
Chapter 6 British Mid Jurassic fossil reptile sites

Introduction

British Mid Jurassic reptile sites

Fossil reptiles have been found in numerous localities in the Mid Jurassic (Aalenian–Callovian) of southern England and west Scotland, but the most productive sources for reptiles are mainly in rocks of Bathonian and Callovian age. The typically shallow-water lagoonal and littoral marine facies of the Bathonian (e.g. Forest Marble) have produced many important finds of dinosaurs, pterosaurs and mammal-like reptiles (some of the last of this group in the world), in addition to marine reptiles, while the Callovian Oxford Clay is famous for its plesiosaur remains, which occur throughout the outcrop. Fuller details of British Jurassic geology, reptile evolution worldwide and British Jurassic sites are given in the introduction to Chapter 5.

British Mid Jurassic reptile sites are listed below, grouped roughly in stratigraphic order, and excluding the selected GCR sites, which are listed at the end. Details of these sites were obtained from Fox-Strangways (1892), H.B. Woodward (1894, 1895) and Waldman (1974), as well as from museum records and other unpublished sources.

Aalenian–Bajocian (Inferior Oolite)

There are relatively few reptile sites in the Inferior Oolite (Aalenian–Bajocian) of Britain. The remains are mainly teeth and jaws of the dinosaur *Megalosaurus* and odd pieces of the crocodiles *Steneosaurus* and *Teleosaurus*.

DORSET: Eype, near Bridport ([SY 45 92]; *Teleosaurus*); Bradford Abbas ([ST 59 15]; '*Stegosaurus*' spines); Nethercombe Quarry, Sherborne ([ST 636 175]; type of *Megalosaurus nethercombensis* from *humphriesianum* Zone); Lower Eastham Farm, Crewkerne ([ST 458 104]; *Ichthyosaurus* in Yeovil Sands); Cold Harbour Road Quarry, Sherborne (?[ST 642 173]; type of *Megalosaurus hesperis* from *parkinsoni* Zone in quarry behind the houses on the north side of Cold Harbour Road, now built over).

SOMERSET: Doultong Quarries, Shepton Mallet ([ST 65 43]; *Megalosaurus*).

GLOUCESTERSHIRE: Stroud — ?exact locality ([SO 85 05]; *Megalosaurus*); Frith Quarry, Stroud ([SO 868 083]; plesiosaur tooth in Lower *Trigonia* Grit [*discites* Zone, Lower Bajocian]); Rodborough Hill, Stroud ([SO 84 04]; *Teleosaurus*); Leckhampton Quarries ([SO 950 185]; *Steneosaurus*, *Teleosaurus* from the Gryphite Grit [*laeviuscula* Zone, Lower Bajocian], also fragments of *Ichthyosaurus*, *Pliosaurus*); Crickley Hill Quarry ([SO 928 164]; ?*Megalosaurus*).

NORTH YORKSHIRE: White Nab, Scarborough Bay ([TA 058 864]; ?*Cetiosaurus* from *humphriesianum* Zone; ?also *Ichthyosaurus*, *Plesiosaurus*).

Bathonian (including White Limestone, Great Oolite, Forest Marble, Lower Cornbrash, etc.)

Reptile remains are common in the 'Great Oolite' and Forest Marble of Gloucestershire and Oxfordshire in particular, but dozens of localities are known throughout the British Bathonian (Figure 6.1) and (Figure 6.2). The commonest forms are crocodylians (*Steneosaurus*, *Teleosaurus*), dinosaurs (*Megalosaurus*, *Cetiosaurus*, '*Stegosaurus*', *Lexovisaurus*), pterosaurs (*Rhamphocephalus*), plesiosaurs (*rimoliasaurus*), and turtles (*Protochelys*). References include Phillips (1871), H.B. Woodward (1894), A.S. Woodward (1910), Huene (1926), Arkell (1933, 1947a, 1947b), Torrens (1968, 1969a, 1969b), Palmer (1973), Sellwood and McKerrow (1974); Metcalf *et al.* (1992) and Evans and Milner (1994).

DORSET: Long Burton, near Sherborne ([ST 65 13]; ?*Megalosaurus* from ?Forest Marble); Yetminster (ophthalmosaur; from a nodular Cornbrash limestone immediately underlying the Oxford Clay; Delair, 1986); Watton Cliff (West Cliff) ([SY 451 901]–[SY 453 907]; microvertebrate remains, including frogs, salamanders, lizards, crocodiles, dinosaurs from the

Forest Marble: Evans, 1991, 1992b); Swyre ([SY 525 868]; amphibian and reptile microvertebrate bones and teeth from the Forset Marble: Evans, 1991b, 1992b).

