

## Contributi alla discussione

**DAL SITO: 8000ers.com**

Considerazioni sui criteri di definizione degli ottomila – Prominenza e

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The site for all information about the mountains above 8000 metres and for many mountains below!

## Prominence

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Short History of Orometrical Prominence

In 1930 Günter Oskar Dyhrenfurth began compiling seven-thousander peak lists after climbing Jongsang Peak. Back then he already differentiated between independent mountains, major peaks and minor peaks according to their notch depths. In the same year, John Rooke Corbett started a similar list of mountains in Scotland. Where Hugh Munro had already established a list of Scottish three-thousanders (in ft), Corbett created one including all Scottish mountains between 2500 and 3000 ft altitude that also had a "drop on all sides" of at least 500 ft. He also climbed every mountain on his own list. At this time the idea took shape that peaks should be classified by other criteria than just the absolute altitude.

In 1938 Kenneth Mason published his "Karakoram Nomenclature", a compilation of mountains and peaks which was doubtless excellent back then. But beyond several errors its major deficiency was the almost complete lack of distinction between major and minor peaks resulting from the neglect of notch depth as a criterion. Until the 1960s Günter Oskar Dyhrenfurth was the only one to mention and apply this criterion to high mountain regions. In cooperation with Anders Bolinder, who would later become his co-worker, he published in the volumes "Berge der Welt" ("Mountain World" published by the "Swiss Foundation of Alpine Research"), decidedly the best lists of seven-thousanders at that time. Anders Bolinder kept at the method after Dyhrenfurth had passed away. Jerzy Wala, a Polish geographer, also compiled 7000er lists of the Karakoram and 6000er lists of the Hindukush with some distinction between Main- and subsidiary peaks in addition to his detailed orographical sketch maps. In contrast, H. Adams Carter's "Classification of the Himalayas" (1985, AAJ Vol. 27/Issue 59, pages 109-141) did not distinguish between mountains and ridge points.

In fact, the only ones who advanced the idea of using notch depths as a criterion were the "peakbaggers" in England, Scotland and Wales. Alan Dawson compiled the most acknowledged lists of serial ascents in Great Britain, including all mountains with a drop of 150 m and more ("Marilyns") and also all peaks with more than 610 m (2000 ft) altitude with a drop of 30 m and more in England and Wales ("Hewitts"). Later even every peak with more than 610 m altitude in England and Wales with a notch depth above 15 m was listed ("Nuttalls").

It was not until spring 2000 that the author heard about the developments on this subject that had taken

place in the US. Back in the 1960s the "Colorado Fourteener Completers" had already calculated what they called "saddle drops" and had also compiled corresponding ascent lists. In 1981 Steve Fry used the term "prominence" for this criterion. This term was first published in the 1987 Jan/Feb issue of "Summit", in which prominence cuts for "super mountains" and "ultra mountains" were also suggested. Today the term "prominence" is well established among interested circles. First it was named "Topographic Prominence", but this term is used for several other subjects, so it would be better to name it "Orometrical Prominence", because it is used for orometrical subjects only. Although some other suggestions (e.g. "height difference", "re-height", "re-ascent", "vertical rise", "primary factor") have been made, the Latin word for "to protrude" is probably the most fitting.

For several years now prominence lists have been created in the US. Quite a number of mountaineers are now more interested in climbing the most prominent mountains of a certain area and working these lists than in simply climbing every point above a certain "magical" decimal based altitude. Apart from Steve Fry, the persons who pioneered in finding prominences in the US were Steve Gruhn, Jeff Howbert, Aaron Maizlish, Andy Martin, David Metzler, Carl Mills, David Olson, John Roper, Roy Schweiker, Greg Slayden, and Ron Tagliapietra. An outstanding contribution has been made by Edward Earl who was the first who developed a computer program to calculate the prominences from digital data. In addition he created one of the first websites about prominence and in August 2000 he founded an E-group which discusses the subject "prominence" seriously and extensively. The members also share newly identified prominences and discuss other possible criteria, such as steepness and impressiveness. These criteria can also be calculated and evaluated. Also an important pioneer in the prominence history is Adam Helman, who wrote the first book about prominence in the US.

