

MESSAGE IN A BOTTLE – A TALE OF TWO TRIASSIC TEMNOSPONDYL (LABYRINTHODONT) FEMORA FROM TASMANIA

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(with one text-figure and two plates)

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The history surrounding the discovery and study of some of the earliest Triassic temnospondyl bones found in Tasmania is unravelled and the significance of these bones is discussed. Both bones are likely to have been collected as a result of the quarrying of sandstone (between 1855 and 1857) for the building of the current Tasmanian Government House.

Key Words: temnospondyl, labyrinthodont, Triassic, early records, Tasmania, museology.

INTRODUCTION

In 1997 the senior author, while exploring the antique shops of Hobart, found in Suffolk Park Antiques an intriguing small, nineteenth-century, clear glass bottle. Labelled as “message in a bottle”, it did indeed contain a note on a slip, cut from a visiting card, together with a wafer-thin, sub-triangular piece of dark, porous material (pl. 1). The handwritten note read “section shaft humerus labyrinthodont, sandstone quarry, Hobart, 1856, Tas Museum”. A further annotation, written at right angles to the preceding note, appears to read “Pro R.S.T 1898–9”. Pro R.S.T. is an abbreviated reference to the *Papers and Proceedings of the Royal Society of Tasmania*, 1898–99. This issue of the journal included a short note by W.H. Twelvetrees and W.F. Petterd describing and illustrating two labyrinthodont bones from Tasmania lodged in the Tasmanian Museum and Art Gallery (TMAG) collection. Here we trace

the history of the two temnospondyl (labyrinthodont) bones, review the significance of these specimens and propose an explanation as to how part of one specimen came to be in the Suffolk Park Antiques shop.

DISCOVERY AND STUDY

One of the temnospondyl bones was obtained from Dr Joseph Milligan (1807–1884), formerly of Hobart, Tasmania, and was collected, date unknown but prior to 1861, from a sandstone quarry near the current Government House (Clarke 1861) (fig. 1). The new Government House was constructed, from 1855 to 1857, using sandstone quarried on-site (Newman 2005), and the bones were probably found at this time. The original specimen was sent by Milligan to England, where it was examined by Richard Owen, the foremost anatomist of the nineteenth century, and plaster copies were made of the original which was returned to Milligan. In 1897, Twelvetrees and Petterd received a cast of this bone (previously referred to as TMAG Z163, but recently registered as TMAG Z3553) from Dr H. Woodward, Keeper of Collections at the British Museum.

Angela Milner, Natural History Museum, London (pers. comm. 2011), notes that a “coloured plaster cast, undoubtedly used to replicate the specimen [is] in our collections under register number NHMUK R 500”. She also notes that the cast was presented by Richard Owen in 1884 to the Natural History Museum and there is a handwritten note with it that reads “Cast of humerus of Labyrinthodont Reptile from sandstone, probably Carboniferous, Tasmania. The original with Joseph Milligan, Esq”. On the reverse side of the label one of the British Museum (Natural History) staff has written: “try *Eosaurus* of Marsh”, referring to the great American palaeontologist Othniel Charles Marsh (1831–1899). *Eosaurus* literally means “dawn lizard”, although it is now recognised as representative of an extinct group of Palaeozoic labyrinthodonts (pl. 2). Milner also pointed out that the cast was referred to by Lydekker (1890) as “genus non det.” and correctly as the “cast of a femur; from strata of unknown age in Tasmania”.



PLATE 1

Original bottle, showing the wedge of bone and handwritten label. The handwritten note reads “section shaft humerus labyrinthodont, sandstone quarry, Hobart, 1856, Tas Museum”. A further annotation, written at right angles to the preceding note, reads “Pro R.S.T 1898–9”.

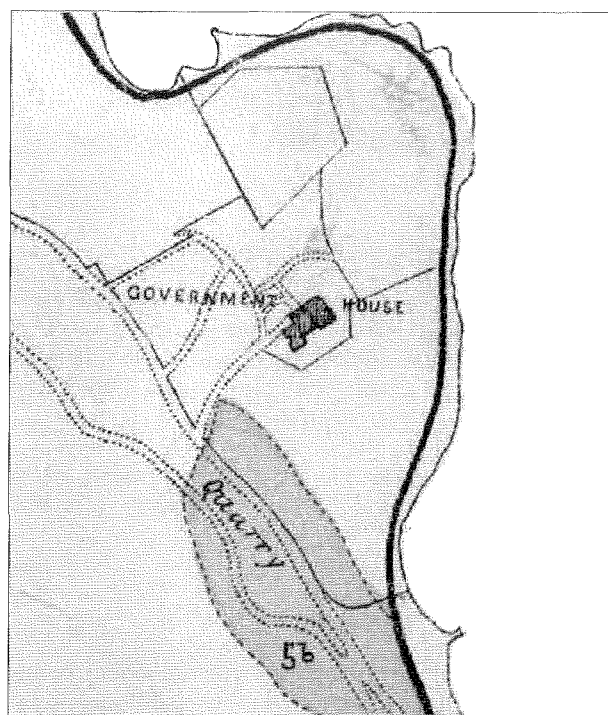


FIG. 1 — Extract of map (from Krause 1884) showing the position of a large quarry near Government House. A smaller quarry, which is not shown, is now a water feature in the grounds of Government House.

