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Rock climbing in Czech Paradise: Historical development of the frequency of traditional ascents at selected sandstone towers

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ABSTRACT

Chaloupsky, D. (2014). Rock climbing in Czech Paradise: Historical development of the frequency of traditional ascents at selected sandstone towers. *J. Hum. Sport Exerc., 9*(Proc1), pp.S276-S283. Sandstone rock climbing in Geopark Czech Paradise. Overcrowded by climbers or sustainable? The main aim of the research is to analyse the frequency of rock climbing ascents on sandstone rocks in the Prachov Rocks in Czech Paradise from the year 1944 till now. In quantitative research were processed data acquired from summit books, which are installed on the top of each individual sandstone tower, and from older archived summits books. For the latest records it was necessary to ascend each tower and process the data straight in the field. Over 23 000 records were evaluated in total. The most frequently climbed towers with routes of different levels of difficulty were selected intentionally, because they provide comprehensive archival records. The research proved that the frequency of ascents increased rapidly in the early 60s. The period 1969-89 can be regarded as a peak frequency of climbs. The ascents each year exceed the number 600. Maximum in 1979 was 1022 ascents, minimum 631 in 1989. Further developments had a downward trend and the number of outputs was moving around the values of 500 per year. The rise can be observed since 2009 till recent, when the value fluctuate around 640 ascends per year. The hypothesis, that there is a continuous increase in the frequency of climbing towards the present, has not been confirmed. This work shows that rock climbing does not load local rocks in recent days more than in the past. **Key words**: CLIMBING ASCENT, HISTORY, GEOPARK, TOURISM MANAGEMENT.

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INTRODUCTION

The main aim of the research is to analyse the frequency of rock climbing ascents on sandstone rocks in the Prachov Rocks in Czech Paradise in the years 1944 – 2012.

The research was initiated by the members of Protected Landscape Area of Czech Paradise, based on the queries raised to the chairmen of climbing clubs operating in Czech Paradise. The queries were as follows: What is the development of frequency of climbs in individual areas of Czech Paradise? Is the protection of the newly declared UNESCO Geopark of Czech Paradise, established in 2005, endangered by climbing activities currently more than in the past? Should the climbing activities in Geopark of Czech Paradise be reduced due to overloading rocks by climbers?

Czech Paradise is a major tourist area, which has the status of a Protected Landscape Area, and thanks to its geological heritage it was also proclaimed a European geopark under the auspices of UNESCO. The main natural feature of the area are sandstone rocks – favourite destination of rock climbers. From geological point of view the climbing area belongs into Czech Cretaceous Basin. The rock is made of marine Mesozoic reinforced coarse-grained sand deposits called quartsoze sandstone (Härtel et al., 2007). Geological development and specific forms of weathering have created the Rock Cities. In geomorphological literature this term is defined as clusters of rock towers separated by labyrinths and gorges (Adamovič et al., 2010).

Rock climbing the sandstone rocks in the Czech Republic has a long tradition. The beginnings of climbing on sandstone rocks date back to the time when first sandstone towers were conquered by climbers. Prachov rocks, situated in the heart of Czech Paradise, is one of the most important and most visited Czech climbing areas. There are 352 detached towers located in this rock city.

The first official ascent was recorded in 1907. A detailed history of the beginnings of Prachov rock climbing from different perspectives was documented in a series of rock climbing guides. The first climbing guide was made by Janeba (1934) followed by Jedlička (1961) and Janků & et al. (1977). The further development was discussed by Dlabola et al., (1998), and also by the authors of the last published climbing guide Petráň & Koťátko (2007). Sýkora (2004) or Chaloupská & Louka (2012) were concerned with history of origin of sandstone climbing in the Czech Republic.

Concerning recent research, there is no comparison with other authors regarding processing data from summit books. Taylor (2006) focused on climbing in Yosemite Valley, but the aim and methods were different and it dealt with climbing guidebooks.
Although most of the above mentioned authors have been active mountaineers, neither of them tried to analyse the data from summit books.

