**Diverse vertebrate assemblage of the Kilmaluag Formation (Bathonian) of Skye, Scotland**

Elsa Panciroli,Roger B. J. Benson, Stig Walsh, Richard J. Butler, Tiago Castro, Marc E. H. Jones, Susan E. Evans

**Supplementary Information**

PBDB = Palaeobiology Database <https://paleobiodb.org/>

**Contents Page**

**Supplementary table 1:** *Vertebrate assemblage of the Forest Marble
Formation. Data from Evans and Milner (1994) and Paleobiology
Database (PBDB). Asterisk\* indicates present in Kirtlington Cement
Quarry locality* **2**

**Supplementary table 2:** *The Guelb el Ahmer Fauna, Morocco. Data
from Haddoumi et al. (2016), unless otherwise referenced* **4**

**Supplementary table 3:** *Vertebrate assemblage of the Itat Formation,
Berezovsk coal mine, Russia. From Averianov et al. (2005, 2016) and
PBDB unless otherwise referenced* **5**

**Supplementary table 4:** *The Yanliao Biota, China. Data from
Xu et al. (2017) and Sullivan et al. (2014), unless otherwise referenced* **6**

**Supplementary table 5:** *Vertebrate assemblage of the Alcobaça
Formation, Portugal. Data from Martin and Krebs (2000) and PBDB,
unless otherwise referenced* **7**

**Supplementary table 6:** *Vertebrate assemblage of the Morrison
Formation, USA. Data from Chure et al. (2006), Rougier et al. (2015),
Foster and Heckert (2011) and the PBDB, unless otherwise referenced* **9**

**Supplementary table 7:** *Vertebrate assemblage of the Purbeck Group.
Includes Lulworth, Durlston and Haddenham formations. Data from
PBDB and Salisbury (2002)* **12**

**References 15**

**Supplementary table 1:** *Vertebrate assemblage of the Forest Marble Formation. Data from Evans and Milner (1994) and Paleobiology Database (PBDB) unless otherwise indicated. Asterisk\* indicates present in Kirtlington Cement Quarry locality.*

