New Perspectives on Neolithic Impact in Ireland

Michael O'Connell, Karen Molloy and Anette Overland
Palaeoenvironmental Research Unit, Department of Botany, NUI, Galway
Michael.OConnell@nuigalway.ie; Karen.Molloy@nuigalway.ie; Anette.Overland@nuigalway.ie

An overview of Neolithic impact in Ireland as reflected in pollen diagrams, and including reference to other proxies, are presented (cf. O'Connell and Molloy 2001). Aspects considered in some detail include: the environmental context of early Neolithic farming in Ireland, the initial impact of Neolithic farmers within local and regional contexts, the response of the natural system (biological and physical) to early farming activity, and changes in levels of human impact and the environmental response in the later Neolithic. The results from recently completed palaeoecological investigations at Barrees, Beara peninsula, south-west Cork are briefly discussed. These and other investigations, as well as the archaeological evidence, point to major human impact beginning in the Bronze Age rather than the Neolithic as is frequent in other parts of Ireland. A satisfactory evaluation of the nature and intensity of Neolithic impact in Ireland is severely constrained by the relatively small number of detailed pollen diagrams that give a record with high temporal resolution and a well constrained chronology.

O'Connell, M. and Molloy, K. 2001. Farming and woodland dynamics in Ireland during the Neolithic. *Biology and Environment (Proc R Ir Acad, Ser B),* **101**, 99-128.

Figures provided as follows (Figure no. as in O'Connell and Molloy (2001) is indicated)

Neol_PollenDiagrams_F1.jpg Map of Ireland showing the location of the main detailed pollen diagrams relating to the Neolithic (Fig. 1).

Neol_CF_GLU4_single & comp_time_F5.jpg Percentage pollen diagram, profile GLU IV, Glenulra basin, Céide Fields. The mid-Holocene part of the profile only is shown. The curves are plotted to a time scale (^{14}C calibrated years; Fig. 5).

Neol_summary_Impact_histos_F10.jpg Overview of Neolithic impact and woodland regeneration in later Neolithic (Fig. 10).

