

1. Introduction

The Jarrow Assemblage preserves a diverse assemblage of early tetrapods from the Langsettian (Bashkirian, Pennsylvanian) of Co. Kilkenny. Despite the importance of this assemblage in understanding the evolution of early terrestrial ecosystems it is poorly studied. This is apparent in the faunal composition for the assemblage which includes embolomere, colosteid and the microsauro microbrachid which are all known from inadequately described material. Here the microbrachid

2. Materials and Methods

NMS 1967.13.2 preserves the only identified specimen of a microsauro from the Jarrow Assemblage. It was scanned using micro-computed tomography at the Palaeobiology Lab, University of Bristol. The scan was set at 225 kV, 240 µA with a 1 mm copper plate in front of the source.

The CT-slices were then imported into SPIERS from which a 3D model was produced.

References

- BOSSY, K. V. H. and MILNER, A. C. 1998. Order Nectridea Miall 1875, 73–131. In WELLNHOER (ed), Encyclopedia of Paleoheterpetology. Verlag Dr.Friedrich Pfeil, München, 206 pp.
- Huxley, T. and Wright, E., 1868. *On A Collection Of Fossil Vertebrata From The Jarrow Colliery, County Of Kilkenny, Ireland*. Dublin: Royal Irish Academy, pp.351-370.

3. Model of Skull

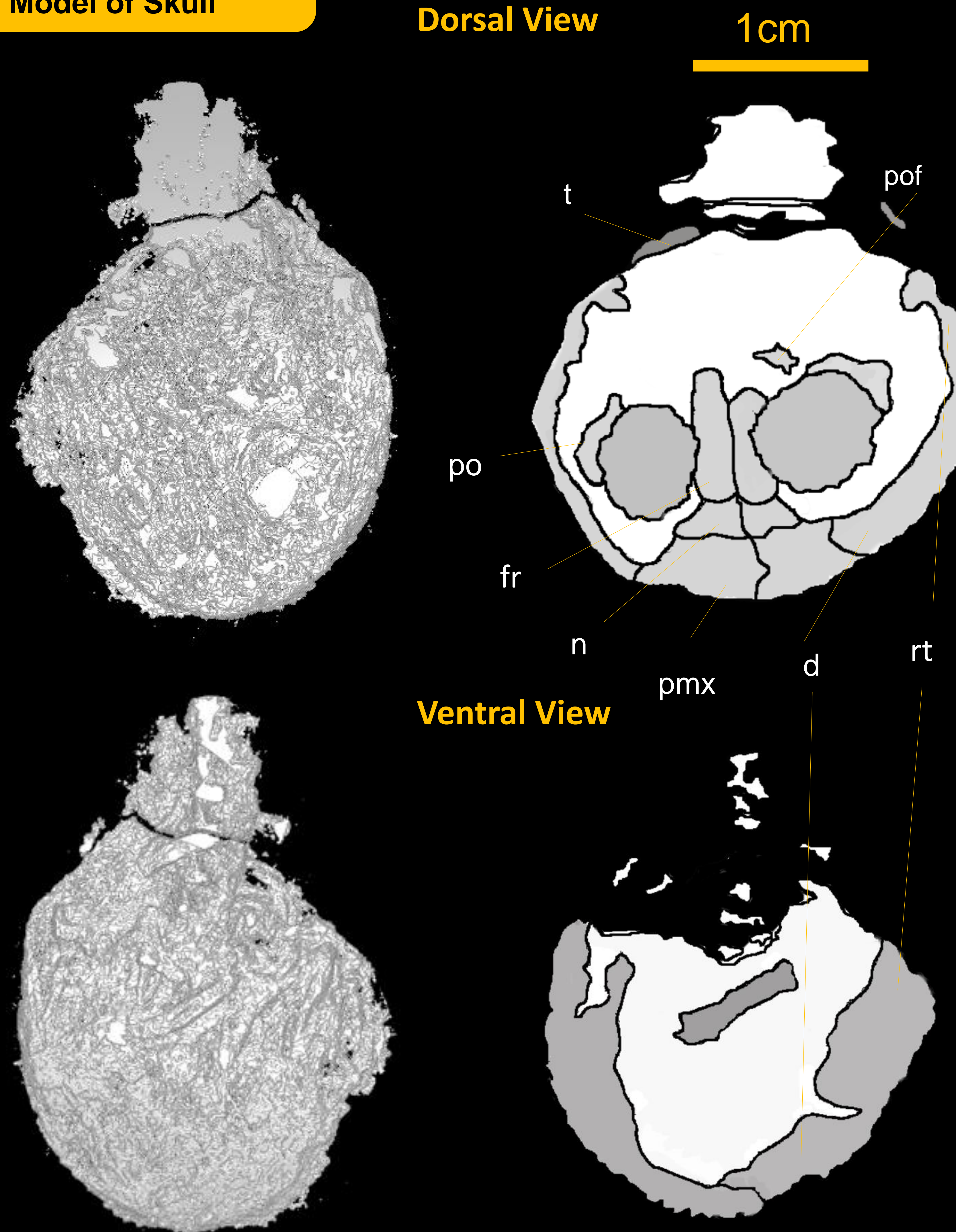


Figure 1. Dorsal and ventral view of the 3D models of the skull of NMS 1967 with distinguishable features illustrated in the illustrations provided. Identification key; t: Tabulars, rt: Retroarticular process, d: Dentary, po: Post-orbital, pof: Post-frontal, n: Nasal, pmx: Pre-maxilla, fr: Frontals