|  |  |  |  |
| --- | --- | --- | --- |
| Chondrichthyes | Hybodontiformes |  | *\*Asteracanthus**\*Hybodus**Lissodus wardi**\*Lissodus* sp.*Parvodus pattersoni*  |
|  | Batoidea |  | *\**Batoidea indet. |
|  | Carcharhiniformes  |  | Carcharhiniformes indet |
|  | Galeomorphi |  | *Galea* indet. |
|  | Heterodontidae |  | *Proheterodontus sylvestris* (Underwood and Ward 2004) |
|  | Protospinacidae |  | *Breviacanthus brevis* |
|  | Pseudonotidanidae |  | *Pseudonotidanus semirugosus* (Underwood and Ward 2004) |
|  | Rhinobatidae |  | *Spathobatis delsatei* (Underwood and Ward 2004)? *Paracestracion* sp. |
|  | Scyliorhinidae |  | *Palaeoscyllium tenuidens* (Underwood and Ward 2004)Scyliorhinidae indet. |
|  | Proscylliidae |  | *Eypea leesi* (Underwood and Ward 2004) |
|  |  | Incertae sedis | Neoselachii indet |
| Osteichthyes | Lepisosteiformes |  | *\*Lepidotus tuberculatus* |
|  | Pycnodontoidea |  | *Mesodon bucklandi* *\**Pycnodontoidea indet. |
|  | ?Amioidea |  | *\**Amioidea indet. |
| Lissamphibia | Anura | Discoglossidae | *\*Eodisciglossus oxoniensis*Discoglossidae indet. |
|  |  | Albanerpetonidae | *\*Albanerpeton* sp.*\*Anoualerpeton priscus*Albanerpetontidae indet. |
|  | Caudata | Incertae sedis | *\*Marmorerpeton kermacki* *\**Kirtlington ‘Salamander A’*\**Kirtlington ‘Salamander B’ |
| Sauropsida | Testudinata |  | Chelonia indet. (Evans and Milner 1994)*\**Cryptodira indet. (Evans and Milner 1994)?Pleurosternidae indet. (Evans and Milner 1994) |
|  |  |  | Cryptodira: cf. Pleurosternidae |
|  | Lepidosauromorpha  | Lepidosauromorpha indet | *\*Marmoretta oxoniensis* (Evans, 1991)Lepidosauromorpha indet. |
|  |  | Squamata indet | *Balnealacerta silvestris* (Evans 1998)*Bellairsia gracillis* (Evans 1998)*‘Eophis underwoodi’* (Caldwell et al. 2015)*Oxiella tenuis* (Evans 1998)*Parviraptor* sp. (Evans 1994)*\*Saurillodon marmorensis \*Squamata indet.* (Evans 1998)?Paramacellodidae indet. |
|  |  | Rhynchocephalia | Sphenodontia indet. (Evans 1992) |
|  | Choristodera |  | *\*Cteniogenys* sp. |
|  | Archosauromorpha | Crocodylomorpha | *\**Cf. *Nannosuchus* (?juvenile *Goniopholis*)*Theriosuchus* sp. (Tennant et al 2016)*\**Atoposauridae indet.Crocodylomorpha indet. |
|  |  | Teleosauridae | *Steneosaurus heberti* (Phizackerley, 1951)*Steneosaurus megistorhynchus* (Phizackerley, 1951)Teleosauridae indet. |
|  |  | Pterosauria | *\**Pterosauria indet. |
|  |  | Dinosauria - Ornithiscia | *\** Ornithischia indet |
|  |  | Dinosauria - Sauropoda | Sauropoda indet. |
|  |  | Dinosauria - Theropoda | Theropoda indet.Coelurosauria indet. |
| Synapsida | Mammaliamorpha | Tritylodontidae | *\*Stereognathus* ooliticus (Panciroli et al. 2017)*\**Tritylodontidae indet. |
