

A “turtle cemetery” from the Late Jurassic of Switzerland.

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The Late Jurassic is a key period in turtle evolution, with the beginning of their secondary adaptation to life in the marine environment (Billon-Bruyat et al. 2005). In Western Europe, turtles are mainly known from coastal marine environments like Canjuers, Cerin, Solnhofen and Solothurn (de Broin 1994). In this way, the famous Solothurn Turtle Limestone (Late Kimmeridgian, Canton Solothurn) revealed a rich and diverse turtle assemblage.

Here we report a new turtle assemblage from the Swiss Jura mountains, discovered in the vicinity of the town of Porrentruy (Canton Jura). This discovery has been realized thanks to systematic excavations in progress along the Transjurane highway (A16), close to dinosaur tracksites (Marty et al. 2003). The depositional sequence belongs to the Late Kimmeridgian, more precisely to the *Virgula* Member of the Reuchenette Formation. The vertebrates are mainly represented by turtles, including actually 11 carapaces (more or less complete and articulated), isolated bones and numerous carapace fragments, assigned to the Plesiochelyidae *s.l.* (Plesiochelyidae and “Thalassemydidae”). The reptiles are also represented by rare isolated teeth and bones of teleosaurid crocodylians (*Steneosaurus*, *Machimosaurus*) and a wing phalanx of a non-pterodactyloid pterosaur. The fauna also includes remains of chondrichthyes, osteichthyes, and invertebrates. Moreover, this locality is characterized by numerous plant macrorests.

This new Late Jurassic turtle assemblage already gives data about turtle taphonomy (e.g. generally upside down carapaces) and the evolution of turtle body size through Mesozoic (competing with the largest known pre-Cretaceous turtles).

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