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Shilin Stone Forests, Yunnan, China

Knez, M.[1,2] and Slabe, T.[1,2]

[1]Karst Research Institute, Research Centre of the Slovenian Academy of Sciences and Arts, Postojna, Slovenia, knez@zrc-sazu.si
[2]Yunnan University International Joint Research Center for Karstology, Kunming, China, knez@zrc-sazu.si

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Stone forests (Shilins) are a unique form of karst karren that distinctly dissect the surface of carbonate rock.
Stone forests are the traces of long-term vertical dissection and the lowering of a karst surface. Relative to sediment, stone forests can be bare, covered, or buried. Dissolving of the rock along fissures, faults, and bedding planes leads to the formation of fissures that can evolve into wider corridors and reach karst caves. The dissolving of carbonate rock is most pronounced under sediment and soil where the corrosive power of water is the greatest as a rule. A great many stone forests began their development in this fashion.
The Shilin Stone Forests in China are one of the most remarkable examples of this kind of development: their diversity, many evident periods, and long development reveal the basic characteristics of the formation of this unique phenomenon on the earth's surface.

Figure 1: Major Shilin Stone Forest, the pillars are up to 35 meters high, the rock is thickly stratified, bedding planes are well expressed

The extensive Shilin Stone Forests, whose pillars reach fifty meters high, is a form of covered karst. The carbonate rock on which the karren formed was covered by thick layers of sediment that had a major influence on the formation and shape of the stone forests. The Shilin stone forests were formed when water from the soil containing biogenic CO_2 and sediment dissolved the rock under the ground. The

water enlarged the fissures and separated rock masses. Under acidic soil, wide and deep cracks formed between pillars and deep channels developed on their walls. Teeth are first to form and over time they develop into forests.

The rock relief on the pillars in stone forests reveals the interwoven traces of the original shaping of the rock below soil and sediment, of the lowering of the level of soil and sediment, and of the younger but distinct transformation of pillars by rainwater, which naturally dominates on the tops.

The shape and height of the pillars are also characteristic of certain types of rock and their topographical location.