SOMERSET: Closworth ([ST 56 10]; type of *Steneosaurus stephani* from the Cornbrash).

AVON: Bath — ?exact locality ([ST 75 65]; type of *Steneosaurus temporalis* from the Great Oolite [*aspidoides* Zone, Upper Bathonian]).

WILTSHIRE: Avoncliff ([ST 80 59]; *Teleosaurus* from the Fuller's Earth); Bradford-on-Avon ([ST 82 60]; *Cetiosaurus*, '*Cardiodon*' from the Forest Marble [discus Zone, Late Bathonian]); Atford ([ST 86 66], ?Atworth; teeth of '*Cardiodon*', *Megalosaurus*, '*Hylaeosaurus*', *Plesiosaurus* from the Forest Marble); Frankley, near Bradford (?Frankleigh, [ST 822 622]; *Cetiosaurus*); Box Tunnel ([ST 84 69]; *Megalosaurus*); Leigh Delamere ([ST 890 790]; microvertebrates from the Forest Marble; Evans and Milner, 1994); Malmesbury ([ST 93 87]; *Cetiosaurus*).

GLOUCESTERSHIRE: Minchinhampton Reservoir (?[SO 855 113]; type of *Megalosaurus bradleyi* from the White Limestone); Avening ([SO 88 97]; *Teleosaurus* from Forest Marble); Sapperton Tunnel, Hayley Farm ([SO 949 018]; *Megalosaurus*, ?*Cetiosaurus*, from Kemble Beds; *Plesiosaurus*, *Steneosaurus* — ?same locality); Tarlton Clay Pit, near Cirencester ([SO 970 001]; assorted microvertebrates from the Forest Marble; Evans and Milner, 1994); Cirencester, Jarvis' Old Quarry ([SO 995 999]; *Cetiosaurus*, '*Goniopholis*', from the Kemble Beds); Ready Token, near Cirencester ([SP 100 050]; microvertebrates; Evans and Milner, 1994); Bibury ([SP 11 06]; *Cetiosaurus* from Forest Marble); Chedworth [SP 05 11]; *Steneosaurus* from lower White Limestone); Sevenhampton [SP 03 21]; '*Pterodactylus*' from Cotswold Slate); Naunton [SP 11 23]; *Teleosaurus* from Cotswold Slate [?Taynton Stone or Hampen Marly Formation, *progracilis* Zone, Middle Bathonian]; Kinton Thorns Quarry ([SP 123 263]; *Megalosaurus*; type of *Rhamphocephalus prestwichi* from Cotswold Slate); Oakham Quarry, Little Compton ([SP 279 306]; *Megalosaurus*, *Cetiosaurus*, ?*Lexovisaurus* from the Chipping Norton Limestone Formation [*zigzag* Zone, Lower Bathonian]); Stanton (SP 07 34; *Megalosaurus* from the Forest Marble); Hornsleasow (Snowhill) Quarry ([SP 131 322]; *Cetiosaurus*, *Megalosaurus*, small carnivorous dinosaurs, pterosaurs, crocodiles, tritylodontid, chelonians, 'lizard' from Chipping Norton Limestone Formation [*zigzag* Zone, Lower Bathonian]; (Vaughan, 1989; Metcalf *et al.*, 1992).