MATERIAL AND METHODS

In the research data were collected from summit books. These are installed on the top of each individual sandstone tower and they contain comprehensive records of successful ascents. Data were processed assessed by quantitative analysis.

Intentionally the most frequently climbed towers with routes of different levels of difficulty, which offer comprehensive archival records were selected. The research sample consists of five towers: Prachovská

jehla (Prachov Needle), Drážďanská věž (Dresden Tower), Smítkova věž (Smitka Tower), Obelisk and Bella Vista. Each tower is described in a guidebook and has a list of climbing routes with difficulty rating. Based on the international scale of difficulty climbers can anticipate the obstacles during their climb.

Measures
Having reached the summit, each climber reaches the summit book at the same time and logs data concerning the date of ascent, name of the route he/she has climbed, his/her name and the name of the climbing club. This refers to what we understand one ascent. One ascent is a basic unit we count.

Data collection
Data were collected from historical books which are stored in the archives of the Climbing Club of Prachov. However to get the latest records it was necessary to ascend each tower and process the data straight in the field on the summit of each selected tower. Data were processed from 34 summit books. 23 746 records were evaluated in total.

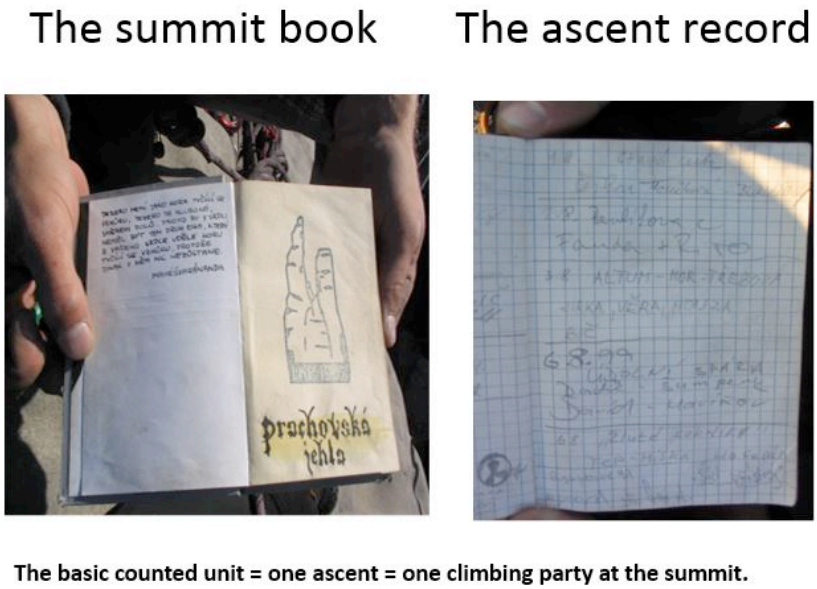

Figure 1. *The sample of summit book with record of ascents*

The best comprehensive records were collected from Prachov Tower where the data covered the period from 1944 up to 2012. Satisfactory records from the rest of the towers start from 1960 (Obelisk), 1962 (Dresden Tower), 1966 (Smitka Tower) and 1969 (Bella Vista).

RESULTS

Prachov Needle
Prachov Needle is the symbol of Prachov Rocks. It is a tall narrow spire. The character of climbing is face climbing and the spire is very popular mostly among moderate climbers. There are 10 climbing routes and 6 variants. The easiest route starts at grade VII (saxonian scale of difficulty).

Prachov Needle has the best comprehensive archival records from all selected towers. The records of ascents cover the period from 1944 to 2012. Unfortunately the archive was not able to trace all the existing summit books since some may have been lost in the past. Therefore the period of 1980 – 1989 is missing. 5498 recorded ascents in 1944 – 2012 were processed. A great progress of ascents from early to late 60s is notable