|  | Mammaliaformes | Morganucodonta | *\*Wareolestes rex**Morganucodon tardus* (Butler and Sigogneau-Russel 2016)*Stylidens hookeri* (Butler and Sigogneau-Russel 2016)Morganucodontidae indet |
|  |  | Docodonta | *\*Borealestes serendipitus**\*Borealestes* sp. nov.*\*’Borealestes’ mussettae**\*Simpsonodon oxfordensis* (incl. *‘Cyrtlatherium’* believed to be milk molar of *Simpsonodon*)*\*Krusatodon kirtlingtonensis* (Sigogneau-Russell 2003) |
|  |  | Haramiyida | *\*Eleutherodon oxfordensis* (Butler and Hooker 2005)*Haramiyida* sp. (Butler and Hooker 2005)*\*Millsodon oxfordensis* (Kermack et al 1998)*Millsodon superstes* (Butler and Hooker 2005)*\*Kirtlingtonia catenata* (Butler and Hooker 2005) |
|  | Mammalia | Multituberculata | *\*Kermackodon multicuspis* (Butler and Hooker 2005)*\*Hahnotherium antiquum* (Butler and Hooker 2005)Multituberculata indet. |
|  |  | Shuotheriidae | *Shuotherium* sp. (Sigogneau-Russell 1998) |
|  |  | Eutriconodonta | *\*Phascolotherium simpsoni* (Butler and Sigogneau-Russel 2016) |
|  |  | Cladotheria | *\*Palaeoxonodon ooliticus* (=*Palaeoxonodon freemani*; *Kennetheridium leesi*, Close et al 2016)Amphitheria indet. (Freeman 1979) |
|  |  | Incertae sedis | *Kirtlingtonia catenata* (Butler and Hooker 2005)Eupantotheria indet.Allotheria indet.*\**Triconodonta indet. |
|  |  |  |  |
|  |  |  |  |

**Supplementary table 2:** *The Guelb el Ahmer Fauna, Morocco. Data
from Haddoumi et al. (2016), unless otherwise referenced.*

|  |  |  |  |
| --- | --- | --- | --- |
| Osteichthyes | Actinista |  | Mawsoniidae indet |
|  | Dipnoi |  | *Arganodus* sp. |
|  | Lepisosteiformes |  | *Lepidotes* sp. Or *Scheenstia* sp.Cf. Ionoscopiformes indet. |
|  | Osteoglossiformes |  | Osteoglossiformes indet. |
| Pisces indet | . |  | Indet |
| Lissamphibia | Albanerpetonidae | Albanerpetonidae | Albanerpetonidae indet. |
|  | Caudata |  | Caudata indet. |
|  | Lissamphibia indet. |  | Lissamphibia indet. |
| Sauropsida | Testudinata |  | Testudinata indet. |
|  | Lepidosauromorpha | Squamata indet | Cf. *Parviraptor* Squamata indet |
|  |  | Incertae sedis | Scincomorpha indet. 1Scincomorpha indet. 3? Scincomorpha indet. 3 |
|  |  | Rhynchocephalia | Rhynchocephalia indet. |
|  | Choristodera |  | Choristodera indet. |
|  | Archosauromorpha | Crocodylomorpha | Atoposauridae, cf. *Theriosuchus* sp.Teleosauridae indet.Thalattosuchia, ?Petrorhynchidae indet. |
|  |  | Pterosauria |  |
|  |  | Dinosauria - Theropoda | Theropoda indet. |
|  |  | Dinosauria - Ornithiscia | Thyreophora, cf. Stegosauria indet.Ornithiscia indet. |
|  |  | Pterosauria | Pterosauria indet. |
| Synapsida | Mammalia | Cladotheria | Amphitheriidae indet.Dryolestida indet. |
|  |  |  |  |

