Diplocaulus

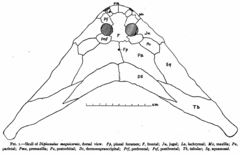


*Diplocaulus* (meaning "double caul") is an extinct genus of [lepospondyl](https://en.wikipedia.org/wiki/Lepospondyli" \o "Lepospondyli) [amphibians](https://en.wikipedia.org/wiki/Amphibian) which lived from the Late [Carboniferous](https://en.wikipedia.org/wiki/Carboniferous) to [Permian](https://en.wikipedia.org/wiki/Permian) periods of [North America](https://en.wikipedia.org/wiki/North_America) and [Africa](https://en.wikipedia.org/wiki/Africa). *Diplocaulus* are by far the largest and most well-known lepospondyls, characterized by a distinctive boomeran of [Morocco](https://en.wikipedia.org/wiki/Morocco) and represent the youngest known occurrence lepospondyl.

discription

*Diplocaulus* had a stocky, [salamander](https://en.wikipedia.org/wiki/Salamander)-like body, but was relatively large, reaching up to 1 m (3.3 ft) in length. Although a complete tail is unknown for the genus, a nearly complete articulated skeleton described in 1917 preserved a row of tail vertebrae near the head. This was construed as circumstantial evidence for a long, thin tail capable of reaching the head if the animal was curled up.[[1]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:2-1) Most studies since this discovery have argued that [anguiliform](https://en.wikipedia.org/wiki/Fish_locomotion" \l "Anguilliform" \o "Fish locomotion) ([eel](https://en.wikipedia.org/wiki/Eel)-like) tail movement was the main force of locomotion utilized by *Diplocaulus* and its relatives.[[2]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:3-2)[[3]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:0-3)

Horns[[edit](https://en.wikipedia.org/w/index.php?title=Diplocaulus&action=edit&section=2)]

[](https://en.wikipedia.org/wiki/File:Douthitt_Diplocaulus_skull_diagram.png)

A skull diagram of *D. magnicornis* by Douthitt (1917), whose identifications of skull bones closely matches those of modern sources.

The most distinctive features of this genus and its closest relatives were a pair of long protrusions or horns at the rear of the skull, giving the head a boomerang-like shape. Most of the outer/front edge of each horn was formed by the elongated, blade-like [squamosal bone](https://en.wikipedia.org/wiki/Squamosal_bone). The rear edge of the skull and horns, on the other hand, was formed by the postparietal bones, also known as dermosupraoccipitals in older publications. However, the primary component of each horn (including the tips) is a long bone with a historically controversial identification. Many early sources considered the bone to be a tabular, which in other early tetrapods is a small bone lying at the rear edge of the skull.[[4]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:5-4)[[1]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:2-1) However, Olson (1951) doubted this, arguing that the bone's contact with the [parietals](https://en.wikipedia.org/wiki/Parietal_bone) excluded the possibility of it being a tabular. He argued that the bone was the [supratemporal bone](https://www.merriam-webster.com/dictionary/supratemporal_bone" \o "mwod:supratemporal bone), which had enlarged and shifted towards the rear tip of the skull.[[5]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:4-5)Beerbower (1963) countered Olson's reasoning by pointing out that *[Urocordylus](https://en.wikipedia.org/wiki/Urocordylus" \o "Urocordylus)*, a newt-like relative of *Diplocaulus*, retained both a supratemporal and a tabular bone. In *Urocordylus*, the tabular lies closer to the back of the skull and even contacts the parietals, invalidating Olson's main point.[[2]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:3-2) Based on this observation, it is more likely that the primary bone of the horns in *Diplocaulus* is a tabular. Many studies (even a later publication by Olson) now refer to *Diplocaulus* horns as tabular horns based on Beerbower's argument.[[6]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:7-6)[[3]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:0-3)[[7]](https://en.wikipedia.org/wiki/Diplocaulus#cite_note-:8-7)