In 2001 the author contacted John Biggar (SCO), who has identified the prominences of many South American mountains. His mountain lists are shown at [www.andes.org.uk](http://www.andes.org.uk) !

Some years ago Jonathan de Ferranti (SCO) developed a program which is able to calculate automatically the prominence of a mountain within an accuracy of a few metres by using Shuttle Radar Topographic Mission (SRTM) data and topographic maps.

His website [www.viewfinderpanoramas.org](http://www.viewfinderpanoramas.org) offers provisional and map-checked prominence lists for mountains, DEM data sets and digital mountain panoramas from all over the world.

Aaron Maizlish's website [www.peaklist.org](http://www.peaklist.org) attempts to file every mountain in the world with a prominence greater than 1500 m. The Canadian website <http://bivouac.com> is also concerned with the prominence of mountains. Also Petter Bjørstad of Norway shows many prominence lists on his site [www.ii.uib.no/~petter/mountains.html](http://www.ii.uib.no/~petter/mountains.html), especially for Skandinavia.

Other prominence finders in Europe include [Mark Trengove](#), Parys Lisiecki, Vasja Kavčič, Piotr Mielus and the oldest "prominencian" Edwin Darnley "Clem" Clements (85).

By now a considerable number of web sites have taken notice of this criterion and it has become quite common.

# Dominance

## Elevation Equality

Basically, this classification system, which the author named "elevation equality", makes the fragmentation of mountain systems along political borders disappear. One should grant supreme mountains their territory (Orometrical Domain) in the same manner in which a river crossing borders remains acknowledged as the same one river even when changing its name. Precisely determined land or mountain divides should have the same significance as water divides. Not until then will we gain a perfect orological mosaic. In other words: Great rivers have their catchment area; the same should be conceded to supreme mountains. Xavier Eguskitza and the author agree that river courses and mountain ranges complement each other and thereby create a certain hierarchy that is not influenced by humans and therefore neutral.

To illustrate this, some prominent examples are given here, beginning with the lowest altitude class, where we can find the Saxon Switzerland and the Bohemian Switzerland. Whereas both mountain ranges received their similar names from their geological features and the resulting character of one landscape beyond the Elbe, from an orological point of view both parts west of the Elbe belong to the Ore Mountains in contrast to the both parts east of the Elbe. The eastern parts belong to the Lausitzer mountains which are already part of the Sudetes system. In this case the political border were more significant for the name giving than the natural separation caused by the Elbe. Then again, Eifel and Ardennes are from the orological point of view clearly parts of the same mountain range and the different names are only caused by the borders between Germany and its western neighbours. Also, the geological label "Rheinisches Schiefergebirge" (Rheinic schist mountains) does not make any sense from the orological point of view. The western part is linked to the distant Massif Central and not across the river Rhine.

Let us now take a look at standard high mountains, where an exceptional illogic classification can be found in the Allgäuer Alps. In his book "Allgäuer Alpen" (Rosenheimer Verlagshaus, 1991, ISBN 3-475-52687-5), Dieter Seibert makes fun of the geographers for good reason: „Can you imagine a main ridge where right in the middle a part is simply missing? The Allgäu can come up with one! [...] This ridge contains the Öffnerspitze – yet that is part of the Hornbachkette. The main ridge just ends at the Mädelejoch and continues after another 2 km at the Märzle. To sum it up: Theory is just that.”

the starting point for the High Alps to 3867 m. And the dominance clearly shows how many mountains below 4000 m yet of the same altitude class are more interesting than minor peaks above 4000 m. Therefore we inserted the list of the most dominant mountains in the High Alps just below. It should be mentioned that there is a natural gap between mountains and major main peaks (see Fletschhorn – Allalinhorn). It was gaps like this that helped the author after a number of comparisons to set limits for the different elevation units. Thus it

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should be noticeable that the mountains were not forced into the system but the system was adjusted to the mountains.