**Supplementary table 3:** *Vertebrate assemblage of the Itat Formation, Berezovsk coal mine, Russia. From Averianov et al. (2005, 2016) and PBDB unless otherwise referenced.*

|  |  |  |  |
| --- | --- | --- | --- |
| Chondrichthyes | Hybodontiformes |  | *Hybodus* sp. |
| Osteichthyes | Acipenseriformes |  | Acipenseriformes indet. |
|  | Amiiformes |  | Sinamiidae indet. |
|  | Dipnoi |  | *Ferganoceratodus* sp |
| Lissamphibia | Anura |  | *?Eodiscoglossus* sp. |
|  | Caudata |  | *Urupia monstrosa* [cf. = Karauridae indet.]*Kiyatriton krasnolutskii* *Egoria malashichevi* (Skutchas *et al*. 2020) |
| Sauropsida | Testudinata |  | *Annemys* sp. [cf. = *Xinjiangchelys* sp.]Testudine indet. 1Testudine indet. 2Testudine indet. 3 |
|  | Lepidosauromorpha |  | Lepidosauromorpha indet |
|  | Squamata | Incertae sedis | Scincomorpha indet. [=cf. Paramacellodidae indet.] |
|  | Choristodera |  | Choristodera indet. [=Steniogenys sp.] |
|  | Archosauromorpha | Crocodylomorpha | Gonipholididae indet. [=*Sunosuchus* sp.] |
|  |  | Pterosauria | Pterosauria indet. |
|  |  | Dinosauria - Theropoda | *Kikelkus aristotocus* [=Allosauridae indet.; =Dromeosauridae indet.] |
|  |  | Dinosauria - Ornithiscia | Ornithopoda indet.Heterodontosauridae indet.Stegasauria indet. |
|  |  | Dinosauria - Sauropoda | Mamenchisauridae indet. |
| Synapsida | Mammaliamorpha |  | Tritylodontidae indet. |
|  | Mammaliaformes | Docodonta | *Hutegotherium yaomingi**Itatodon tataronovi**Simpsonodon sibiricus*Docdonta indet. |
|  |  | Haramiyida | *Maiopatagium sibiricum,* (Averianov *et al*. 2019)*Sharypovoia arimasporum* (Averianov *et al*. 2019)*Sharypovoia magna* (Averianov *et al*. 2019)*‘Sineleutherus issedonicus’* (Averianov, Lopatin and Krasnolutskii 2011, but see Averianov *et al*. 2019) |
|  | Mammalia | Cladotheria | *Anthracolestes sergeii**Amphibetulimus krasnolutskii* |
|  |  | Eutriconodonta | Amphilestidae indet.Eutriconodonta indet. |
|  |  | Multituberculata | Multituberculate species 1 (Averianov *et al*. 2020)Multituberculate species 2 (Averianov *et al*. 2020) |

**Supplementary table 4:** *The Yanliao Biota, China. Data from from Xu et al. (2017) and Sullivan et al. (2014), unless otherwise referenced.*