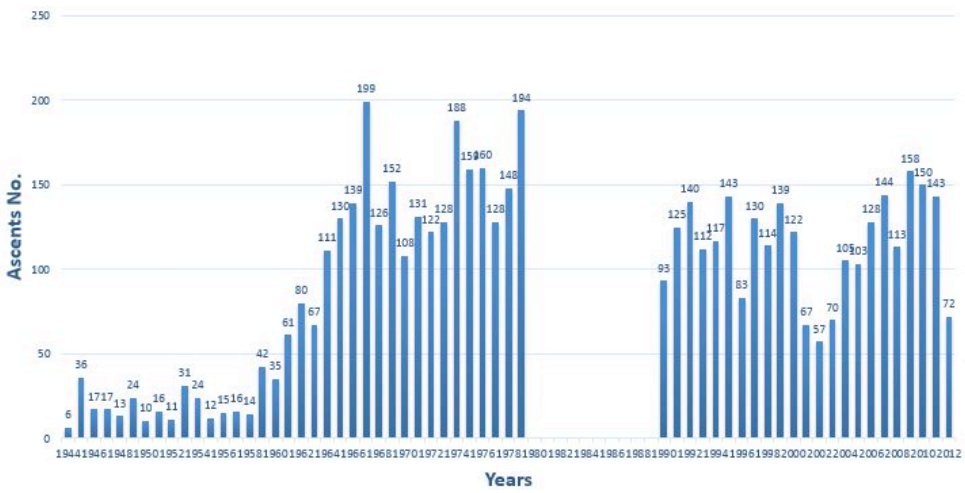

Figure 2. *Prachov Needle – Historical record of ascents.*

Obelisk

Obelisk is one of the tallest towers in the area. Vertical face climbing is the most typical character of the routes. There are 9 climbing routes and 3 variants. The easiest route starts at grade VII (saxonian scale of difficulty).

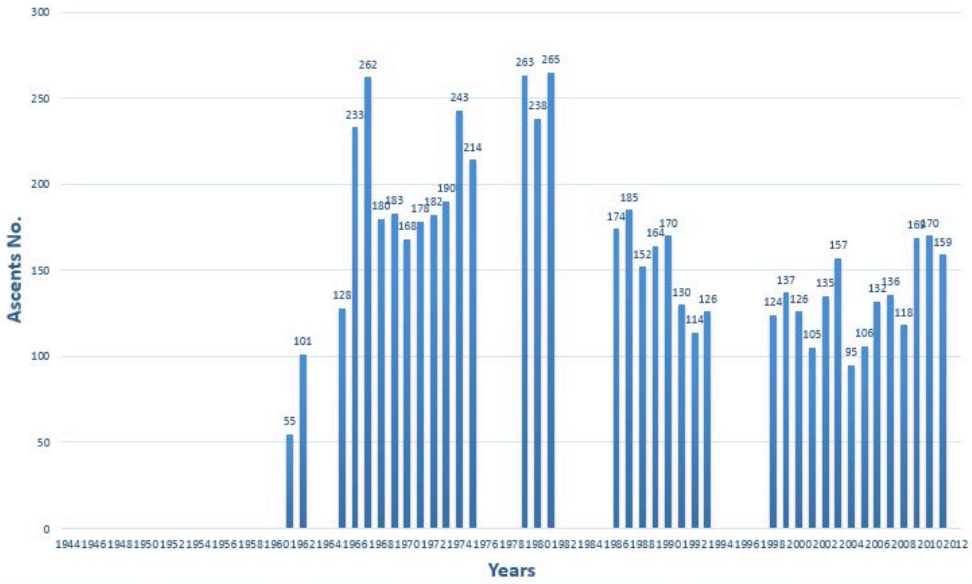

Figure 3. *Obelisk – Historical record of ascents.*

6167recorded ascents from 1961 to 2011 were processed. There were four short periods with data missing.

Dresden Tower

Dresden Tower is well known for its typical crack routes. There are 19 climbing routes and 5 variants. The easiest route starts at grade IV (saxonian scale of difficulty).