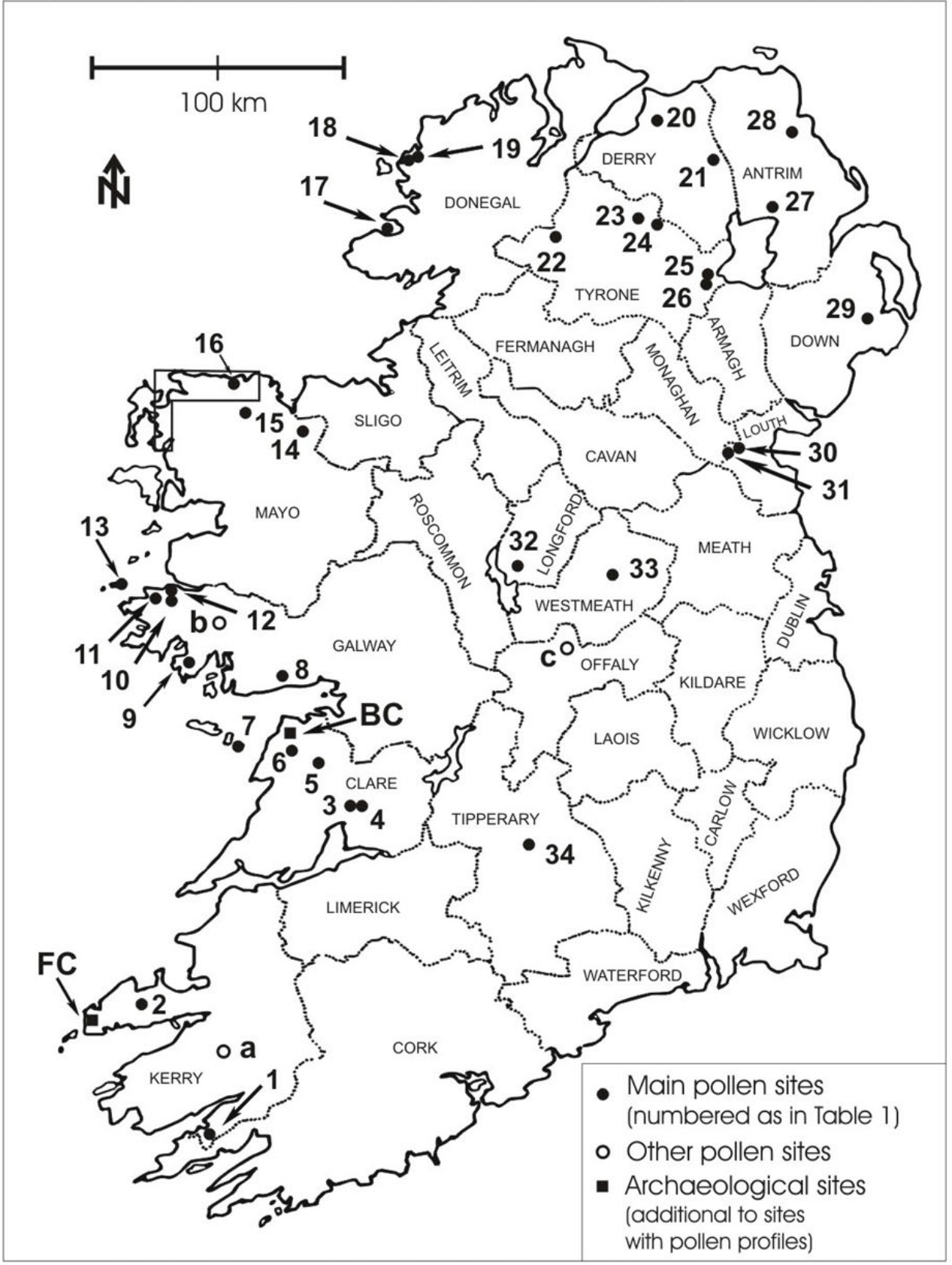

Fig. 1. Map of Ireland showing the main sites referred to in the text.
Site numbering: a. Muckross Bog, Killarney (Vokes 1966, in Mitchell 1988); b. Oak and Birch Islands, Connemara (Hannon and Bradshaw 1989); c. Clara Bog, Co. Offaly (Connolly 1996); BC, Ballyelly-Coolmeen (Plunkett Dillon 1985; Drew 1994); FC: Ferriter's Cove (Woodman *et al.* 1999). For arabic numbers see Table 2. The area in N. Mayo that yielded pine timbers used for ^{14}C dating is indicated by a box. From: O'Connell, M. and Molloy, K. 2001. Farming and woodland dynamics in Ireland during the Neolithic. *Biology and Environment (Proc R Ir Acad, Ser B),* ***101,*** 99-128.

