
Guy's Cliffe, Warwick, Warwickshire

[SP 293 667]

Highlights

Guy's Cliffe is the site of a superb specimen of a large fish-eating amphibian, *Mastodonsaurus jaegeri*, one of the best-preserved examples of this group.

Introduction

The exposures in the grounds of Guy's Cliffe House and on the banks of the River Avon below which comprise Guy's Cliffe, display good sections in the Bromsgrove Sandstone Formation which yielded a fine specimen of *Mastodonsaurus* early in the 19th century. Although not a reptile but an amphibian tetrapod, this specimen is important in correlating the Triassic Warwick sandstones with those of Bromsgrove and Devon. Guy's Cliffe House is owned by freemasons; the property is fenced off and access is difficult, but re-excavation could produce further finds.

Buckland (1837) described the 'excellent section' at Guy's Cliffe as exposing Keuper sandstone. This age assignment was based on a find made in 1823 of 'part of the jaw and other bones of a saurian... presented to the Oxford Museum by the late Butic Greathead, Esq.' This was probably the first find of a tetrapod to be made in the area. Buckland (1837) identified the bones as those of *Phytosaurus*, a German form. The original specimen, although now lost, is well represented by casts.

Owen (1842a, pp. 537–8, pl. 44, figs 4–6, pl. 37, figs 1–3) and Miall (1874, p. 433) described Buckland's 'saurian'; in reality fine specimens of the lower jaw of the temnospondyl *Mastodonsaurus jaegeri*. Milner *et al.* (1990, p. 878) suggest that the Warwickshire material of *Mastodonsaurus*, including *M. jaegeri*, should properly be given *nomen dubium* status and redefined as *Mastodonsaurus* sp.

Howell (1859, p. 40) and Hull (1869, pp. 88–9) reviewed the lower Keuper Sandstone at Guy's Cliffe and elsewhere, and Huene (1908c) described sections at Guy's Cliffe and proposed that the outcrops provided evidence of subaerial dunes as well as water-laid deposits.

Description

Murchison and Strickland (1840, p. 344) published the following section from a quarry in the grounds of Guy's Cliffe House:

	Thickness (ft)
Sandstone and beds of marl	8
Solid sandstone, whitish or grey, occasionally of a reddish tint	12
Red, micaceous marl, with wedges of sandstone	8
Solid, light-coloured, reddish tinted sandstone,	c. 20
Total	48

Huene (1908c) showed cross-bedded sandstone units that had been eroded into a channel and covered by a discontinuous breccia layer in a section at Guy's Cliffe 'below the house of Lord Algernon Percy, on the bank of the Avon'. He noted that the bedding was very irregular and that ripple marks occurred over some beds. Another section figured by Huene 'on the rocky cliff opposite Guy's Cliffe House shows contorted sandstones with laterally discontinuous marl and breccia bands'. These features he attributed to the action of moving dunes 'near the border of the sea'.

Good sections of 7–10 m of cross-bedded, buff-coloured sandstone with irregular shale lenses are still exposed in the grounds of Guy's Cliffe House.

Behind the house is a yard which is bounded to the west by the house, to the north by a chapel and to east and south by rock. The outcrop has been chiselled vertical, and stables and hermit's holes are built into the rock on the south side. On the east is the historic Guy's Cave cut into the rock.

Fauna

'Temnospondyli': Mastodonsauridae.

Mastodonsaurus sp. (= *Mastodonsaurus jaegeri* Owen, 1842)

Remains of lower jaw — casts only

Interpretation

Buckland (1837) placed the Guy's Cliffe sandstone in the Keuper on the basis of the bones collected in 1823, misidentified by him as *Phytosaurus*, a form common in the German Keuper. However, Murchison and Strickland (1840, p. 346) assigned a Bunter age to the 'sandstone of Warwick, Bromsgrove and Ombersley', but were troubled by Buckland's 'saurian' which they attempted to explain away as a Bunter form.

Owen's (1842c, 1842d) recognition of the identity of the Warwick *Mastodonsaurus* with those of the German Keuper confirmed Buckland's view. Howell (1859, p. 40) and Hull (1869, pp. 88–9) confirmed the age of the sandstones of Guy's Cliffe and other Warwick localities as 'Lower Keuper'. Huene (1908c, 1908d) and Wills (1910) repeated the correlation of the Warwick and Bromsgrove sandstones and suggested their equivalence to the German Lettenkohle (Ladinian). Walker (1969) and Paton (1974a) suggested an Early Ladinian assignment on the basis of reptiles and amphibians respectively. Warrington (*in* Benton *et al.*, 1994) gave palynological evidence for an Anisian age, as at Coten End (see above), the most comparable locality.

Conclusions

Guy's Cliffe has produced a good specimen of *Mastodonsaurus jaegeri* (*Mastodonsaurus* sp.), a heavily built, fish-eating, crocodile-like amphibian (over 2 m long), the best British example of this species. The conservation value of the site relates largely to the importance of this fossil amphibian for correlating the Warwick sandstones and the potential for future finds.

[References](#)