
Abbey Wood, Greater London

[TQ 480 786]

Introduction

The fossiliferous strata at Abbey Wood have produced a wide variety of vertebrate remains, including mammals, birds, reptiles and fishes. Over recent years the collecting emphasis has been placed on bulk sampling, and many significant new finds have come to light, including three fragmentary bird specimens (Harrison and Walker, 1977a). The site has potential for continued excavation and recovery of new fossil material.

Description

The stratigraphy and occurrence of the fossils are outlined in Chapter 3.

Fauna

In addition to an extensive fauna of fishes, reptiles and mammals (Cooper, 1932a,b; Simons, 1962; Van Valen, 1965; Kühne, 1969; Hooker, 1979, 1980, 1996c; Hooker *et al.*, 1980; Dineley and Metcalf, 1999), remains of one bird species have been recovered from Abbey Wood.

AVES

Procellariiformes

Marinavidae

Marinavis longirostris Harrison and Walker, 1977a

The bird remains occur as scattered bone fragments that show little evidence of transport-induced abrasion. The holotype of *Marinavis longirostris* is an imperfect right dentary, broken at both ends, and an associated posterior fragment of a left rostrum (Figure 4.2), both collected by David Ward in 1972. Other material referred to this taxon includes the terminal hook of a premaxilla (paratype), also collected by David Ward in 1972, and a left carpometacarpus, collected by Stuart Baldwin in 1973.

Interpretation

Interpretation of the sedimentary environment is given in Chapter 3.

Marinavis longirostris was probably a seabird, perhaps a procellariiform or a pelecaniform, but probably the former (Harrison and Walker, 1977a). In some regards, the beak bones resemble the modern shearwater, *Puffinus tenuirostris*. These limited remains were made the foundation of not only a new genus and species, but also of a new family, Marinavidae (Harrison and Walker, 1977a). No further remains have been reported, and it is difficult to assess the validity of the new taxonomic names and their postulated relationships (Brodkorb, 1978; Unwin, 1993).

Comparison with other localities

Bird localities from the beginning of the Eocene Epoch are relatively few and far between, and most of them produce only isolated specimens. A distant relative of *Marinavis*, the bony toothed pelecaniform *Pseudodontornis tenuirostris*, has been reported from the Oldhaven Formation (Early Eocene) of Herne Bay, Kent (Harrison, 1985). The only other British earliest Eocene bird locality is in Croydon, Surrey, from which Newton (1886) reported remains of the large flightless bird

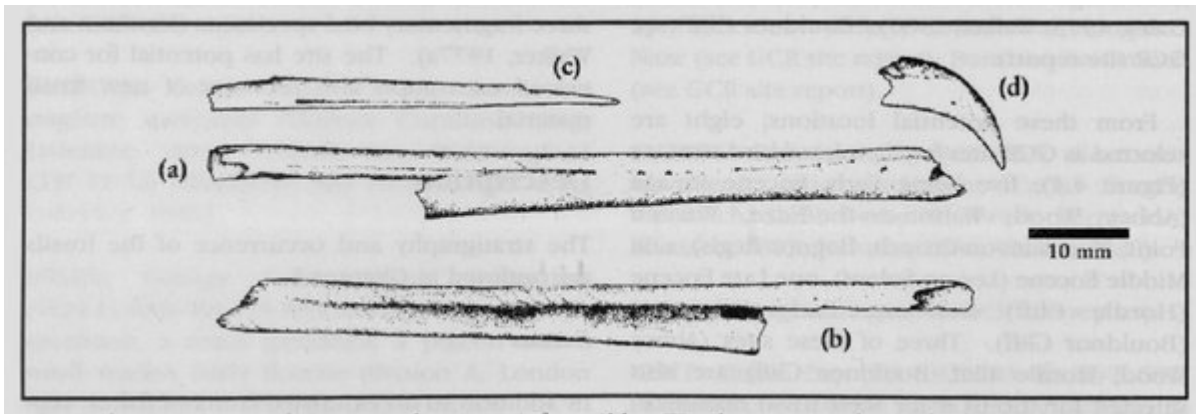
Gastornis klaasseni from the somewhat older Woolwich Formation. Farther afield, earliest Eocene birds are not abundant but are known from a number of localities in North America, Central Asia and Europe (Harrison, 1980a; Unwin, 1993). Among the continental European localities, the Conglomerat de Meudon has yielded a gastornithid. The Landen Formation of Mesvin, near Mons, Belgium, is also the source of a gastornithid.

Chapter 3 gives further comparisons, especially of the more extensive mammal faunas.

Conclusions

British earliest Eocene bird fossils are rare, and Abbey Wood has produced the most recent reasonably good specimens. If the original description is correct, these specimens represent a new genus and species of seabird and also a new family. The site is selected mainly because of its potential for future finds. The impermanent nature of the vertebrate-bearing lenses means that carefully controlled excavation programmes will be required to prevent overworking and destruction of the site. The efforts of the Tertiary Research Group should ensure that the Lessness Shell Bed continues to be a rich source of bird, mammal, reptile and fish remains for many years to come.

References



(Figure 4.2) Specimens of *Marinavis longirostris* from Abbey Wood. An incomplete right dentary in external (a) and internal (b) views and parts of a premaxilla: posterior fragment (c) and the terminal hook of the beak (d). (Based on Harrison and Walker, 1977a.)