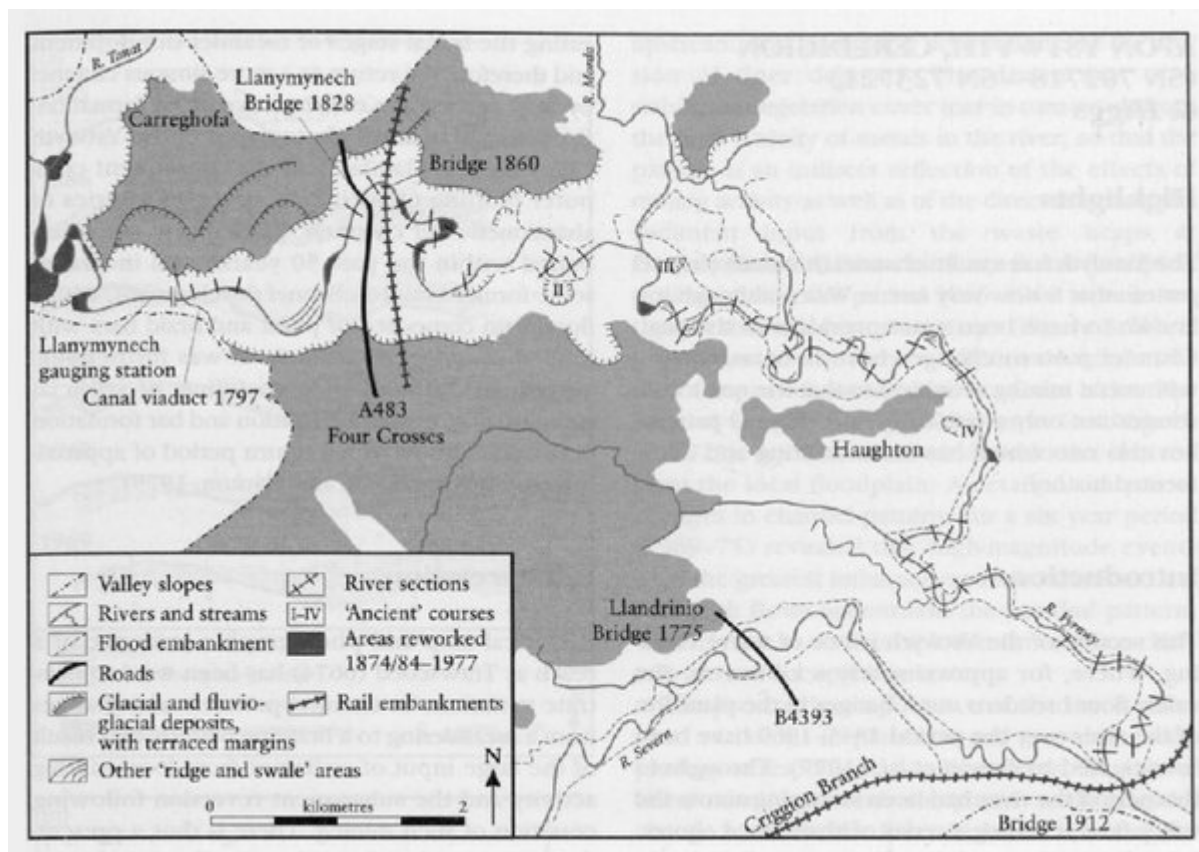
Interpretation

The terrace surface features at this site, visible especially under dry weather conditions rather than necessarily constituting marked topographical features, are little known and studied in Britain. They may, however, be more widespread than realized, though concealed, and their finer details can and have been eliminated by cultivation. They provide very useful information on palaeohydrology in the Holocene (especially about river channel size and hence discharges) and could prove to be key features in this respect. Survey and dating of the fluvial sediment provide a timescale for terrace development and channel pattern evolution; it is important that such a site, where evidence is known to be available, is not inadvertently destroyed.

Conclusion

A flight of terraces is present within the Vyrnwy Valley but their distinctive features are the unusually well-preserved palaeochannels in their surfaces. These are particularly revealed in crop patterns on aerial photographs. They have the potential to provide valuable information on past hydrological conditions.

References



(Figure 3.25) The Afon Vyrnwy: a geomorphological map. (After Lewin, 1992.)