4. Model of Vertebrae

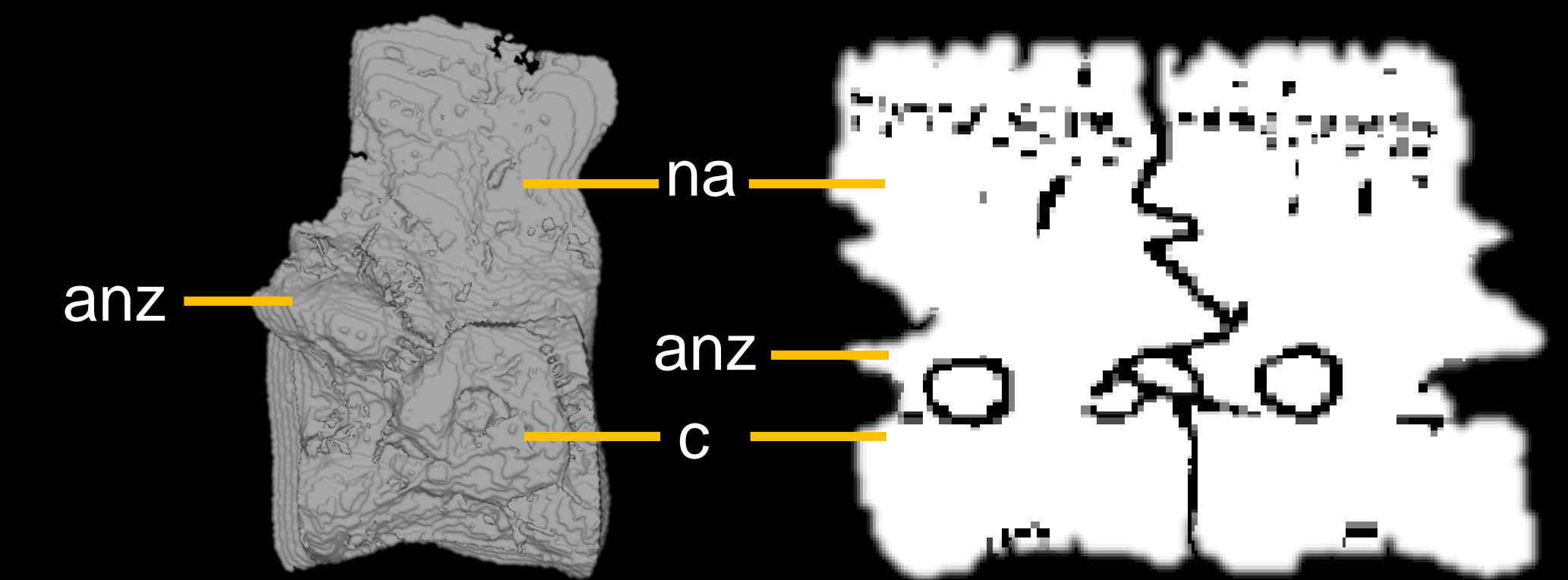


Figure 2. A 3-D model of one of the vertebrae of NMS 1967 compared to an illustration of *Keraterpeton galvani* (Bossy and Milner, 1980) displaying the vertebral centrum and fan-like neural arches. Abbreviations: anz, anterior zygapophyses, c, centrum and na, neural arch.

5. Classification

Micro-CT data shows that NMS 1967.13.2 has characteristics seen in *Keraterpeton galvani*. These include posterior extending tabular horns (Fig. 1), a long retroarticular process in the jaw and fan-shaped neural arches along the vertebral column (Fig. 2). This suggests that NMS 1967.13.2 is not a microbrachid but is another specimen of *K. galvani* (Fig. 3), one of the first tetrapods to be described from Jarrow



Figure 3. *Keraterpeton galvani* from Huxley and Wright (1868)

6. Jarrow Fauna

Reclassification of NMS 1967.13.2 means that there are no known microbrachids from the Jarrow assemblage. This is in contrast with similar assemblages from Nýřany (CR), which dominated by microbrachids. A faunal difference between the two assemblages is likely due Nýřany preserving a freshwater lake community and Jarrow preserving a brackish estuarine community.