OXFORDSHIRE: Smith's Quarry, Sarsden ([SP 300 266]; type of *Rhamphocephalus depressirostris*, *Megalosaurus*, *Cetiosaurus* from the 'basement bed of Great Oolite Series' [?Sharp's Hill Beds, Lower Bathonian]); Padley's Quarry, Chapelhouse, Chipping Norton ([SP 329 281]; *Cetiosaurus* from Sharps Hill Member [*tenuiplicatus/progracilis* Zone, Lower–Middle Bathonian]); Workhouse Quarry, Chipping Norton ([SP 318 276]; *Cetiosaurus*, *Megalosaurus* in Sharps Hill Formation); Temple Mills Quarry, Sibford Ferris ([SP 35 37]; *Steneosaurus*); Enstone ([SP 37 24]; *Cetiosaurus*); Over Norton ([SP 31 28]; *Cetiosaurus*); Sharps Hill Quarry ([SP 338 358]; *Lexovisaurus* and microvertebrates in Sharps Hill Formation [*progracilis* Zone, Lower Bathonian]; Woodeaton ([SP 533 123]; *Cetiosaurus* and microvertebrates from Hampen Manly Formation [*progracilis* Zone, Middle Bathonian]); Enslow Bridge ([SP 475 178]; type of *Steneosaurus meretrix*; *Megalosaurus* from the Stonesfield Slate (*progracilis* Zone, Middle Bathonian); types of *Cetiosaurus oxoniensis* and *Lexovisaurus? vetustus* from the Forest Marble [Upper Bathonian]); Gibraltar (Bletchington Station) Quarry ([SP 483 183]; *Steneosaurus*, *Megalosaurus*, *Cetiosaurus* from *fimbriatus-waltoni* Beds (top White Limestone Formation [*aspidoides* Zone, Upper Bathonian]); Slape Hill, Woodstock ([SP 423 196]; *Steneosaurus*, *Teleosaurus*, *Cetiosaurus* from White Limestone Formation); Glympton Quarry ([SP 427 217]; type of *Cetiosaurus glymptonensis* from the Forest Marble [Upper Bathonian]); Tolley's Quarry, Bladon ([SP 44 14]; *Cetiosaurus*, *Ichthyosaurus*); Hanborough Railway Station ([SP 44 15]; crocodylian from the Cornbrash); Hampton Common (?[SP 50 15]/?[SP 48 16]; *Steneosaurus*, *Rhamphorhynchus*, *Plesiosaurus*); Fritwell ([SP 52 29]; *Teleosaurus*); Littlemore ([SP 53 02]; *Megalosaurus* from the Corallian); Stratton Audley ([SP 60 26]; *Cetiosaurus* from the Forest Marble (Upper Bathonian); Ardley Quarry ([SP 539 272]; *Teleosaurus* from Ardley Member of White Limestone [*hodsoni* Zone, Upper Bathonian]).

NORTHAMPTONSHIRE: Blisworth railway cutting ([SP 725 543]; *Cetiosaurus*, *Steneosaurus* from 'Great Oolite' [Blisworth Limestone, *hodsoni* Zone, Upper Bathonian]); Cogenhoe ([SP 83 60]; *Cetiosaurus* from Cornbrash); Northampton, Buttock's Booth ([SP 78 64]; *Steneosaurus* from 'Great Oolite' [Blisworth Limestone, *hodsoni* Zone, Upper Bathonian]); Kingsthorpe, Northampton ([SP 75 63]; *Steneosaurus* from 'Great Oolite'); Rushden Quarry ([SP 951 661]; '*Cimoliasaurus*' from Cornbrash); Irchester ([SP 89 68]; *Steneosaurus*); Islip Ironstone Quarry, Thrapston ([SP 975 782]

etc.; *Steneosaurus*, *Megalosaurus*, *Muraenosaurus* from Cornbrash); Oundle ([TL 03 88]; crocodile from 'Great Oolite').

BUCKINGHAMSHIRE: Olney ([SP 88 51]; *Plesiosaurus*, *Cetiosaurus* from the top of the Cornbrash).

CAMBRIDGESHIRE: Peterborough — ?exact locality ([TL 19 98]; *Steneosaurus*, *Teleosaurus*, from Cornbrash); Orton, Peterborough ([TL 17 96]; crocodile); Norman Cross Brickworks, Stilton ([TL 170 912]; '*Cimoliasaurus*', *Ichthyosaurus*, *Teleosaurus* from Cornbrash).

LEICESTERSHIRE: Essendine/Banthorpe railway cutting ([TF 04 12]; '*Cimoliasaurus*', *Cetiosaurus* from Blisworth Clay [Upper Bathonian]); Belmesthorpe ([TF 04 10]; *Steneosaurus*, *Teleosaurus*, *Rhamphocephalus* from 'Great Oolite' [Upper Bathonian] and Upper Estuarine 'Series' [Lower–Middle Bathonian]); Great Casterton, Rutland (*Cetiosaurus*, LEICS).

NORTH YORKSHIRE: Scarborough (?[SE 86 06]; *Plesiosaurus* from the Cornbrash).

INNER HEBRIDES: Elgol, Skye ([NG 531 164], [NG 519 154], [NG 518 168]; plesiosaur, crocodylian, tritylodont remains from Lealt Shale Formation and Kilmaluag Formation (Waldman and Savage, 1972; Harris and Hudson, 1980; Savage, 1984; Waldman and Evans, 1994).