|  |  |  |  |
| --- | --- | --- | --- |
| Osteichthyes | Acipenseriformes |  | *Liaosteus hongi*Unnamed ptycholepids |
| Lissamphibia |  | Caudata | *Beiyanerpeton jianpingensis**Chunerpetron tianyensis**Liaoxitriton* *daohugouensis**Jeholotriton paradoxus**Pangerpeton sinensis**‘Yabeinosaurus’ youngi*Tadpole (possible insect, Huang 2013) |
| Sauropsida | Squamata | Incertae sedis | ‘Lizard 1’‘Lizard 2’  |
|  | Archosauromorpha | Pterosauria | *Archaeoistiodactylus linglongtaensis* (possible *Darwinopterus,* Martill and Etches, 2012)*Changchengopterus pani**Darwinopterus modularis**D. linglongtaensis**D. robustodens**Dendrorhynchoides mutoudengensis**Fenghuangopterus lii**Jeholopterus ningchengensis**Jianchangnathus robustus**Jianchangopterus zhaoianus**Kunpengopterus sinensis**Pterorhynchus wellnhoferi Qinglongopterus guoi**Wukongopterus lii* |
|  |  | Dinosauria - Theropoda | *Anchiornis huxleyi**Aurornis xui**Eosinopteryx brevipenna Epidendrosaurus ningchengensis**Epidexipteryx hui* (= *Scansoriopteryx heilmanni*)*Pedopenna daohouensis**Xiaotingia shengi* |
|  |  | Dinosauria - Ornithischia | *Tianyulong confuciusi* |
| Synapsida | Mammaliformes | Docodonta | *Agilodocodon scansorius* (Meng et al. 2015)*Castorocauda lutrasimilus**Docofossor brachydactylus* (Luo et al. 2015) |
|  |  | Haramiyida | *Arboroharamiya jenkinsi**Maiopatagium* (Meng et al. 2017)*Megaconus mammaliaformis* |
|  | Mammalia | Australosphenida | *Pseudotribos robustus* |
|  |  | Eutheria | *Juramaia sinensis* |
|  |  | Eutriconodonta | *Liaotherium gracile**Manchurodon simplicidens**Volaticotherium antiquum* |

**Supplementary table 5:** *Vertebrate assemblage of the Alcobaça Formation, Portugal. Data from Martin and Krebs (2000) and PBDB, unless otherwise referenced.*

|  |  |  |  |
| --- | --- | --- | --- |
| Chondrichthyes | Hybodontiformes |  | *Acrodus* sp.*Asteracanthus biformatus**Hybodus* sp.*Polyacrodus* sp. novHybodontiformes indet. |
|  | Batomorphii |  | Batomorphii sp.1Batomorphii sp. 2 |
|  | Incertae sedis |  | Holostei indet |
| Osteichthyes | Ionoscopidae |  | Ionoscopidae incertae sedis |
|  | Macrosemiidae |  | Macrosemiidae incertae sedis |
|  | Amiiformes |  | *Caturus* Caturidae indet.Amiidae indet. |
|  | Semionotiformes |  | *Lepidotes* sp. 1*Lepidotes* sp. 2 |
|  | Pachycormidae |  | Pachycormidae indet. |
|  | Pycnodontidae |  | *Coelodus/Proscinetes* sp.*Macromesodon* sp. |
| Lissamphibia | Anura | Discoglossidae | Discoglossidae indet.Anura indet. |
|  | Albanerpetontidae |  | Cf. *Celtedens*  |
|  | Caudata |  | *Marmorerpeton* |
| Sauropsida | Testudinata |  | *Craspedochelys jaccardi**Peltochelys duchasteliiPlatychelys* sp.Pleurosternidae indet.Platychelidae indet.Chelonia indet.Plesiochelydae indet. |
|  | Lepidosauromorpha | Lepidosauromorpha indet. | *Marmoretta* sp. |
|  |  | Anguimorpha  | *Dorsetisaurus sp.**Dorsetisaurus pollicidens* |
|  |  | Paramacellodidae | *Becklesius hoffstetteri* *Paramacellodus* sp. indet. |
|  |  | Squamata indet. | *Parviraptor sp.**‘Portugalophis lignites’**Saurillodon proformis**S. henkeli**S.* cf. *obtusus*Scincoidea indet. |
|  |  | Rhynchocephalia | Sphenodontia indet. |
|  | Choristodera |  | *Cteniogenys sp.* |
|  | Archosauromorpha | Crocodylomorpha | *Goniolophis* cf. *simus**Goniolophis brodereiGoniolophis baryglyphaeus**Lisboasaurus estesi* *Lisboasaurus mitracostatus**Machimosaurus hugii**Theriosuchus* |
|  |  | Pterosauria | Pterosauria indet.Pterodactyloidea indet. |
|  |  | Dinosauria - Theropoda | Cf. *Archaeopteryx* sp.*Aviatyrannis jurassicaCeratosaurus* sp.*Compsognathus* sp.*Paronychodon* sp.Cf. *Richardoestesia* sp.*Stokesosaurus* sp.Dromaeosaurinae indet.Tetanurae indet.?Troodontidae indet. |
|  |  | Dinosauria - Ornithopoda | *Dacentrurus armatus**Dryosaurus* sp.*Phyllodon henkeli**Trimucrodon cuneatus*Iguanodontia indet.Stegosauria indet. |
|  |  | Dinosauria - sauropoda | Brachiosauridae indet.Titanosauriformes indet. |
| Synapsida | Mammaliaformes | Docodonta | *Haldanodon expectatus* |
|  | Mammalia | Cladotheria | *Drescheratherium acutum**Dryolestes leiriensis**Guimarotodus inflatus**Henkelotherium guimarotae**Krebsotherium lusitanicum**Laolestes andresi**Nanolestes drescherae* (Martin 2002)*Nanolestes krusati*Dryolestidae indet.Paurodontidae indet. |
|  |  | Eutriconodont | *Priacodon* sp. |
|  |  | Multituberculata | *Bathmochoffatia hapax**Bernardodon atlanticus**Bernardodon* sp.*Ecprepaulax animala**Guimarotadon leiriensis**Henkelodon naias**Iberodon quadrituberculatus**Kielanodon hopsoni**Kuehnodon dietrichi**K. guimarotensis**K. simpsoni**K. dryas**K. uniradiculatus**Meketichoffatia krausei**Meketibolodon robustus**Parachoffatia staphylos**Paulchoffatia delgadoi* *Paulchoffatia* sp. *Pinheirodon vastus**Pinheirodon pygmaeus**Pinheirodon* sp.*Pleasiochoffatia thoas**P. staphylos**P. peparenthos**Pseudobolodon oreas**P. krebsi**P. dryas**Proalbionbaatar plagiocyrtus* *Renatodon amalthea**Xenachoffatia oinopion*Paulchoffatiidae indet (multiple) |
|  |  | Symmetrodonta | Symmetrodonta indet. |
|  |  | Incertae sedis | Triconodonta indet. |

