

Nature of the Stołowe Mountains
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The Stołowe Mountains National Park, Poland
/case study/

Sandstone Landscapes: Diversity, Ecology and Conservation
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The Stołowe Mountains, literally Table Mountains, form the north-eastern edge of the North Bohemian Sandstone Plate. They are situated in Central Sudetes on the Polish – Czech state border.

Stołowe Mountains National Park covers 63 square kilometres of the upper part of the mountain range rising here up to the elevation of 919 m a. s. l.. Built with completely flat layers of sedimentary rocks they are the only example of plate mountains in Poland. Strongly cracked, isolated tablelands stand out in the relief of the region.

Their upper sandstone layer shows different resistance to the erosive factors. This is why long lasting erosive process has led to creation of numerous fabulous rocky shapes in the form of animals, clubs, mushrooms, human beings, as well as deep fissures and rocky labyrinths.





The Park flora has been transformed by long influence of man who changed water conditions and rebuilt natural forests. Woodlands cover about 90 % of Park area at present, but the natural broad leaves forests of lower montane belt have survived only in small fragments in almost inaccessible areas. On fertile habitats they are represented by montane beech forest, on less fertile – montane mixed forest and in a deep shadowy dells of streams European sycamore forest. Predominated artificially planted spruce forests are in bad condition today, and being monocultures are especially susceptible to damages caused by biotic and abiotic factors.

Among National Park woodlands a big peat bog with such characteristic plants like andromeda, cranberry, marsh tea and endangered species of pine has been maintained.

Because of the abundance of exposed rocks, pioneer - litophyte plants: numerous species of mosses, lichens and liverworts are an important part of Stołowe Mountains flora. Flowerless plants of marl exposures are especially interesting. They contain a big variety of mosses, ferns and rare species of saxifrage which only grows in this area in Poland.

Grasslands being a characteristic element of Stołowe Mountains landscape are very important for the biodiversity of National Park. Even though they cover small part of the area one can find there more than 35% of the species of the vascular flora.

Twenty plants growing in these habitats (inclusive 9 species of orchids) are protected at national level.



In a whole, 16 natural plant's associations included in the Habitat Directive of Nature 2000 network and 48 protected species of flora have been identified in the area.

Marshy meadows overgrown with numerous populations of protected plants are a home of the globe flower which is considered to be a symbol of the region.

The fauna of the site is represented by rather common woodland's animals. Among not so easily spotted are badger, pine marten, weasel, otter and small nocturnal animals like fat dormouse and hazel dormouse. The characteristic environment of cracks and sandstone fissures makes an ideal habitat for a number of bats.

Rocks are also nesting places of rare birds like eagle owl, kestrel and raven. Among woodland breeding birds hazel grouse, honey buzzard, black stork, tengelmans owl and pygmy owl catch our attention. Meadows provide habitats for corncrake and quail.

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As for other groups of vertebrates salamander, alpine newt and warty newt are the most precious elements of animal world.

The invertebrate fauna is still being investigated, but it is known that the Coleoptera insects order is very rich with species and many representatives of Carabidae family are protected at national level. Snow insects and some spiders inhabiting cold and wet sandstone fissure make outstanding peculiarity of the site. Between them one can find postglacial endemic spider *Bathyphantes eunemis*.

The present status of the nature influences the main tasks of the National Park's management plan.

As for inanimate nature protection it defines special regulations for climbers and tries to dissolve the visitors congestion in two honey pots which attracts more than 200.000 tourists each year in summer season.

Because of the progressive degradation of spruce monocultures, rebuilding of tree stands and regeneration of primeval character of the forests are the main goals of forest management. It is connected with silver fir programme realization and reduction of red deer overpopulation.

An important part of the management plan is devoted to the maintaining of the site biodiversity. The rich meadows, clearings, swards and pastures are threatened to become overgrown because of rural exodus and deterioration of traditional farming techniques. Maintaining them requires seasonal mowing and removal of hay. The restoration of endangered pine *Pinus uncinata* is another task realised by the Park authority. In the field of animal protection big programme for amphibians is being developed (special pond for breeding, tunnel under busy road).

The Stołowe Mountains National Park was established in 1993 being 19-th National Park in Poland. The tenth anniversary of the creation will be celebrated next year in September.