

## FOSSIL VERTEBRATE STUDIES IN RHODESIA: SPHENODONTID REMAINS FROM THE UPPER TRIAS OF RHODESIA

by

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## INTRODUCTION

Small sphenodontid rhynchocephalians are known from the upper Trias in Britain (Robinson, 1973). This paper records for the first time the presence of sphenodontids of very similar age, size, and morphology from the Upper Trias of Rhodesia.

The material was recovered from a locality yielding concentrated coelurosaurian dinosaur remains in the Forest Sandstone (U. Triassic) of the Chitake River, Zambezi Valley, Rhodesia (16°07'S; 29°30'E). At least 26 individuals of the coelurosaurian genus *Syntarsus* have been recovered from a restricted site in the Chitake River exposure, the site evidently representing an ephemeral waterbody, or pan, in the arid Triassic landscape of that part of the country.

Although prosauropod dinosaur remains are common in the surrounding sediments they are absent from the immediate site of *Syntarsus* concentration. The only associated non-coelurosaurian remains in the "pan" are the sphenodontid jaws re-

corded here, and one bone which appears to be an osteoderm of an unidentified reptile.

A detailed account of the *Syntarsus* occurrence, together with an interpretation of the palaeoenvironment, is in preparation for publication elsewhere at a later date.

The specimens described here are registered and stored in the palaeontological collections of the Queen Victoria Museum, Salisbury, Rhodesia, under the following numbers:

QG 166, 167, 168, 1104.

## DESCRIPTION

All of the sphenodontid material examined to date consists of broken lower jaws. The material is very well preserved and easily prepared with needles. Four of the best jaw fragments are shown in the camera lucida drawings in the accompanying figure (fig. 1).

QG 166 (fig. 1A) has three large conical acrodont

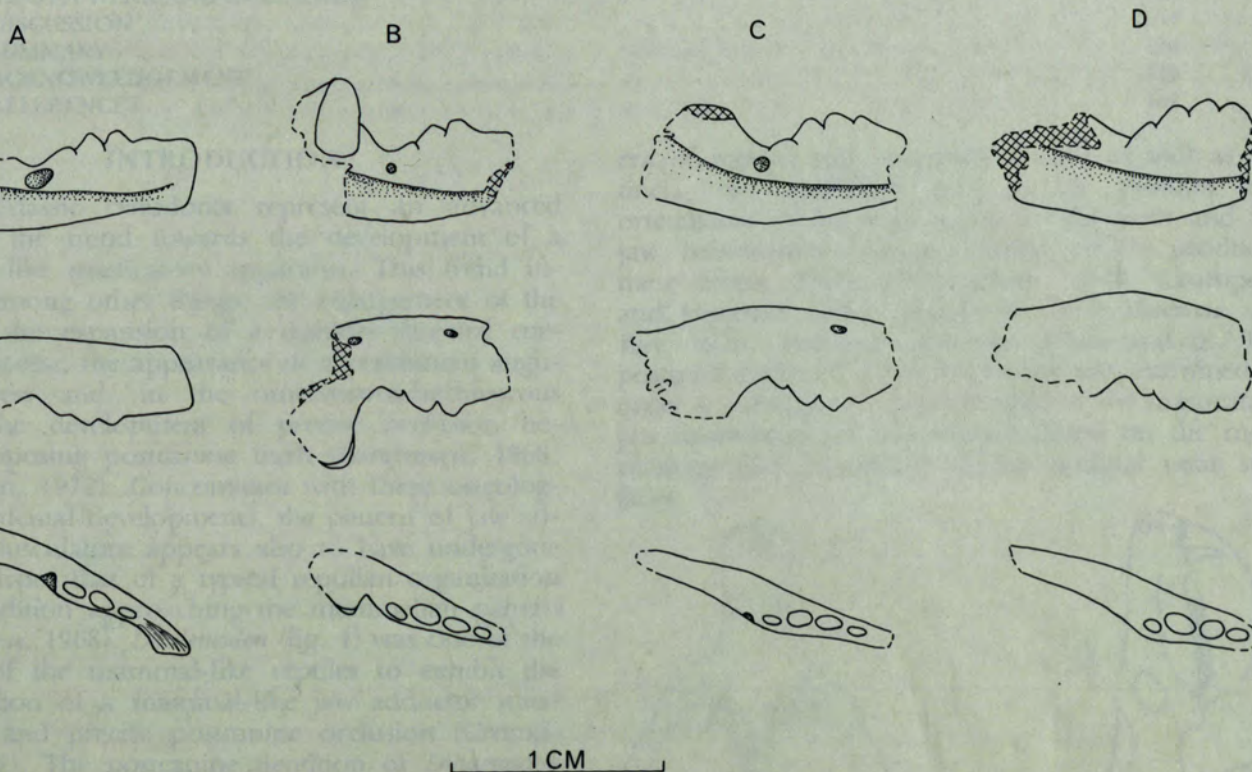


Figure 1. Sphenodontid lower jaws.

