Early Cretaceous (Aptian-Albian)

The Aptian and Albian stages in Britain are important for reptile faunas that include a variety of marine and terrestrial forms, and significant finds have come from the Lower Greensand (Aptian–Early Albian), Gault Clay (Albian), Upper Greensand (Late Albian), and from the areally restricted Cambridge Greensand (remanie latest Albian material in a basal Cenomanian matrix). Another reworked deposit, the Lower Greensand of Potton, Bedfordshire, contains reworked fossils from the Late Jurassic or Wealden. Reptile remains in the Lower and Upper Greensand are usually fragmentary and sparse. The Gault Clay has yielded abundant and well-preserved remains, particularly from the cliff sections of Folkestone.

Lower Greensand reptile sites include the following:

DORSET: Punfield Cove, Swanage ([SZ 032 798]; *Iguanodon, 'Megalosaurus'*, sauropod; Buckland, 1835; Strahan, 1898, pp. 122–32; Delair, 1966, p. 58; Rawson *et al.*, 1978, pp. 41–2).

BUCKINGHAMSHIRE: Brick Hill ([SP 91 31], ?exact locality; Dakosaurus, plesiosaur, ichthyosaur).

BEDFORDSHIRE: Potton ([TL 22 49]; various localities on Old Potton–Sandy railway line; *Dakosaurus, Cimoliasaurus, Pliosaurus, 'Ichthyosaurus', Iguanodon, Megalosaurus, Craterosaurus,* etc.; Seeley, 1869a, pp. 74–80, 1869b, 1874a; Nopcsa, 1912; Casey, 1961; Edmonds and Dinham, 1965; Galton, 1981b).

CAMBRIDGESHIRE: Upware, Commissioner's Pit ([TL 539 708]; *Goniopholis, 'Plesiosaurus', Pliosaurus, Ichthyosaurus, Iguanodon;* Walker, 1867; Keeping, 1883; Whitaker *et al.*, 1891, pp. 22–32; Casey, 1961; Rawson *et al.*, 1978).

ISLE OF WIGHT: Atherfield ([SZ 45 79], ?exact locality; plesiosaur, turtle; Atherfield Clay); Blackgang Chine ([SZ 484 768]; *Iguanodon;* Fitton, 1847; Mantell, 1854, pp. 170–3); Sandown (?[SZ 625 855]; ichthyosaur, plesiosaur); Shanklin — (?sauropod, Sandrock Series).

SURREY: Godalming ([SU 96 43]; pliosaur; Swinton, 1930).

KENT: Chipstead ([TQ 501 560]; '*Plesiosaurus*'); Maidstone *Iguanodon* Quarry ([TQ 746 558]; *Iguanodon*, turtle, plesiosaur, pliosaur; Bakewell, 1835; Owen, 1841c, p. 452; Bensted, 1860; Topley, 1875, pp. 117–18; Worssam, 1963, pp. 26, 37, 48, 107, 136; Delair, in Swinton, 1970, p. 301); Hythe ([TR 163 352]; *Dinodocus, Polytychodon,* Mackeson, 1840; Owen, 1841c, pp. 449–52; Topley, 1875; Woodward, 1908c; Smart *et al.*, 1966, pp. 77–8); Folkestone ([FR 22 35]; plesiosaur, ichthyosaur; Topley, 1875, p. 422; Smart *et al.*, 1966, pp. 93–6; Padgham, 1972).

The Cambridge Greensand is a remanié deposit of early Cenomanian age, containing reptile bones reworked from the uppermost Albian (*dispar* Zone) (Cookson and Hughes, 1964; Casey, *in* Edmonds and Dinham, 1965; Rawson *et* al., 1978, pp. 38, 50). The vertebrate remains are associated with abundant phosphate material derived from the Gault, and were collected from former phosphate workings located along a SW–NE line from Whaddon [TL 34 47] to Swaffham Fen [TL 56 67]. Typical source localities may have resembled the sequence at Barnwell [TL 56 67], where at least four levels of phosphates are developed, including the Barnwell Hard Band in which abundant vertebrate remains have been found (A.C. Morter, pers. comm.). Seeley (1869a) noted 30 or more Cambridge Greensand sites, and he and others (Owen, 1859c, 1861c; Huxley, 1867b; Seeley, 1869a, 1870b, 1873, 1874c, 1875b, 1876b, 1876c, 1876d, 1879; Lydekker, 1888a, 1889a, 1889b) described 80 or more species of turtles, crocodilians, dinosaurs, ichthyosaurs, plesiosaurs and especially pterosaurs. Seeley's 40 or so pterosaur 'species' have been synonymized to four or five by Unwin (1991). There are few extant exposures of the Cambridge Greensand: it may be seen at Barrington [TL 39 49] and Arlesey ([TL 185 350]; M.B. Hart, WJ. Kennedy, pers. comm., 1993).

Upper Greensand (Late Albian) reptiles have been found at these localities:

DORSET: Melbury Down, near Shaftesbury ([SP 90 20]; *Trachydermachelys;* Jukes-Browne and Hill, 1900, pp. 158–61; Andrews, 1920; White, 1923, p. 63); Charmouth, ?exact locality; ichthyosaur; Jukes-Browne and Hill, 1900, pp. 183–9).

SOMERSET: Kilmerton (?exact locality; ichthyosaur).

WILTSHIRE: Shute Farm, Warminster ([ST 844 411]; ichthyosaur, *Polysphenodon;* Jukes-Browne, 1896; Jukes-Browne and Hill, 1900, pp. 237–41); Savernake ([SU 21 66]; plesiosaur; Jukes-Browne and Hill, 1900, pp. 262–5).

ISLE OF WIGHT: St Lawrence Cliff ([SZ 53 76]; *Hylaeochelys;* Owen, 1881; Parkinson, 1881; Jukes-Browne and Hill, 1900, pp. 132–6).

BEDFORDSHIRE: Ampthill ([TL 03 38]; ichthyosaur).

MIDDLESEX: Croydon, London ([TQ 31 64]; ichthyosaur).

KENT: Folkestone ([TR 22 35]; ichthyosaur; Topley 1875, p. 152).

Two Greensand exposures are selected as GCR sites:

- 1. Wicklesham Pit, Faringdon, Oxfordshire [SU 292 943]. Early Cretaceous (Late Aptian), Faringdon Sponge Gravels (Lower Greensand).
- 2. East Wear Bay, Folkestone, Kent [TR 243 366]. Early Cretaceous (Albian), Lower-Upper Gault.

References