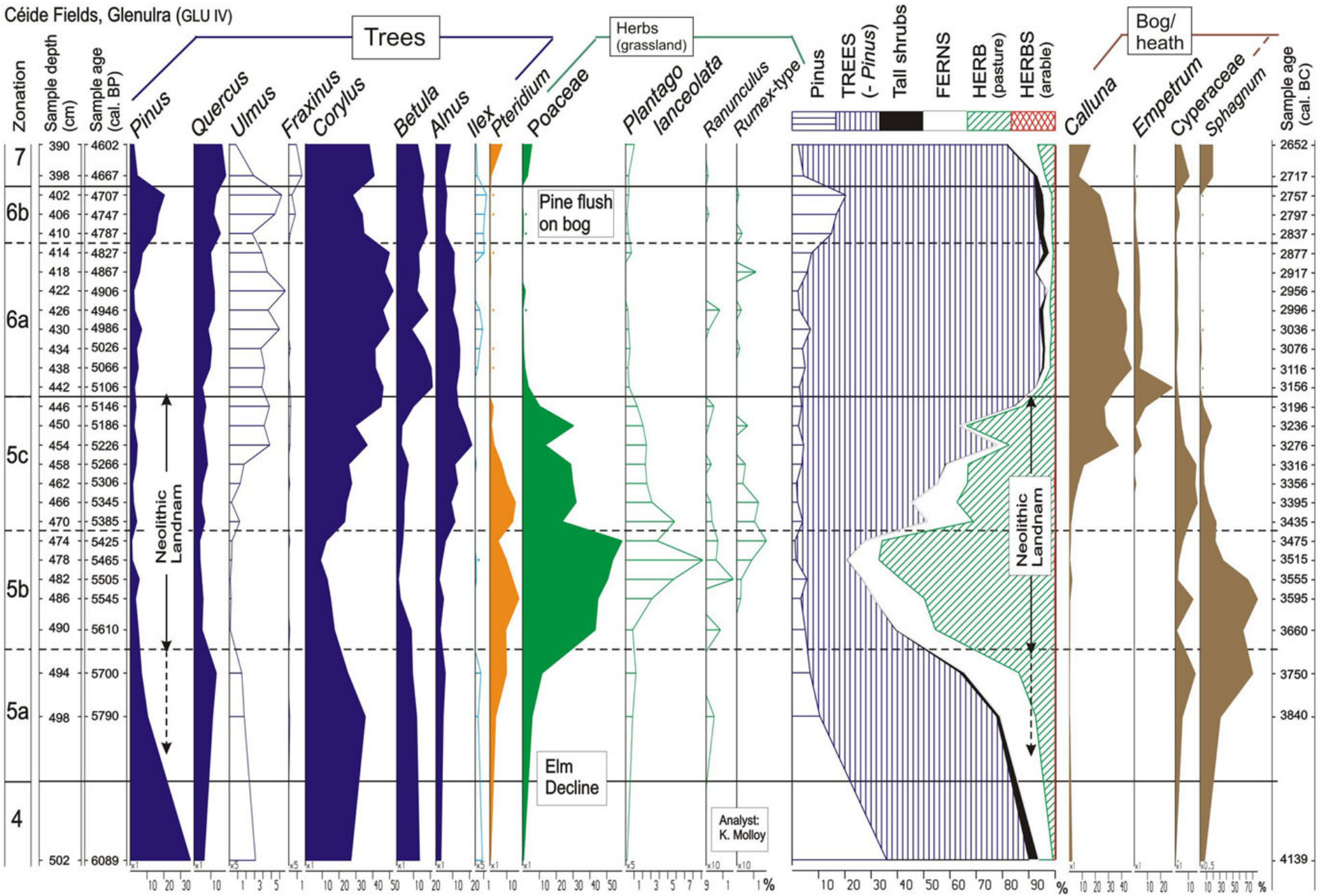

Fig. 5. Percentage pollen diagram (main terrestrial taxa and composite curves) , profile GLU IV, Glenulra basin, Céide Fields. The mid-Holocene part of the profile only is shown. The curves are plotted to a time scale in cal. years BP (cal. BC is also given). Bog taxa are excluded from the pollen sum.

From: O'Connell, M. and Molloy, K. 2001. *Biol Environ (Proc R Ir Acad, Ser B),* ***101,*** 99-128.