**Supplementary table 6:** *Vertebrate assemblage of the Morrison Formation, USA. Data from Chure et al. (2006), Rougier et al. (2015), Foster and Heckert (2011) and the PBDB, unless otherwise referenced.*

|  |  |  |  |
| --- | --- | --- | --- |
| Osteichthyes | Dipnoi |  | *Potamoceratodus* sp. |
|  | Paleonisciformes |  | *Morrolepis schaefferi*?paleoniscid |
|  | Amiiformes |  | *Ophiopsis* sp.Amioid indet. Sinamiidae indet. |
|  | Semionotiformes |  | Semionotid (undescribed) |
|  | Halecostomi |  | *Hulettia hawesi* *Leptolepis* sp. |
|  | Ceratodontiformes |  | *Ceratodus felchi**C. fossanovum**C. frazieriC. guentheri**C. robustus* |
|  | Pycnodontoidea |  | Gen et nov |
| Lissamphibia | Anura |  | *Comobatrachus aenigmatis**Ennaebatrachus hechti**Eobatrachus agilis**Rhadinosteus parvus* Unnamed pelobatid |
|  | Caudata |  | *Comonexturoides marshi**Iridotriton hechti* |
|  |  | Incertae sedis | Unnamed salamander |
| Sauropsida | Testudinata  |  | *Dinochelys whitei**Dorsetochelys buzzops* *Glyptops plicatulus**Uluops uluops* |
|  | Lepidosauromorpha | Anguimorpha | *Dorsetisaurus* sp.  |
|  |  | Paramacellodidae | *Paramacellodus* sp. |
|  |  | Incertae sedis | *Diablophis/Parviraptor* *Saurillodon* sp.*Schilleria utahensis*‘Scincomorph’ lizard A‘Scincomorph’ lizard B |
|  |  |  | Unnamed lizard |
|  |  | Rhynchocephalia | *Eilenodon robustus**Opisthias rarus**Theratairus antiquus* |
|  | Choristodera |  | *Cteniogenys antiquus* |
|  | Archosauromorpha | Crocodylomorpha | *Amphicotylus lucasii**Eutretauranosuchus delfsi**“Fruitachampsa callisoni”**Goniopholis felix**G. gilmorei**G. lucasii**G. stovalli**Hallopus vistor**Macelognathus vagans**Oplosuchus kayi*Unnamed mesoeucrocodilianGoniolophidae indet. |
|  |  | Pterosauria | *Dermodactylus montanus**Kepodactylus imperatus**Laopteryx priscus* *Mesadactylus ornithosphyos* |
|  |  | Dinosauria - Theropoda | *Allosaurus fragilis**A. jimmadensi**?Aviatyrannis jurassica**Ceratosaurus nasicornis**C. magnicornis**C. dentisulcatus**Coelurus fragilis**Cf. Elaphrosaurus**Koparion douglassi**Marshosaurus bicentissimus**Ornitholestes hermanni**Saurophaganax maximus**Stokesosaurus clevelandi**Tanycolagreus topwilsoni* *Torvosaurus tanneri*Unnamed troodontid |
|  |  | Dinosauria - Ornithopoda | *Camptosaurus dispar**Drinker nisti**Dryosaurus altus**Fruitadens haagarorum**Gargoyleosaurus parkpinorum**Hesperosaurus mjosi**Mymoorapelta maysi**Nanosaurus agilis**Stegosaurus armatus**S. stenops* |
|  |  | Dinosauria - Sauropoda | *Amphicoelias altus**A. fragillimus**Apatosaurus ajax**A. excelsus**A. louisae**Barosaurus lentus**Brachiosaurus altithorax**Camarasaurus supremus**C. grandis**C. lentus**C. lewisi**Diplodocus longus**D. carnegii**D. hayi**D. lacustris**Dystylosaurus edwini**Dystrophaeus viaemalae**Dyslocosaurus polyonychius**Haplocanthosaurus priscus**H. delfsi**Seismosaurus hallorum**Supersaurus vivianae**Suuwassea emilieae*Unnamed cetiosaurid(= “*Morosaurus”**agilis*)Unnamed cetiosaurid (=“*Apatosaurus*”*minimus*) |
| Synapsida | Mammaliaformes | Docodonta | *Docodon victor**D. apoxys* |
|  | Mammalia | Cladotheria | *Amblotherium gracilis**A. minimum**A.* sp. 1*A.* sp. 2*Araeodon intermissus**Archaeotrigon brevimaxillus**A. distagmus**Comotherium richi**Dryolestes priscus**Euthlastus cordiformis**Foxraptor atrox**Fruitafossor windscheffeli* *Laolestes eminens**L. goodrichi**L. oweni**L.* sp.*Paurodon valens**Tathiodon agilis*Unnamed paurodontid |
|  |  | Eutriconodonta | *Aploconodon comoensis**Comodon gidleyi**Priacodon ferox**P. robustus**P. lulli**P. grandaevus**P. fruitaensis**Trioracodon bisulcus**Triconolestes curvicuspis*Unnamed eutriconodontan |
|  |  | Multituberculata | *“Ctenacodon” brentbaatar**Ctenacodon laticepts**C. scindens**C. serratus**C.* sp.*Glirodon grandis**Psalodon fortis**P. marshi**P. potens**?P*. sp.*Zofiabaatar pulcher*Unnamed multituberculate |
|  |  | Symmetrodonta |  *Amphiodon superstes**Tinodon bellus* |

