

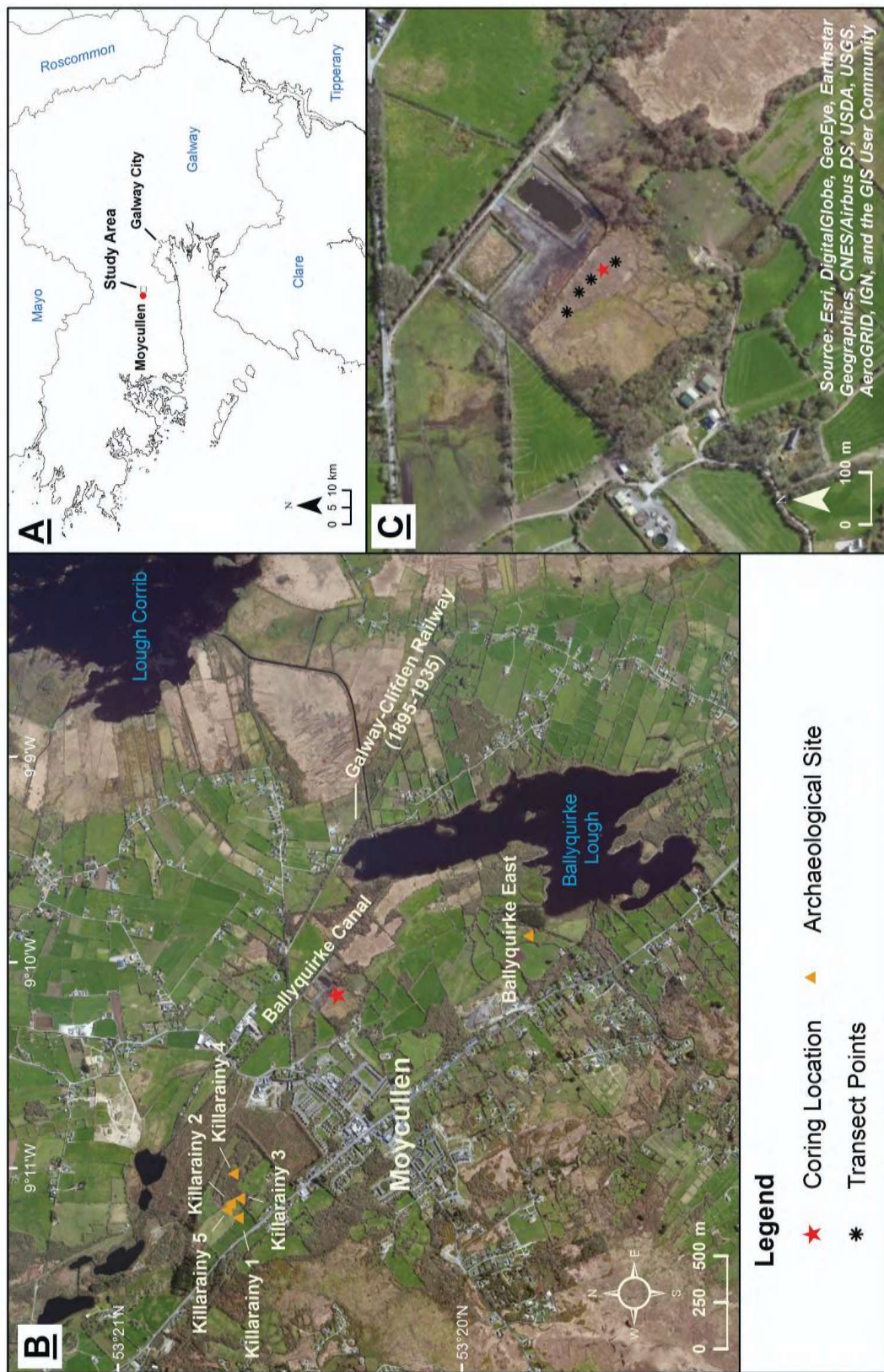
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Vegetation in prehistory

