Summary

After the winter of 2006, several samples of Triassic dark bituminous marlstone and laminated limestone were collected in the Kamniška Bistrica Valley in the Kamniško-Savinjske Alps, northern part of Central Slovenia. The site was more detaily investigated, and during the field excursion in September 2006 the first fish remain was found on a fragment of dark bituminous marlstone. Afterwards, several surveys were carried out in search for the original outcrop, which was discovered at the end of September 2006. In the following four years, broader area of the Kamniško-Savinjske Alps was investigated in more detail. As a result of this work, several new sites with mostly very well preserved Lower and Middle Triassic plant, mollusk, decapod, brachiopod, echinoid, ophiuroid, crinoid, amphibian, fish, and reptile remains were found. The most important are discoveries of the Middle Triassic (Anisian) Velika planina Horizon and Strelovec Formation. The recovered fish specimens belong to the genera Eosemionotus, Habroichthys, Saurichthys, Placopleurus, and to early neopterigians probably close to the "semionotiform", whereas the majority of recovered reptile specimens belong to pachypleurosaur sauropterygians.

So far, the Tethydean Middle Triassic basins have yielded several sites, which are very rich in marine vertebrates. The majority of localities are concentrated in the Southern Alps, mainly in Lombardy (Italy), Canton Ticino and Graubunden (Switzerland), and in Southern China (Guizhou and Yunnan Provinces). The recently discovered Slovenian sites lie in between these two regions. In the Southern Alps, several intraplatform basin existed in the internal parts of the evaporite-carbonate platforms. In Slovenia, their formation was related to the extension tectonics in the Anisian and Ladinian. Contrary to the Middle Triassic basins of Southern China, the basins in the Southern Alps were smaller, with sedimentological and

paleoenvironmental conditions strongly influenced by local tectonic and paleotopographic settings. Some of the Triassic small fish genera found on the new Slovenian sites, such as *Eosemionotus*, *Habroichthys* and *Placopleurus*, were very widespread and are frequently found all along the Southern Alps as well in Southern





China. However, as each area also yielded its own endemic genera, it can be expected that on Slovenian sites, too, we might find new interesting fossils within the ongoing field research.

The new fossil sites from the Kamniško-Savinjske Alps have yielded to date the most abundant Triassic fish and reptilian fauna found in Slovenia. Despite the difficult terrain, which was probably the reason why these sites had not been discovered earlier, the very well preserved specimens, the great variety of species and the large but still not well investigated area give hope that new interesting finds and fossil sites will be discovered in the future.



Neznan ostanek vretenčarja iz Strelovške formacije (T-956). Velikost 4,5 mm. Spodnji sliki sta narejeni pod vrstičnim elektronskim mikroskopom: Miloš Miler, Geološki zavod Slovenije.

Unidentified vertebrate remain form the Strelovec Formation (T-956). Size 4.5 mm. Scanning electron microscope (SEM) images: Miloš Miler, Geological Survey of Slovenia.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: <u>Scopolia</u>, <u>Journal of the Slovenian Museum of Natural History</u>, <u>Ljubljana</u>

Jahr/Year: 2010

Band/Volume: Suppl\_5

Autor(en)/Author(s): Anonymus

Artikel/Article: Summary. 194-195