**Supplementary table 7:** *Vertebrate assemblage of the Purbeck Group. Includes Lulworth, Durlston and Haddenham formations. Data from PBDB and Salisbury (2002).*

|  |  |  |  |
| --- | --- | --- | --- |
| Chondrichthyes | Hybodontiformes |  | *Egertonodus basanus**Hybodus* sp*Lonchidion crenulatum**Lonchidion inflexum**Parvodus rugianus**Polyacrodus parvidens*Hybodontoidea indet. |
|  | Batoidea |  | Batoidea indet. |
|  | Rhinobatidae |  | *Belemnobatis variabilis*Rhinobatoidei indet. |
| Osteichthyes | Lepisosteiformes |  | *Lepidotes minor* |
|  | Ophiopsiidae |  | *Ophiopsis breviceps* *Ophiopsis dorsalis* *Ophiopsis penicillata* |
|  | Pleuropholidae |  | *Pleuropholis attenuatus* |
|  | Semionotiodea |  | *Histionotus angularis**Macrosemius andrewsi* |
|  | Incertae sedis |  | Osteichthyes indet. |
| Lissamphibia | Anura |  | *Sunnybatrachus purbeckensis* |
|  | Albanerpetontidae | Albanerpetontidae | *Celtedens megacephalus* |
|  | Caudata | Batrachosauroididae | Batrachosauroididae indet. |
|  |  | Incertae sedis | *Apricosiren ensomi* |
| Sauropsida | Testudinata |  | *Chelone obovata**Dorsetochelys typocardium**Helochelydra anglica**Hylaeochelys latiscutata**Pleurosternon bullockii**Plesiochelys* sp.*Pleurosternon bullocki**Pleurosternon* sp.*Tretosternon punctatum**Tretosternon* sp.Cryptodira indet.Testudina indet.Thalassochelydia indet. |
|  | Lepidosauromorpha | Anguimorpha | *Dorsetisaurus hebetidens* *Dorsetisaurus purbeckensis* |
|  |  | Lacertoidea | *Purbicella ragei* |
|  |  | Paramacellodidae | *Becklesius* sp.*Paramacellodus oweni**Paramacellodus* sp.  |
|  |  | Squamata incertae sedis | *Durotrigia* *triconidens*.*Parasaurillus pseudobtusus* *Parviraptor estesi* *Parasaurillus pseudobtusus**Pseudosaurillus becklesi Pseudosaurillus* sp*Saurillus robustidens**Saurillus obtusus**Saurillus* sp.Squamata indet. 1Squamata indet. 2Squamata indet. 3 |
|  |  | Rhynchocephalia | *Homoeosaurus* sp.*Opisthias* sp.Rhynchocephalia indet. |
|  | Ichthyosauria |  | *Ichthyosaurus* sp.Ophthalmosauridae indet. |
|  | Sauropterygia |  | Plesiosauria indet.Cryptoclidia indet. |
|  | Archosauromorpha | Crocodylomorpha | *Goniopholis crassidens**Goniopholis kipling**Goniopholis simus**Goniopholis gracilidens* (=*Nannosuchus*)*Pholidosaurus purbeckensis**Theriosuchus pusilus*Crocodylia indet. (*Goniopholis* sp. *Bernissartia* sp., *Goniopholis* *tenudens* |
|  |  | Pterosauria | *Gnathosaurus macrurus Plataleorhynchus streptophorodon*Ctenochasmatidae indet. |
|  |  | Dinosauria - Ornithischia | *Echinodon becklesii**Owenodon hoggii*Ankylosauria indet. |
|  |  | Dinosauria - Sauropoda | *Duriatitan humerocristatus*Cetiosauridae indet.Sauropoda indet. |
|  |  | Dinosauria - Theropoda | *Nuthetes destructor*Theropoda indet. |
| Synapsida | Mammaliaformes | Morganucodonta | *Purbeckodon batei* |
|  |  | Docodonta | *Peraiocynodon inexpectatus* |
|  | Mammalia | Cladotheria | *Amblotherium pusillum**Amblotherium soricinum**Amblotherium* sp.*Chunnelodon alopekodes* *Dorsetodon haysomi**Durlestotherium newmani**Durlstodon ensomi**Magnimus ensomi**Peramus tenurostris**Peramus dubius**Peramus minor**Peramus* sp.*Peraspalax talpoides**Peraspalax* sp. *Phascolestes mustelula**Phascolestes* sp. *Tribactodon bonfeldi*Paurodontidae indet. |
|  |  | Eutriconodonta | *Trioracodon major**Trioracodon ferox**Trioracodon mordax**Trioracodon* sp.*Triconodon* sp. |
|  |  | Multituberculata | *Albionbaatar denisae**Bolodon osborni**Bolodon minor**Bolodon crasssidens**Bolodon osborni**Bolodon elongates**Bolodon falconeri**Bolodon* sp*.* *Ctenacodon minor**Gerhardodon purbeckensis**Sunnyodon notleyi**Plagiulax becklesii*"Plagiaulacidae" *sp.,* |
|  |  | Symmetrodonta | *Kouriogenys minor* *Spalacotherium* sp*.**Spalacotherium evansae**Spalacotherium hookeri**Tinodon micron* |
|  |  | Incertae sedis | Mammalia indet. |
|  |  |  |  |

**References**

Averianov, A. O., Lopatin, A. V., Skutschas, P. P., Martynovich, N. V., Leshchinskiy, S. V., Krasnolutskii, S. A. & Fayngertz, A. V. 2005. Discovery of middle Jurassic mammals from Siberia. *Acta Palaeontologica Polonica*, ***50***, 789–797.

Averianov, A. O., Martin, T., Skutschas, P. P., Danilov, I. G., Schultz, J., Schellhorn, R., Obraztsova, E., Lopatin, A., Sytchevskaya, E., Kuzmin, I. & Krasnolutskii, S. 2016. Middle Jurassic vertebrate assemblage of Berezovsk coal mine in western Siberia (Russia). *Global Geology*, **19**,187–204.

Averianov, A. O., Martin, T., Lopatin, A. V., Schultz, J. A., Schellhorn, R., Krasnolutski, S., Skutschas, P. & Ivantsov, S. 2020. Multituberculate mammals from the Middle Jurassic of western Siberia, Russia and the origin of multituberculata. *Papers in Palaeontology*, 1–19. [in press]

Butler, P. M. & Sigogneau-Russel, D. 2016. Diversity of triconodonts in the Middle Jurassic of Great Britain. *Palaeontologia Polonica*, **67**, 35–65.

Caldwell, M. W. Nydam, R. L., Palci, A. & Apesteguía S. 2015. The oldest known snakes from the Middle Jurassic-Lower Cretaceous provide insights on snake evolution. *Nature Communications*, **6**, 1–1.