Callovian

Reptiles are known from the Upper Cornbrash (*macrocephalus* Zone) of Stilton, Cambridgeshire (Martill, 1986), but it is not clear whether the overlying Kellaways Clay has produced any finds. The overlying Kellaways Sand (*calloviense* Zone) of Lincolnshire has recently produced numerous plesiosaur and marine crocodile remains from a scattering of temporary exposures around Lincoln (Brown, 1990; Brown and Keen, 1991) and in the Peterborough district (Martin, 1985b), and the Kellaways Rock (also *calloviense* Zone) has yielded a plesiosaur (*Cryptoclidus*) in Yorkshire. The Lower Oxford Clay (particularly the *jason* Zone) has produced abundant plesiosaurs (*Cryptoclidus*, *Liopleurodon*, *Muraenosaurus*, *Peloneustes*, *Pliosaurus*, *Simolestes*, *Tricleidus*), ichthyosaurs (*Ophthalmosaurus*), crocodylians (*Metriorhynchus*, *Steneosaurus*), pterosaurs ('*Rhamphorhynchus*') and dinosaurs (*Callovosaurus*, *Cetiosauriscus*, *Dryosaurus*, *Eustreptospondylus*, *Lexovisaurus*, *Metriacanthosaurus*, *Ornithopsis*, and *Sarcolestes*) from localities from Dorset to Peterborough, with the richest localities lying in and around Peterborough (Martill and Hudson, 1991). Martill (1986) notes reptile finds in nearly all Lower Oxford Clay horizons, particularly Beds 7, 8, 10, 11, 13 and 17. References include Seeley (1869a), Phillips (1871), H.B. Woodward (1895), Andrews (1910), Arkell (1933), Leeds (1956), Tarlo (1960), Galton (1980a), Brown (1981), and Martill (1985b, 1986, 1988, 1990, 1992), Adams-Tresman (1987a, 1987b), Martill and Hudson (1991) and Martill *et al.* (1994).

DORSET: Backwater, Weymouth ([SY 677 790]; '*Cimoliasaurus*', *Ichthyosaurus*, *Lexovisaurus durobrivensis*, *Pliosaurus* from the Lower Oxford Clay); Putton Lane Brick Pit, Chickerell ([SY 650 801]; type specimen of *Cryptoclidus richardsoni*, *Muraenosaurus*, *Pliosaurus*, *Steneosaurus*, ?*Dacentrurus* from Lower Oxford Clay [*calloviense* Zone]); Radipole ([SY 81 67]; *Plesiosaurus*); Rodwell ([SY 67 78]; ichthyosaur limb; Delair 1987); Shore of Fleet (?Tidman Point and bay to the west; *Steneosaurus*, *Plesiosaurus*); Bowleaze Cove ([SY 7081]; *Steneosaurus*, *Muraenosaurus*).

WILTSHIRE: Melksham ([ST 90 63]; ?*cryptoclidid*, *Metriorhynchus* from Oxford Clay); Devizes ([SU 00 61]; '*Cimoliasaurus*' from Oxford Clay); Chippenham ([ST 91 73]; '*Cimoliasaurus*', *Metriorhynchus*, *Muraenosaurus*, *Pliosaurus*, from Oxford Clay); Christian Malford ([ST 957 774]; '*Cimoliasaurus*', *Peloneustes*, *Pliosaurus*, *Steneosaurus*, *Ophthalmosaurus* from Lower Oxford Clay [*Jason* Zone]); Wootton-Bassett (?Old Park brickpit, [SU 05 82]; '*Cimoliasaurus*' from (?Upper) Oxford Clay [*cordatum* Zone]).

OXFORDSHIRE: Long Marston [= Marston] (SP 53 09; '*Cimoliasaurus*', *Steneosaurus* from Oxford Clay); Shotover Hill ([SP 57 06]; '*Cimoliasaurus*', *Pliosaurus* from Oxford Clay); Cowley Field, Oxford ([SP 57 03], pit filled; *Cimoliasaurus*, *Ophthalmosaurus*, *Cryptoclidus*, type of '*Plesiosaurus*' *hexagonalis* [*nomen dubium*] from Oxford Clay); St Clements, Oxford ([SP 53 06], pits filled; *Ophthalmosaurus*, *Rhamphorhynchus* from Oxford Clay); Summertown Brick Pit, near Oxford ([SP 51 09]; type of *Eustreptospondylus oxoniensis*, *Muraenosaurus plicatus* [*nomen dubium*], '*Cimoliasaurus*' *oxoniensis*, as well as crocodiles, *Ophthalmosaurus* from Middle Oxford Clay [Upper Callovian, *athleta* Zone]); Wolvercote Brick Pit ([SP 494 105]; *Megalosaurus*; *Cryptoclidus*, *Ophthalmosaurus* from Oxford Clay); Shellingford