A second temnospondyl bone (TMAG Z163; in two pieces) was found in 1856 at the Government House Quarry. The temnospondyl bone passed into the hands of the Director of Public Works, Mr W. P. Kay, who in turn presented it to the museum (Anonymous 1857). Alexander Morton, Director of the Tasmanian Museum, brought this specimen to the attention of Twelvetrees and Petterd. Their findings were presented to The Royal Society of Tasmania in May 1899 and the paper was published the following year. The paper, which included a photomicrograph of a transverse section through this specimen (TMAG Z163), described both specimens (Z163 and Z1553) as two left humeri of labyrinthodont amphibians; to which they attributed a Late Permian or Early Triassic age.

Watson in David & Sussmilch (1931) reported the specimen as a reptile, and David (1950) regarded the specimen as a stegocephalian. Cosgriff (1974) identified "it" as a temnospondyl labyrinthodont and confirmed Lydekker's (1890) interpretation that they were femora, not humeri; he noted that the femora of Triassic temnospondyls are very uniform and therefore could not be assigned to a particular family. Possibly because both bones are left femora and are similar in size and appearance, various authors, including Camp & Banks (1978) and Cosgriff (1974) have erroneously assumed that Twelvetrees & Petterd (1900) had described a single bone. Previous curators at the Tasmanian Museum and Art Gallery had also incorrectly assumed that there was a single specimen and the old display label (pl. 2.) is therefore confusing as the reference to Owen pertains to Z3553 and on the reverse the text pertains to Z163.

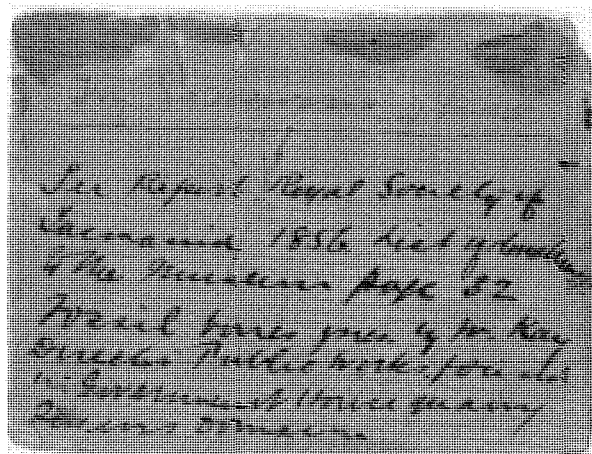
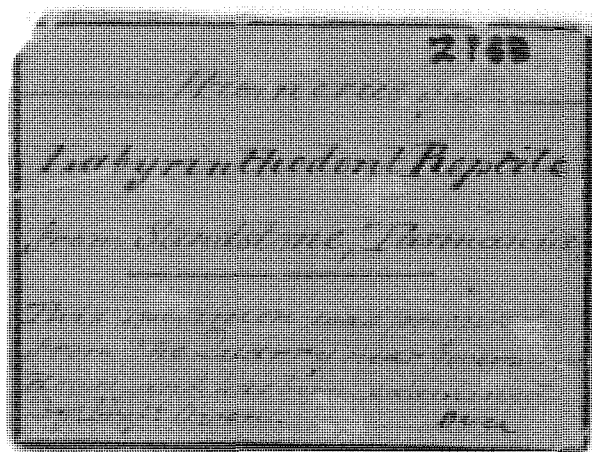


PLATE 2

Original display label which includes information pertinent to both TMAG Z3553 and TMAG Z163.

SIGNIFICANCE AND AGE OF THE TEMNOSPONDYL BONES

These specimens are some of the earliest temnospondyl bones found in Tasmania and Australia. While there is no reason necessarily to assume that they came from the same species of temnospondyl, the two bones were collected from the same area which makes this possibility more likely. This site is now mapped as the Early Triassic Knocklofty Sandstone, or its stratigraphic equivalents (Farmer 1979). Twelvetrees and Petterd's publication is significant because it was the first report of temnospondyls from Tasmania, a group of labyrinthodonts which are now recognised as common elements of the Triassic faunas of the State (Cosgriff 1974). The quarries near Government House were the first Triassic fossil vertebrate site to be found in Tasmania and have yielded the two femora and an undescribed fish spine (A. Milner pers. comm. 2011). Recently Warren *et al.* (2011) have proposed that the type specimen of the temnospondyl *Bothriceps australe* Huxley, 1859 that was described by Huxley (1859) from Australia, but of uncertain age and provenance, was also probably collected from Tasmania at about the same time.

THE BONE IN THE BOTTLE

The piece of bone in the bottle is a section of TMAG Z163 from the Government House Quarry which was cut to prepare the original section. So the question arises – how did it get into a Hobart antique shop? Suffolk Park Antiques had purchased the bottle at auction in 1977, when Sargisons, jewellers of Hobart, had shed most of its stock and fittings. It seems likely that Sargisons, which has a long and distinguished history reaching back into the late 1800s, may well have been given the task of making the original sections of the femur that were used in the photomicrographs made in 1897–1898. As jewellers, Sargisons would have been equipped with the fine saws and wheels capable of sectioning the precious fossil with the minimum of loss or destruction. The piece of bone in the bottle had possibly been retained as a souvenir of the unusual commission.

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