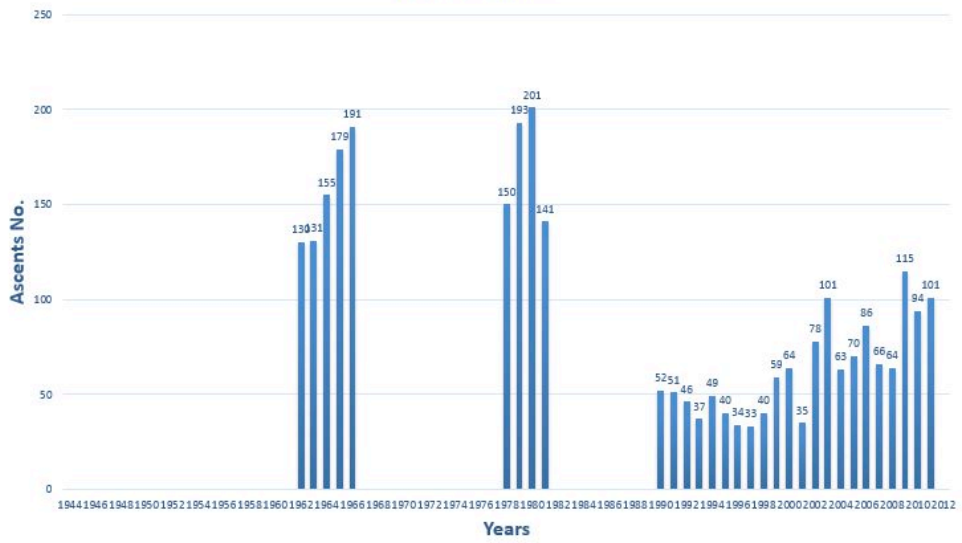

Figure 4. *Dresden Tower – Historical record of ascents.*

2849 recorded ascents from 1962 to 2011 were processed. The record has missing periods 1967-1975, 1982-1989.

Bella Vista

Bella Vista is a popular smaller tower with easier routes suitable for beginner climbers. There are 13 climbing routes and 2 variants. The easiest route starts at grade II (saxonian scale of difficulty).

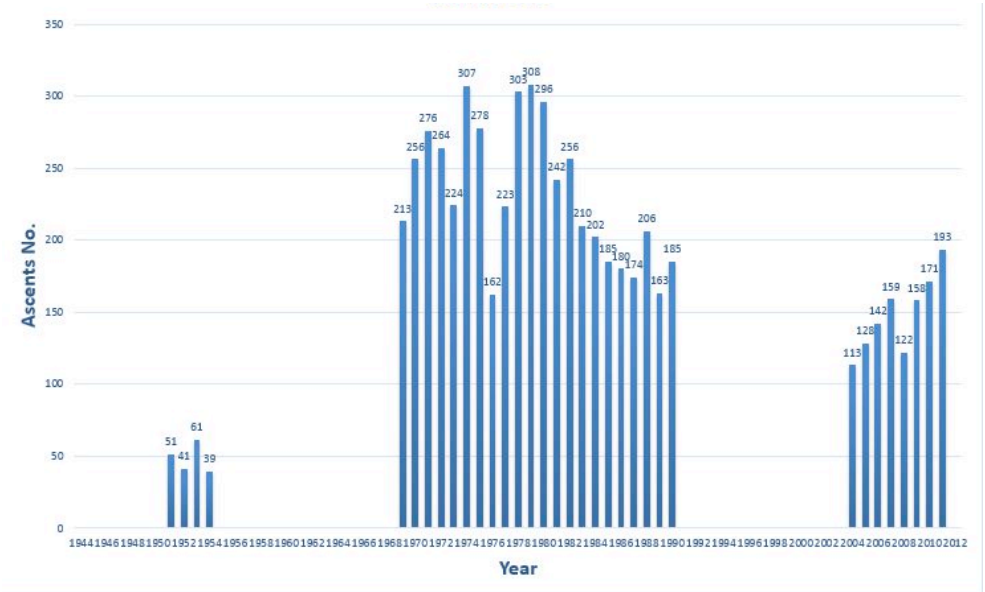

Figure 5. *Bella Vista – Historical record of ascents.*

6491 recorded ascents from 1951 to 2011 were processed. There were 2 missing periods in the records: 1955 - 1968, 1991 - 2003.

Smitka Tower

Smitka Tower is the most difficult climbable tower from our sample. There are 10 climbing routes and 3 variants. The easiest route starts at grade VII (saxonian scale of difficulty) but most of the routes are harder.