Crossroads Quarry ([SU 326 942]; *Pliosaurus*, ?*Goniopholis* from Oxford Clay); St Edmund Hall, Oxford ([SP 518 063]; crocodile from Oxford Clay [*Jamberti* Zone]); Iffley Road Sports Ground, Oxford ([SP 524 054]; '*Plesiosaurus*' from Oxford Clay); Cumnor (?[SP 47 04]; '*Pliosaurus*' from Oxford Clay).

BUCKINGHAMSHIRE: Calvert Brick Pit, and other localities (?), Buckingham ([SP 69 33]; *Ophthalmosaurus* from Oxford Clay); Bletchley Brick Works ([SP 868 327]; *Ophthalmosaurus* from Oxford Clay); Newton Longville Brickworks ([SP 853 322]; *Pliosaurus* from Oxford Clay); Fenny Stratford ([SP 88 34]; *Steneosaurus* from Oxford Clay); Caldecotte Reservoir, Milton Keynes ([SP 892 352]; *Ophthalmosaurus* from Lower Oxford Clay [*coronatum* Zone]; Martill, 1986).

BEDFORDSHIRE: Marston Moretaine ([SP 99 41]; *Peloneustes* from Oxford Clay); Stewartby Clay Pit (n. 0142; *Ophthalmosaurus*, *Liopleurodon* from Oxford Clay); Kempston (?Clay Pits around [TL 03 45], or Green-End Old Pit, [TL 007 475]; *Peloneustes* from Oxford Clay); Bedford ([TL 04 49]; '*Cimoliasaurus*', ?*Lexovisaurus*, *Steneosaurus* from Oxford Clay); Ravensden, Bedford ([TL 07 54]; *Pliosaurus* in Oxford Clay).

CAMBRIDGESHIRE: Orton Brick Pit ([TL 165 937]; *Cryptoclidus*, *Ophthalmosaurus* from Lower Oxford Clay); Norman Cross Brick Pit ([TL 173 916]; unidentifiable reptile from Lower Oxford Clay); Yaxley Brick Pit ([TL 178 932]; *Cryptoclidus*, *Pliosaurus*, *Steneosaurus*, *Metriorhynchus* from Lower Oxford Clay); Eyebury Brick and Tile Works ([TL 18 59]; type of *Pliosaurus evansi* from Lower Oxford Clay); St Neots Brickyard ([TL 18 60]; *Pliosaurus* from Oxford Clay [*coronatum* Zone]); London Road, Peterborough (?[TL18 96]; *Muraenosaurus*, *Cryptoclidus*, *Steneosaurus*, *Metriorhynchus*, *Cetiosauriscus* from Lower Oxford Clay); Woodston Lodge, Peterborough ([TL 18 97]; *Ophthalmosaurus*, *Liopleurodon* from Oxford Clay); Fletton Brick Works (various pits around [TL 19 95]; have probably yielded the majority of 'Peterborough' reptiles; types of *Neopterygius entheciodon*, *Ophthalmosaurus icenicus*, *Apractocleidus tereti pes*, *Cryptoclidus eurymerus*, *Muraenosaurus durobrivensis*, *M. leedsi*, *Peloneustes philarchus*, *Simolestes vorax*, *Tricleidus seeleyi*, *Metriorhynchus cultridens*, *M. durobrivensis*, *Mycterosuchus nasutus*, *Steneosaurus depressus*, *S. durobrivensis*, *S. hulkei*, *S. leedsi*, *S. obtusidens*, *Cetiosauriscus leedsi*, *Lexovisaurus durobrivensis*, '*Stegosaurus*' *priscus*, *Sarcolestes leedsi*, amongst others from Lower Oxford Clay [*jason* Zone]); Peterborough Gas Works (?[TL 199 991]; type of *Ornithopsis leedsi* probably from the junction of the Kellaways Clay with the overlying Kellaways Sand; Martill, 1986; Brown and Keen, 1991); Barrow Pit, Farcet ([TL 200 958]; *Cryptoclidus*, *Liopleurodon*, *Metriorhynchus* from Lower Oxford Clay); Stanground ([TL 20 97]; *Ophthalmosaurus*, *Steneosaurus*?, *Muraenosaurus* from Lower Oxford Clay *Vason* Zone); Dogsthorpe Brick Pit, Peterborough ([TF 219 019]; *Metriorhynchus*? from Lower Oxford Clay *Vason* Zone); *Liopleurodon*; Dawn, 1991); Eye ([TL 22 02]; *Steneosaurus* from Lower Oxford Clay); Whittlesey Clay Pits ([TL 252 976] and/or [TL 250 976]; '*Cimoliasaurus*', *Lexovisaurus durobrivensis*, *Muraenosaurus*, *Ichthyosaurus*, *Peloneustes*, *Pliosaurus*, *Steneosaurus*, *Metriorhynchus* from Lower Oxford Clay [*jason* Zone]); St Ives Brickyard (?[TL 304 718]; type of *Rhamphorhynchus jessoni*, *Pliosaurus* from Middle Oxford Clay).