A QG 166      C QG 168

B QG 167      D QG 1104

All orientated with anterior ends to the right. Top to bottom, lingual, labial and occlusal views.

teeth followed by a large posterolabial pit from which the developing tooth has been lost (this pit is present in three of the four specimens, the size varying considerably). In QG 166 the symphyseal region of the jaw is undamaged; the anterior teeth have been obliterated by wear to leave a hard ridge or "beak".

QG 167 (fig. 1B) has three teeth and the recognisable base of a more anterior fourth. An intact coronoid bone is preserved in position in this specimen.

Jaws QG 168 and QG 1104 (fig 1 C & D) each have four large teeth. Four seems to be the maximum number of teeth recognisable at any time in these apparently mature individuals.

DISCUSSION

Compared with *Sphenodon* the tooth row in the new material is rather short, and the teeth, though fewer, are relatively much larger. This would suggest a rather shorter snout for the fossil form. These jaws correspond well with Robinson's (1973) description of the jaw of *Glebosaurus*.

The development of the dentition in *Sphenodon* has recently been elucidated fully by Robinson (1976). In the material described above anterior teeth are obliterated by wear, while the four large posterior teeth are added in sequence from the back as described by Robinson for *Sphenodon*.

REFERENCES

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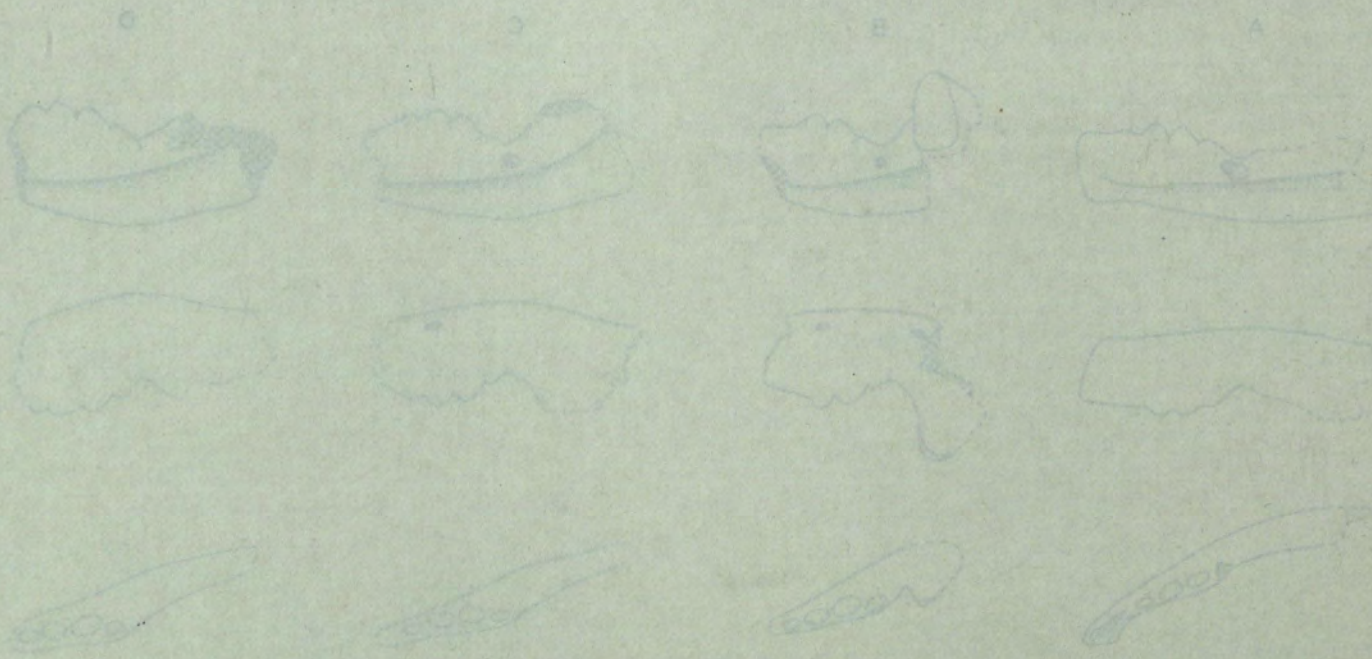


Figure 1. A, QG 166; B, QG 167; C, QG 168; D, QG 1104. Scale bar = 1 cm.