Wrabness

[TM 172 323]

Introduction

Wrabness is the best site for London Clay fruits and seeds preserved in concretions. This mode of preservation complements the pyrite petrifactions such as found at Sheppey and the carbonaceous fossils of Walton-on-the-Naze.

Wrabness is a relatively recently discovered site for fossilized fruits and seeds of the London Clay. Daniels (1971) described the site in a field guide and Collinson (1983b) briefly mentioned the plant fossils from here.

Description

Stratigraphy

The cliffs and foreshore at Wrabness expose mudstones and siltstones of the London Clay, belonging to the upper A1 and lower A2 divisions of King (1981). The exact stratigraphical position of the plant bed(s) is unknown. However, the flora has been included here because it seems most likely some may be Ypresian in age (if derived from the London Clay division A2).

Palaeobotany

Collinson (1983b) states that five species are known from this site but she only specifically mentions *Iodes multireticulata* Reid and Chandler (icacina family), *Nyssidium arcticum* (Heer) Iljinskaja (katsura-tree family) and *Platycarya richardsonii* (Bowerbank) Chandler (walnut family). Daniels (1971) also mentions *Cinnamomum* sp. and *Mastixia* sp..

Interpretation

This is a relatively newly discovered site, whose potential has not been developed. Its importance lies in the preservation of the plant fossils. Although many of the fruits and seeds are preserved as pyrite petrifactions, similar to those at Sheppey, some occur in calcareous concretions. These give a totally new insight into the anatomy of the Thames Group fruits and seeds compared to both the pyrite petrifactions and the carbonaceous fossils such as found at Walton-on-the-Naze. This is particularly important for the smaller fruits and seeds, where pyritization can often obscure the detailed structure. Nodule preservation also retains the original size of the fruits and seeds, albeit in its external mould. Carbonaceous specimens have usually suffered some shrinkage, which can result in serious difficulties when making comparisons at the level of species.

Conclusions

The London Clay at Wrabness has yielded fruits and seeds preserved in concretions. This is a different mode of preservation to that normally associated with the London Clay and provides a significantly different insight into the structure of the fruits and seeds of the 'tropical' vegetation growing in Britain some 50 Ma ago.

References