LINCOLNSHIRE: Reepham ([TF 046 747]; *Cryptoclidus eurymerus*, *Muraenosaurus leedsii*, *Steneosaurus* sp., *Metriorhynchus* sp., *Liopleurodon ferox* from the Kellaways Sand [*calloviense* Zone]; Brown, 1990; Brown and Keen, 1991).

HUMBERSIDE: Mill Hill, Elloughton, near Brough ([SE 942 278]; *Cryptoclidus*, *Muraenosaurus*, etc. from Kellaways Sand [*calloviense* Zone]; Brown and Keen, 1991).

YORKSHIRE: Hackness, Scarborough ([SE 96 90]; *Ichthyosaurus*, *Plesiosaurus*); Gristhorpe ([TA 12 83]; *Steneosaurus* from Kellaways Beds).

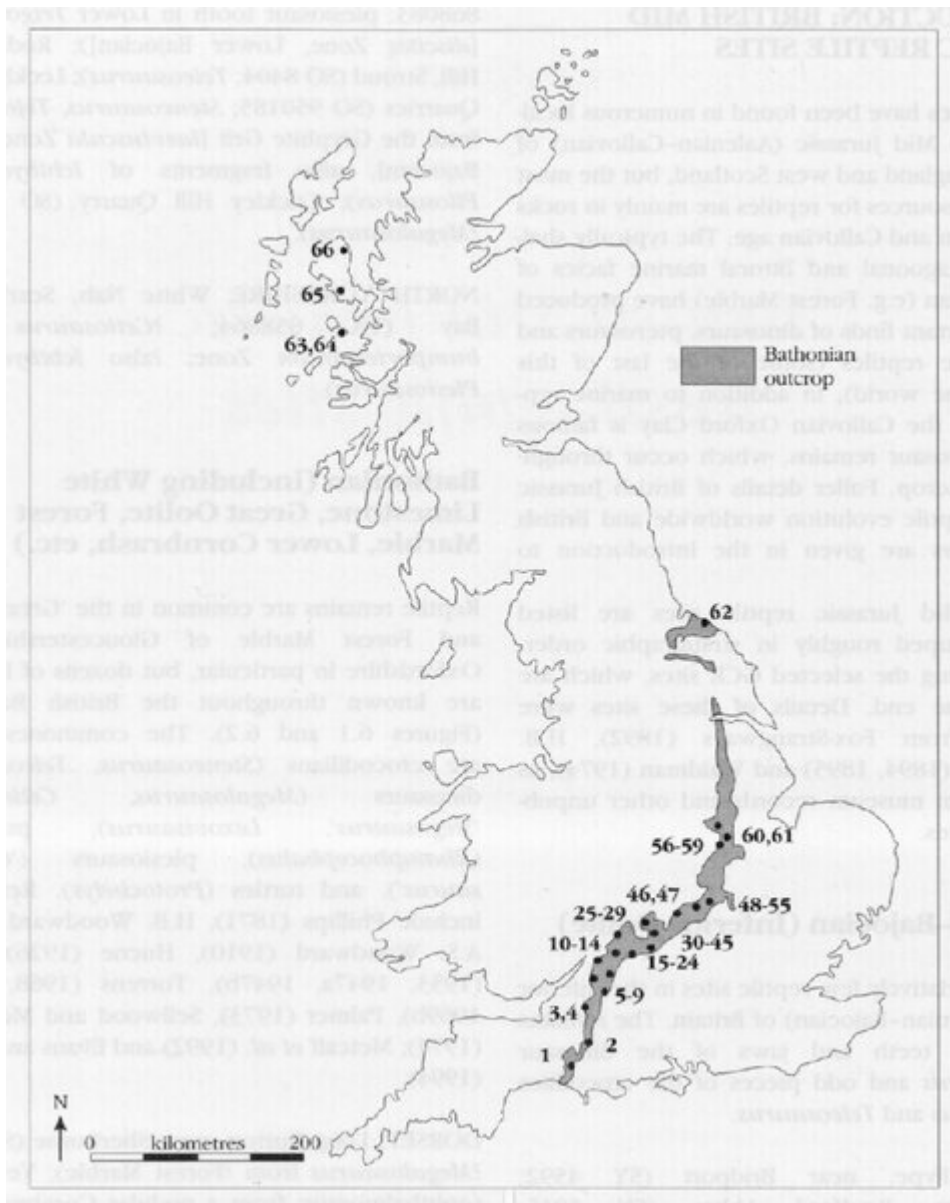
Six reptile-bearing sites have been selected as GCR sites from the huge numbers that have been noted in the literature, as those representing the greatest range of faunas and preservation types, and as having the greatest potential for future collecting. These are all Bathonian; none of the Aalenian or Bajocian sites was strong enough for inclusion. In addition, none of the important Callovian localities could be selected because they have either been lost to infill or degradation, or they are currently worked in a way that prevents the conservation of fossiliferous horizons. In addition, it is not possible to say that any one or two Oxford Clay sites is likely to be more or less productive than any other. The Mid Jurassic sites are:

