

Climbers' attitudes toward nature conservation and management in Tatra National Park, Poland

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The Tatra Mts. are the only high-mountain range in Poland and are protected as a national park since 1954. Numerous limestone and granite cliffs can be found in the area of 225 sq km, between 1000-2500 metres above sea level, both in the forest and alpine belt. The environment of rock cliffs and especially vegetation is unique within the mountain ecosystem (Larson et al., 2000). However, harsh environmental conditions result in a high level of ecosystem vulnerability. On the other hand, the Tatra Mts. are the most popular area for mountain climbing in Poland. In Tatra National Park climbing activity encompasses all of its disciplines: sport climbing on equipped routes, both short and multi-pitched, traditional climbing as well as alpine climbing in the winter season. Recently, new climbing disciplines such as dry-tooling and bouldering have also become popular (Jodłowski, 2004).

Since the 1990s, with the growing popularity of rock climbing in Poland, the climbing activity in Tatra NP has significantly increased, reaching approximately 10,000 ascents in 2006 (Jodłowski, 2007). The only climbing regulations in the national park encompass a total closure of the western part of the mountains, however limestone cliffs located in this area are frequently illegally explored by climbers, especially in winter. Numerous conflicts involving climbers and rangers have been observed. Thus, extensive studies on climbing impact have been conducted. Observed landscape changes caused by climbers include mainly mechanical damage to vegetation, growing instability of slope covers, and micro-relief alteration. The impact significantly differs with reference to climbing disciplines and geological substrate. The largest changes encompassing a complete removal of vegetation layer and soil cover result from dry-tooling on limestone cliffs, whereas sport climbing on granite cliffs causes only a limited removal of weathered rocks and restraining of lichens succession (Jodłowski et al., 2008).

As a conclusion of the research, a number of detailed climbing regulations have been proposed, including partial or temporal closure of the most vulnerable cliffs and limitations for specific types of climbing and use of climbing equipment. Also, bolting the existing and newly opened climbing routes has been a subject of regulations. However, the main strategy towards managing the climbing activity in Tatra NP should be based on co-operation between managers and climbers' representatives (see Pyke, 1997; Prato, Fagre, 2005). Thus, to understand what is climbers' attitudinal dimension toward nature conservation and climbing management in Tatra NP, a survey was conducted among the climbers, who visited Tatra NP at least once. They were contacted on site, in the mountain shelters, climbing gyms and in local clubs (members of Polish Association of Alpinism, representing approximately 50% of climbers visiting the Tatra Mts.). The group of respondents encompassed 480 climbers in total. It comprised approximately 20% of climbers visiting the Tatra Mts. in 2008. The standard questionnaire included 5 groups of questions concerning climbers' self-characteristics, perception of natural values of Tatra NP, perception of climbing impact on the natural environment, expectations and reservations about management process in general as well as attitudes toward potential detailed climbing regulations.

The results correspond well with those obtained by Waldrup and McEwen (1994), and Schuster et al. (2001) in surveys of American climbers. There is a strong need among climbers to be incorporated into the managing process in Tatra NP. The current regulations are considered to be oppressive; Nevertheless, there is an understanding for the detailed solutions. On the other hand, climbers have a poor knowledge on the threat to the environment they may cause as well as the environmental impact resulting from different types of climbing.

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