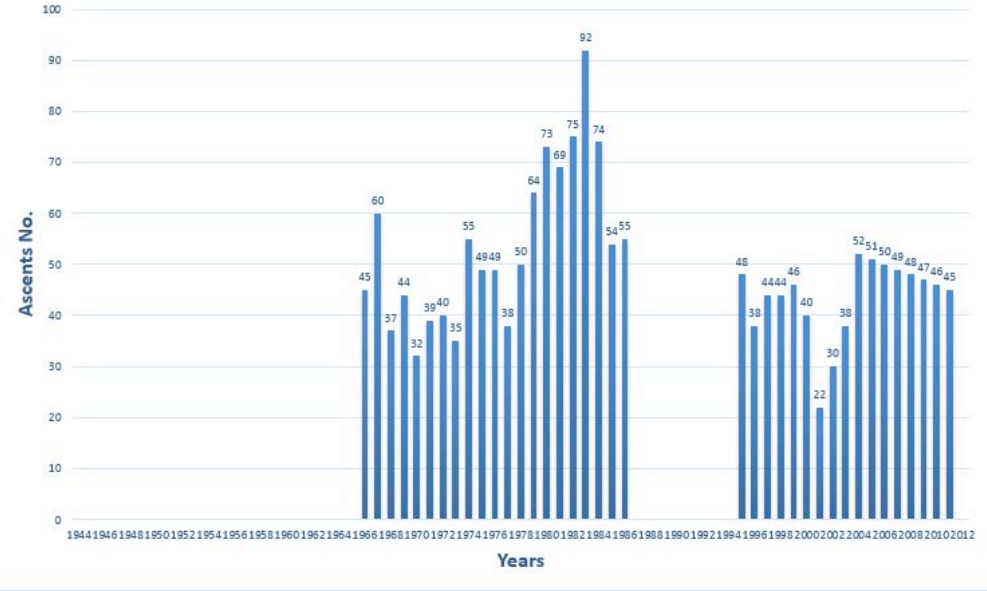

Figure 6. *Smitka Tower – Historical record of ascents.*

1867 recorded ascents from 1966 to 2011 were processed. The records were missing in the period of 1987 – 1994.

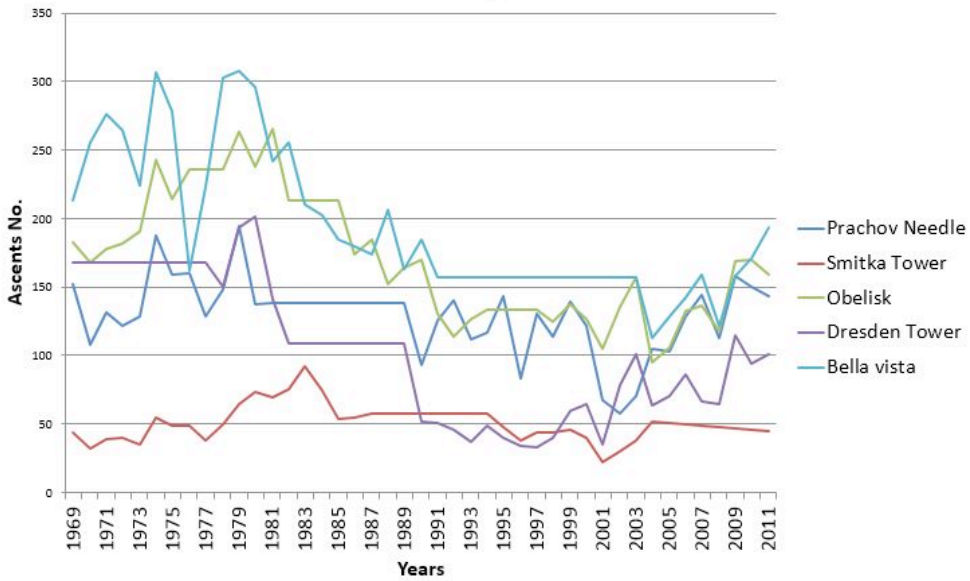

Figure 7. *Reconstruction of the missing data – all towers.*

The chart shows the period from 1969 to 2011. Till 1969 the records did not provide a comprehensive overview, because data were missing in more than two towers at the same time. The missing data from the year 1969 in each tower are reconstructed as an arithmetic average of the ascents in the period of five years before and five years after the missing data. Thanks to this "reconstruction" we can make some interpretation of the chart.