1. Kildonnan and Eilean Thuilim, Eigg ([NM 495 870], [NM 483 913]). Mid Jurassic (?Lower Bathonian). Kildonnan Member, Great Estuarine Group.
2. New Park Quarry, Longborough, Gloucestershire [SP 171 296]. Mid Jurassic (Lower Bathonian), Chipping Norton Member, Chipping Norton Formation.
3. Stonesfield, Oxfordshire [SP 387 171]. Mid Jurassic (Middle Bathonian), Stonesfield Member, Sharps Hill Formation.
4. Huntsman's Quarry, Naunton, Gloucestershire [SP 126 253]. Mid Jurassic (Middle Bathonian), Eyford Member ('Cotswold Slates').
5. Shipton-on-Cherwell Quarry, north-west corner, Oxfordshire [SP 475 178]. Mid Jurassic (Upper Bathonian), Ardley and Bladon members, White Limestone Formation, Forest Marble Formation and Lower Cornbrash.
6. Kirtlington Old Cement Works, Kirtlington, Oxfordshire [SP 494 199]. Mid Jurassic (Upper Bathonian), White Limestone Formation to Lower Cornbrash.

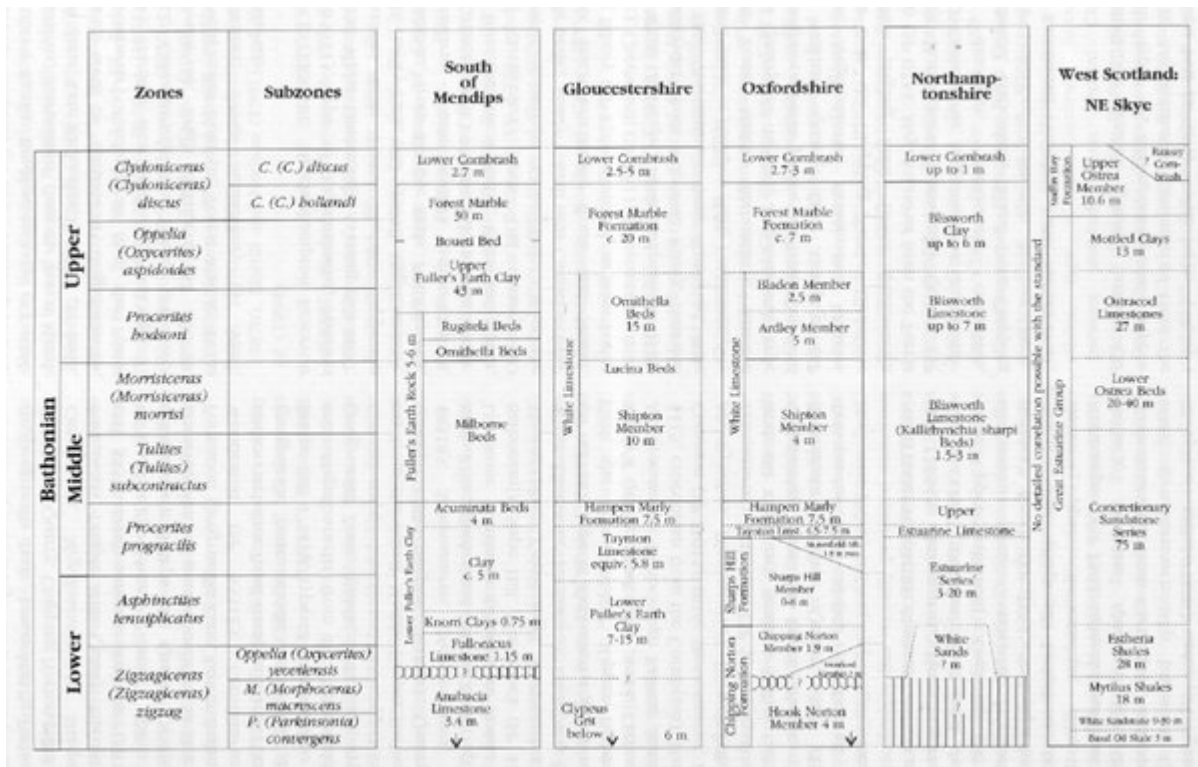
Mid Jurassic (Bathonian) of Scotland

The lagoonal facies of the Great Estuarine Group (Bathonian) of the Inner Hebrides in west Scotland have been known as sites for reptiles since the mid-19th century when Hugh Miller noted reptile material, mainly of plesiosaurs, in the Kildonnan Member of Eigg ('Hugh Miller's Bone Bed'). Further remains of reptiles have been found recently throughout the Group from several locations (Harris and Hudson, 1980; Martin, 1985a). Productive Bathonian sites in the Great Estuarine Group are restricted to the Kilmalug Formation (Figure 6.2), in which some of the youngest tritylodontid mammal-like reptiles, and other specimens of reptiles and mammals, have been found (Waldman and Savage, 1972; Savage, 1984; Waldman and Evans, 1994), and to the Kildonnan Member of the Lealt Shale Formation.

