Zeitschrift: Helvetia : magazine of the Swiss Society of New Zealand
Herausgeber: Swiss Society of New Zealand
Band: 80 (2014)
Heft: [1]

Rubrik: UNESCO Swiss world heritage sites : Monte San Giorgio

UNESCO Swiss World Heritage sites

Monte San Giorgio

Monte San Giorgio is an internationally significant treasure trove of fossil remains from the Middle Triassic period. It was awarded UNESCO World Heritage site status in 2003. This is a major achievement for the canton of Ticino which holds another site: The castles of Bellinzona, which we have covered in an earlier issue.

Rock formations from the Mid Triassic period which hold the hidden fossils are exposed particularly on the north face of Monte San Giorgio. They are also present in the area around Besano in nearby Italy. The formations are approximately 1,000m thick, including reef limestone, dolomite and bituminous shale. These originally formed along the margins of the Tethys Sea and reveal life present in an ancient tropical lagoon environment, sheltered and partially separated from the open sea by an offshore reef.

A diversity of marine life flourished in this lagoon, including reptiles, fish, bivalves, ammonites, echinoderms and crustaceans. Because the lagoon was near to land, fossils also include land-based life, including reptiles, insects and plants. These provide unequivocal and important proof of terrestrial life during that time, spanning a period of some 15 million years.

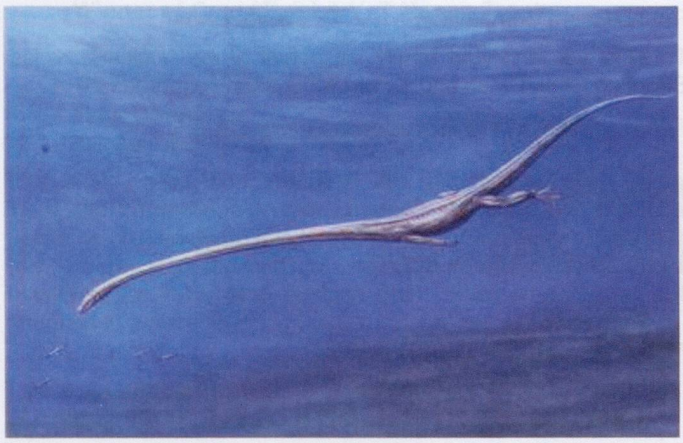
Fossils from the mountain have been known to science for over 150 years. The vertebrate material includes spectacular specimens, including large, articulated skeletons up to six metres in length. Complete skeletons include **ichthyosaurs**, **nothosaurs**, **placodonts** and the remarkable "giraffe-necked" **Tanystropheus**.

The land-based fauna is more restricted, but includes a significant and unique complete skeleton of the archosaur, **Ticinosuchus**. This is the first complete skeleton to be discovered in the northern hemisphere.

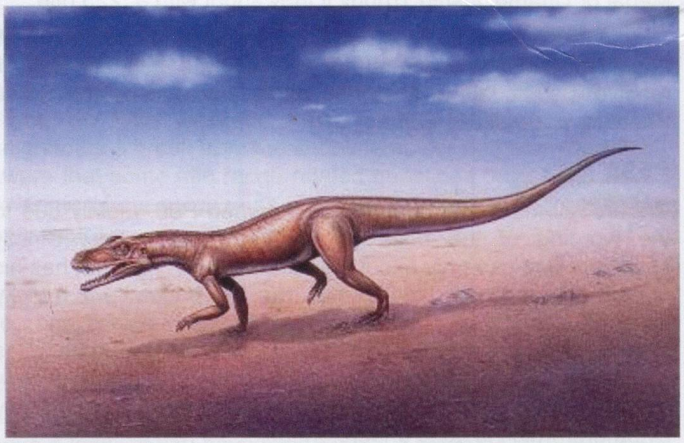
Monte San Giorgio is unique in the world as the best single fossil record of Triassic marine life. Strict, systematic and continuous scientific research has been carried out for over 75 years in Switzerland and Italy, almost exclusively by the universities of Zurich and Milan. This has resulted in a remarkably complete and coordinated record of the site.

The quantity and quality of fossil biota enables interpretation of species evolution, paleo-environments and land-forming processes that existed 200 million years ago. The site provides a record of marine life during a critical period in vertebrate evolution on earth. While important to the examination of life in the Triassic Tethys sea, it also creates a global reference point for comparative studies on the evolution of life. A few examples of fossils from the Monte San Giorgio region are illustrated below.

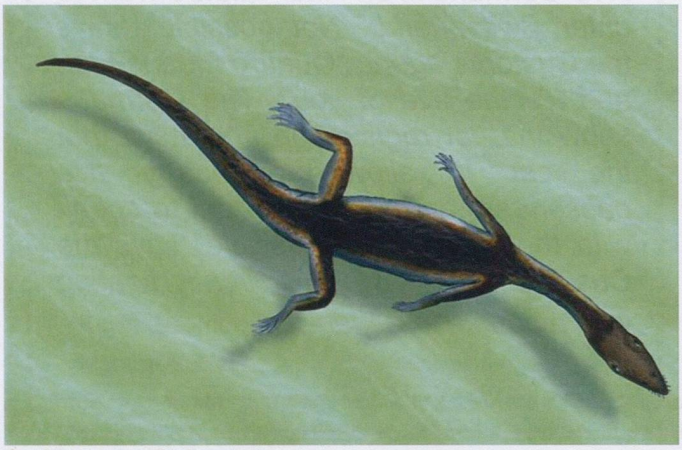
Sources: http:/?whc.unesco.org/en/list/1090, www.italia.it/en/travel-ideas/unesco-world-heritage-sites/monte-san-giorgio-and-its-fossils.html



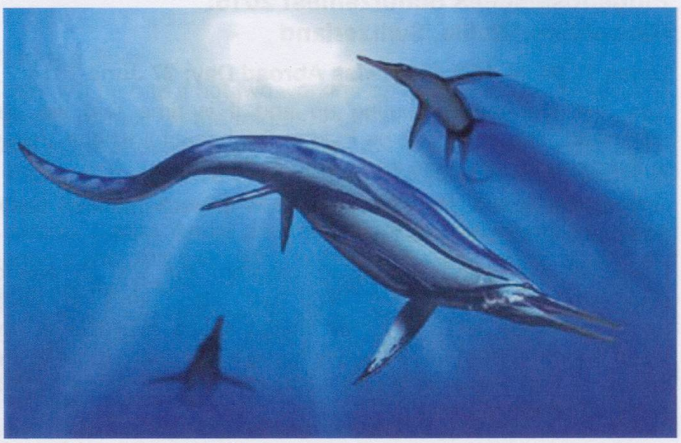
Tanystropheus (Protosaur) www.mineralien-basel.ch



Ticinosuchus (Archosaur) www.mineralien-basel.ch



Sepianosaurus (Nothosaur) http://en.wikipedia.org/wiki/



Besanosaurus (Ichthyosaur) paleopedia.wikia.com/wiki/Besanosaurus