



## Press release

### State Museum of Natural History Stuttgart, Germany

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#### **Tiny fossil reptile sheds light on the origin of lizards and tuataras**

*Stuttgart, Germany, 20.02.2020.* The discovery of a new species of prehistoric reptile from Germany is reported this week in *Scientific Reports*. The anatomical features of the species, named *Vellbergia bartholomaei*, provides unprecedented data towards understanding the early evolution of lizards, snakes, tuataras and their kin (lepidosauromorphs).

Lepidosauromorphs are one of the largest and most diverse vertebrate lineages on Earth today, with over 10,500 species. Ancestors to modern-day lizards, snakes and tuatara have only been found across a few sites in the entire world, and their early evolution remains largely unknown.

In a paper to be published this Thursday, February 20th, 2020, Gabriela Sobral and colleagues will reveal the discovery of a new species of fossil reptile dating from the Middle Triassic (240 million-year-old) deposits of Vellberg, in Germany. The new species include features common to the earliest known lizard-like reptiles, as well as to other reptile groups. Those features, along with a series of analyses combining anatomical and molecular data, indicate *Vellbergia* represents one of the few links between primitive reptiles and the group represented by modern lizards, snakes and tuatara.

The fossil adds to evidence implicating Vellberg as an important site for understanding early lepidosauromorph evolution. Owing to the poor fossil record for the Early Triassic period, specimens from the Middle Triassic are of fundamental importance to understanding how vertebrates recovered after the Permian-Triassic mass extinction (around 252 million years ago), the Earth's most severe known extinction event, and how they diversified into modern species.

“*Vellbergia* is a very interesting fossil because it displays a unique and unexpected set of anatomical features that adds to our understanding as to how they evolved early in the early history of the group; especially in the lineage of the tuatara”, said Dr. Sobral.



“The Vellberg fauna preserves one of the richest Triassic ecosystems and has also yielded the oldest turtle ancestor, along with relatives of crocodiles and up to 5 m long giant amphibians”, said Dr. Schoch.

“Vellberg is a gold mine towards revealing the earliest steps leading to the 250 million years of evolutionary history of lizards, culminating on the more than 10,000 modern species of lizards, snakes and tuatara”, said Dr. Simões.

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### Publication:

Sobral, G., Simões, T. R., Schoch, R.R. 2020. A tiny new Middle Triassic stemlepidosauromorph from Germany: implications for the early evolution of lepidosauromorphs and the Vellberg fauna. *Scientific Reports*, 10: 2273

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Dr. Rainer Schoch with the prehistoric reptile *Vellbergia bartholomaei*.  
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