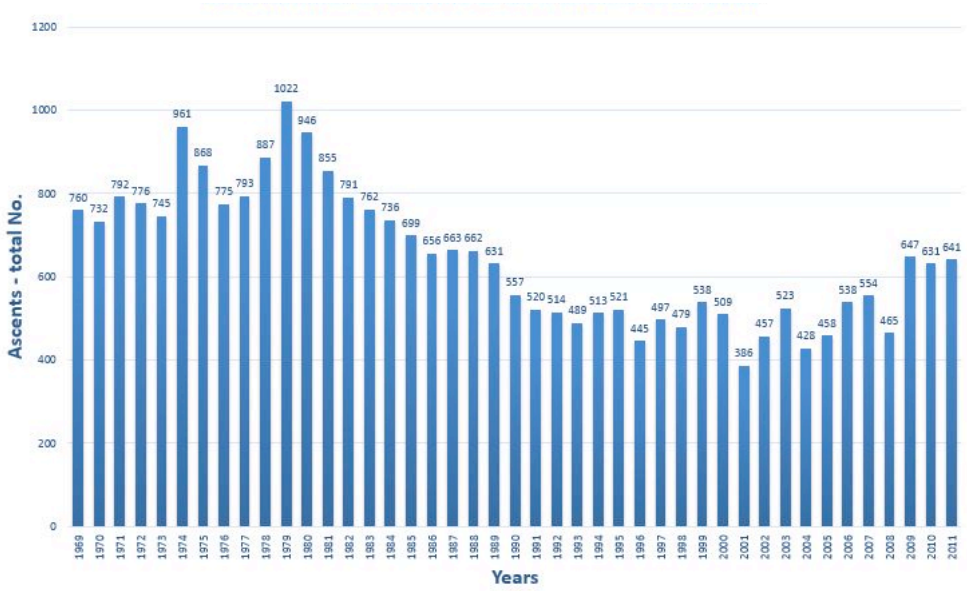

Figure 8. *Total number of ascents at all 5 towers 1969-2011.*

The period 1969 - 1989 can be regarded as a peak frequency of climbs. The number of ascents exceeded in every year 600. Maximum was reached in 1979 (1022 ascents) and minimum in 1989 (631 ascents). Further development had a downward trend and the frequency oscillated around 500 ascents per year. The rise can be observed since 2009 till now, when the value is about 640 ascents per year.

DISCUSSION

Climbers were asked a question: "Do you record your name in the summit book after your ascent? ", which was answered by 127 climbers straight in the Prachov Rocks. The answer of 98 respondents (77%) was "always", of 28 respondents (23%) "sometimes", and no respondent answered "never". The result showed that most climbers note their ascents into the summit book.

Not all summit books are archived. Some of them are missing or definitely lost and cannot be substituted. The missing data from the year 1969 in each tower were reconstructed as an arithmetic average of the ascents in the period of five years before and five years after the missing year. The reconstruction enabled more comprehensive data interpretation. However, this factor has to be considered when interpreting the results.

There are strict traditional rules for traditional sandstone climbing. It is prohibited to climb on wet rock after the rain. Conditions for sandstone climbing depend on weather, which can affect number of ascents.

There is still a growing number of new routes on many towers. Thus the climbers reaching the area of Czech Paradise as their favourite destination can spread out and choose between many towers and many routes and rock climbing areas.

The hypothesis, that there is a continuous increase in the frequency of climbing ascents towards the present, was not been confirmed.

CONCLUSION

The research showed that rock climbing does not load local rocks nowadays more than in the past. Based on the historical development of the frequency of ascents in the Prachov Rocks, the author can claim that it is not inevitable to solve the problem of nature protection in the Geopark of Czech Paradise by a ban on climbing activities.

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