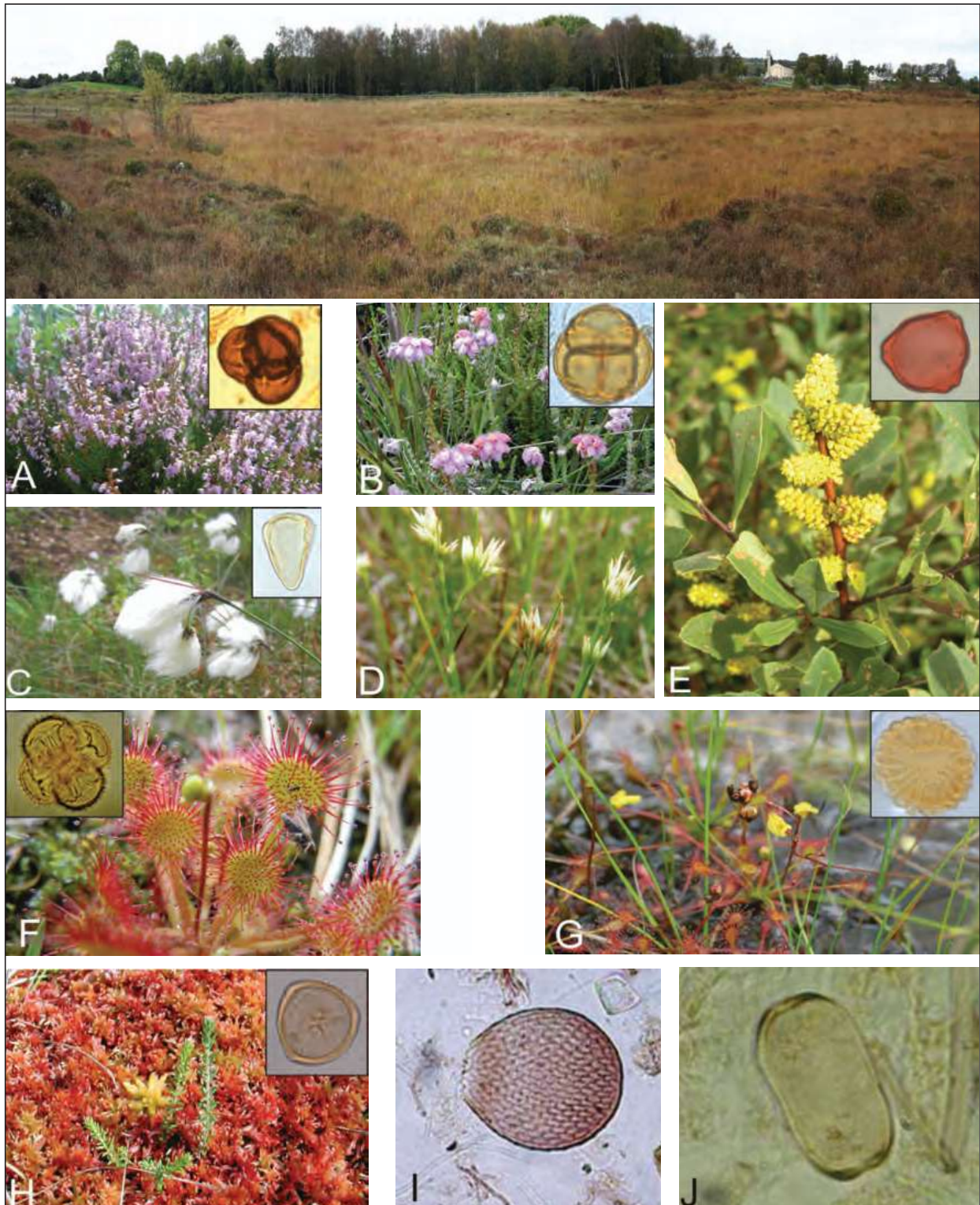
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This chapter presents the main findings from fossil pollen and other palaeoenvironmental evidence in a peat core sample taken from a bog in the townland of Ballyquirke West (Baile Uí Chuiric Thiar) (Illus. 3.1). The investigation was undertaken in conjunction with archaeological excavations along the N59 Moycullen Bypass route by Irish Archaeological Consultancy Ltd. The excavations (Chapter 2) uncovered three pits with charcoal-rich fills in Ballyquirke East, near the shore of Ballyquirke Lake. Charcoal from one of the pits was radiocarbon-dated to 3693–3527 BC (UB-29118), corresponding to the Early Neolithic period, and pottery sherds of Neolithic type were found in two of the pits. Another pit was dated to AD 777–973 (UB-29117) and is interpreted as the remains of a charcoal kiln. Further north, in Killarainy townland, there were other discoveries, including Bronze Age burnt mounds, an early medieval hut floor, and early and later medieval charcoal kilns. The focus of our investigation of fossil pollen from the bog in Ballyquirke West was on the prehistoric period, with the aim of providing a history of vegetation change in the environs of the excavated Early Neolithic site.

Sediments, including lake and bog sediments, accumulate over time on a yearly basis. As they accumulate, pollen from plants growing in the landscape at the time becomes incorporated and subsequently fossilised in the sediments. This has been happening in Ireland since the closing phase of the last Ice Age c. 15,000 years ago. As people arrive into a landscape they begin to modify it. The first people were small bands of Mesolithic hunter-gatherers, who had a minimal impact on their landscape. From the Neolithic onwards farming was adopted, with more significant impact. In addition to documenting changes in natural vegetation (woodlands, grasslands, bogs), fossil pollen also provides insights into human activity, particularly farming, as there are several key pollen types that are considered to be ‘anthropogenic indicators’—i.e. pollen of plants that are strongly associated with people (Behre 1981). These include types such as ribwort plantain (*Plantago lanceolata*) and cereal-type pollen, the former an indicator of pasture and the latter associated with arable farming. Bog/lake systems are therefore considered to be valuable resources, providing insights into past vegetation, and also human subsistence strategies, from the end of the Ice Age to recent times.



Illus. 3.1—(A) Location map of the study area. (B) Aerial view of Ballyquirke Bog in its landscape setting, showing the locations of excavated archaeological sites on the bypass route. (C) Detailed view of the bog, showing locations of trial cores and sample core BQW2. (NUI Galway)



Illus. 3.2—View of Ballyquirke Bog, looking north-west, with (below) some of the main bog plants, and their pollen, that occur on the bog today. (A) Ling heather (*Calluna vulgaris*); (B) cross-leaved heath (*Erica tetralix*); (C) bog cotton (*Eriophorum vaginatum*); (D) white-beak sedge (*Rhynchospora alba*); (E) bog myrtle (*Myrica gale*); (F) sundew (*Drosera rotundifolia*); (G) bladderwort (*Utricularia minor*); (H) *Sphagnum* moss. Also shown are testate amoebas: (I) *Assulina* and (J) *Amphitrema*. (NUI Galway)