References



(Figure 6.1) Distribution of British Bathonian tetrapod localities. Dorset: Long Burton (1), Watton Cliff (1a), Swyre (1b); Somerset: Closworth (2); Avon: Bath (3); Wiltshire: Avoncliff (4), Bradford-on-Avon (5), Frankley (6), Box Tunnel (7), Afford (8), Malmesbury (9), Leigh Delamere (9a); Gloucestershire: Minchinhampton (10), Sapperton Tunnel (11), Avening (12), Cirencester (13), Tarlton Clay Pit (13a), Sevenhampton (14), Chedworth (15), Stanton (16), Bibury (17), Naunton (18), Kyneton Thorns (19), Huntsman's Quarry (20), Eyeford (21), New Park Quarry (22), Oakham (23), Longborough Road Quarry (24); Oxfordshire: Chipping Norton (25), Sarsden (26), Over Norton (27), Sharp's Hill (28), Temple Mills Quarry (29), Enstone (30), Stonesfield (31), Slape Hill (32), Glympton (33), Bladon (34), Hanborough (35), Enslow Bridge (36), Bletchingdon Station (37), Shipton Quarry (38), Kirtlington (39), Hampton Common (40), Fritwell (41), Littlemore (42), Woodeaton (43), Ardley (44), Stratton Audley (45); Buckinghamshire: Stony Stratford (46), Olney (47); Northamptonshire: Blisworth (48), Cogenhoe (49), Northampton (50), Kingsthorpe (51), Rushden (52), Thrapston (53), Ilchester (54), Oundle (55); Leicestershire: Essendine (56), Belmesthorpe (57); Cambridgeshire: Peterborough (58), Botolph's Bridge (59), Orton Longueville, Peterborough (60), Stilton (61); Yorkshire: Scarborough (62); Hebrides: Eigg (63), Muck (64), Elgol, Skye (65a, b), Berreraig, Skye (66). Based on information in Evans and Milner (1994), Metcalf et al. (1992), and original.



(Figure 6.2) Stratigraphy of the British Bathonian (after Cope et al., 1980b), with ages of the localities listed in Figure 6.1 indicated.