Chure, D. J. Litwin, R., Hasiotis, S. T., Evanoff, E. & Carpenter, K. 2006. The fauna and flora of the Morrison Formation. *New Mexico Museum of Natural History and Science Bulletin*, **36**, 233–249.

Delair, J. B. 1973. The dinosaurs of Wiltshire. *The Wiltshire Archaeological and Natural History Magazine*, **68**, 1–7.

Duffin, C. J. 1985. Revision of the hybodont selachian genus Lissodus Brough (1935). *Palaeontographica Abteilung A*, **188**, 105–152.

Evans, S. E. 1991. A new lizard-like reptile (Diapsida: Lepidosauromorpha) from the Middle Jurassic of England. *Zoological Journal of the Linnean Society*, **103**, 391–412.

Evans, S. E. 1992. A sphenodontian (Reptilia:Lepidosauria) from the Middle Jurassic of England. *Neues Jahrbuch für Geologie und Paläontologie. Monatshefte*, **8**, 449–457.

Evans, S. E. 1994. A new anguimorph lizard from the Jurassic and Lower Cretaceous of England. *Palaeontology*, **37**, 33–49.

Evans, S. E. 1998. Crown group lizards (Reptilia, Squamata) from the Middle Jurassic of the British Isles. *Palaeontographica Abteilung A*, **250**, 123–154.

Evans, S. E. & Milner A. R. 1991. Middle Jurassic microvertebrate faunas from the British Isles. In Z. Kielan-Jaworowska, N. Heintz, & H. A. Nakrem (eds.), *Fifth Symposium on Mesozoic Terrestrial Ecosystems and Biota, Extended Abstracts*. Contributions from the Paleontological Museum, University of Oslo, **364** 21–22.

Foster, J. R. & Heckert, A. B. 2011. Ichthyoliths and other microvertebrate remains from the Morrison Formation (Upper Jurassic) of northeastern Wyoming: a screen-washed sample indicates a significant aquatic component to the fauna. *Palaeogeography, Palaeoclimatology, Palaeoecology*, ***305****,* 264–279.

Galton, P. M. & Knoll, F. 2006. A saurischian dinosaur braincase from the Middle Jurassic (Bathonian) near Oxford, England: from the theropod *Megalosaurus* or the sauropod *Cetiosaurus*?.*Geological Magazine*, **143**, 905–921.

Haddoumi, H., Allain, R., Meslouh, S., Metais, G., Monbaron, M., Pons, D., Rage, J.C., Vullo, R., Zouhri, S. & Gheerbrant, E. 2016. Guelb el Ahmar (Bathonian, Anoual Syncline, eastern Morocco): first continental flora and fauna including mammals from the Middle Jurassic of Africa. *Gondwana Research*, **29**, 290–319.

Martin, T. & Krebs, B. 2000. *Guimarota: a Jurassic ecosystem*. Verlag Dr. Friedrich Pfeil.

Martin, T. 2002. New stem lineage representatives of Zatheria (Mammalia) from the Late Jurassic of Portugal. *Journal of Vertebrate Paleontology*, **22**, 332–348.

Phizackerley P. H. 1951. A revision of the Teleosauridae in the Oxford University Museum and the British Museum. *The Annals and Magazine of Natural History*, **12**, 1170–1192.

Rougier, G. W., Sheth, A. S., Carpenter, K., Appella-Guiscafre, L. and Davis, B. M. 2015. A new species of *Docodon* (Mammaliaformes: Docodonta) from the Upper Jurassic Morrison Formation and a reassessment of selected craniodental characters in basal mammaliaforms. *Journal of Mammalian Evolution*, ***22***, 1–16.

Salisbury, S. W. 2002. Crocodilians from the Lower Cretaceous (Berriasian) Purbeck Limestone Group of Dorset, southern England. *Special Papers in Palaeontology*, **68**, 121–144.

Skutschas, P., Kolchanov, V., Krasnolutskii, S., Averianov, A., Schellhorn, R., Schultz, J. & Martin, T. 2020. A new small-sized stem salamander from

the Middle Jurassic of Western Siberia, Russia. *PLoS ONE*,***15***, e0228610.

Tennant, J. P., Mannion, P. D. & Upchurch P. 2016. Evolutionary relationships and systematics of Atoposauridae (Crocodylomorpha: Neosuchia): implications for the rise of Eusuchia. *Zoological Journal of the Linnean Society*, **177**, 854–936.

Underwood, C. J. & Ward, D. J. 2004. Neoselachian sharks and rays from the British Bathonian (Middle Jurassic). *Palaeontology*, **47**, 447–501.