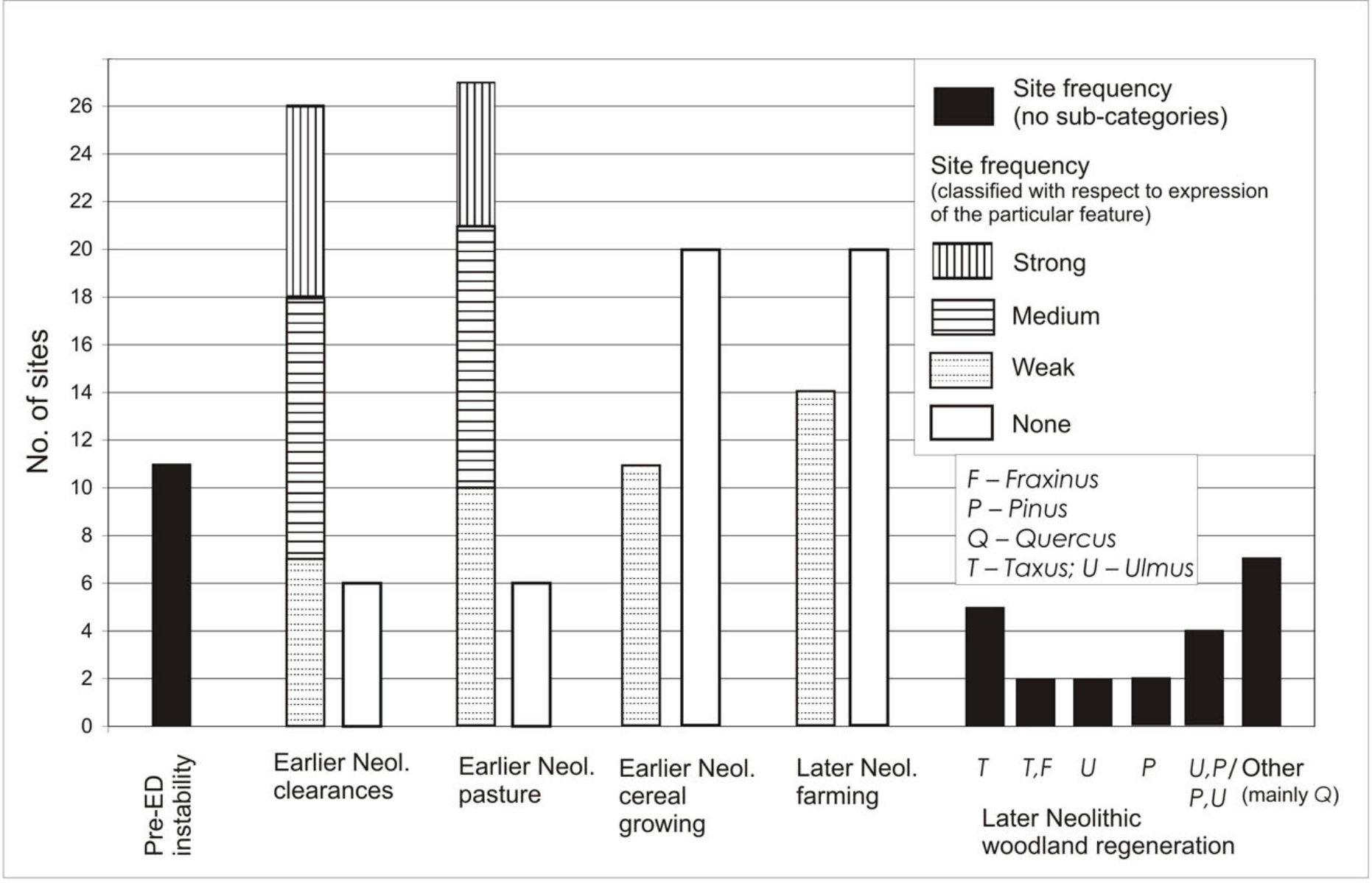

Fig. 10. Chart giving the frequencies with which selected pollen profiles from Ireland (see Table 2) show the following features: pre-Elm Decline (ED) woodland instability; Earlier Neolithic woodland clearance, pastoral activity and cereal growing; and Later Neolithic farming. Frequency of woodland regeneration in the Later Neolithic is also indicated (filled-in histograms on the right) as well as the main trees involved. Where two trees are indicated, the order reflects relative importance, e.g. U,P indicates that *Ulmus* is more important than *Pinus*. Values with a question mark in Table 2 are not included in the plot.
From: O'Connell, M. and Molloy, K. 2001. *Biol Environ (Proc R Ir Acad, Ser B),* ***101,*** 99-128.