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There are several different subsidiary peaks! Here are the geographical facts, from the one "relative independent Main-Peak" (EU category B) over the important subsidiary peaks (C) to the major notable points (D1) Especially the last category is just guessed by contours or from photographs. If climbers pass the connecting cols in the future, it would be appreciated, if they would give altitude information about those points! With help from the DLR the Annapurna I subsidiary peaks are now correct calculated.

Peak	Alt	P	D	EU
<b>BROAD PEAK CENTRAL</b>	8011	c181	<b>2,26</b>	B2
Kangchenjunga W-Peak(Yalung Kang)	8505	c135	<b>1,59</b>	C1
Kangchenjunga S-Peak	8476	c116	<b>1,37</b>	C2
Kangchenjunga C-Peak	8473	c63	<b>0,74</b>	C2
Lhotse C-Peak I	8410	c65	<b>0,77</b>	C2
Lhotse Shar	8382	c72	<b>0,86</b>	C2
<i>K 2 SW-Peak</i>	8580	c30	<b>0,35</b>	D1
<i>Lhotse C-Peak II</i>	8372	c37	<b>0,44</b>	D1
<i>Everest W-Peak</i>	8296	c30	<b>0,36</b>	D1
<i>Yalung Kang Shoulder</i>	c8200	c40	<b>0,49</b>	D1
<i>Kangchenjunga SE-Peak</i>	c8150	c30	<b>0,37</b>	D1
<i>K 2 P. 8134 (SW-Ridge)</i>	8134	c35	<b>0,43</b>	D1
<i>Annapurna C-Peak</i>	8013	49	<b>0,61</b>	D1
<i>Nanga Parbat S-Peak</i>	8042	c30	<b>0,37</b>	D1
<i>Annapurna E-Peak</i>	7986	65	<b>0,81</b>	C2
<i>Shisha Pangma C-Peak</i>	8008	c30	<b>0,37</b>	D1
<i>Everest NE-Shoulder</i>	8423	19	<b>0,23</b>	D2
<i>Everest NE-Pinnacle III</i>	8383	13	<b>0,16</b>	D2
<i>Lhotse N-Pinnacle III</i>	8327	c10	<b>0,12</b>	D2



Kangchenjunga (Kanchanfanga/Kanchendzonga):

- 1.Cima Centrale 8482 m (salita nel maggio 1978 da Brankski, Heinrich e Holech, spedizione polacca)
- 2.Cima Sud 8476 m (salita nel maggio 1978 da Chobrak e Wroz, spedizione polacca)
- 3.Yalung Kang Cima Ovest 8433 m (salita nel maggio 1973 da Matusuda e Ageta, spedizione giapponese)

Lhotse:

- 1.Cima di Mezzo Occidentale 8426 m (non ancora salita)
- 2.Cima di Mezzo Orientale 8326 m (non ancora salita)

Lhotse Shar:

- 1.Cima Est 8400 m (salita nel maggio 1970 da Mayerls e Walter, spedizione austriaca)

K2 (Chogori):

- 1.Cima Ovest 8230 m (salita nell'estate 1982 da Sabir, spedizione giapponese)
- 2.Cima Sud 8132 m (non ancora salita)

Annapurna (Morshiadi):

- 1.Cima Centrale 8064 m (salita nell'ottobre 1980 da Böning, Greissl e Oberrauch, spedizione tedesca)
- 2.Cima Est 8029 m (salita nell'aprile 1974 da Anglada, Civis e Pons, spedizione spagnola)

Nanga Parbat (Diamir):

- 1.Cima Sud 8042 m (salita nell'agosto 1982 da Büler, spedizione svizzera)

Broad Peak (Falchen Kangri):

- 1.Cima Centrale 8016 m (salita nel luglio 1975 da Glazek, Kesiki, Kulis, Nowaczyk e Sikorski, spedizione polacca)

Makalu (Makalufeng):

- 1.Cima Sud-Est 8010 m (salita nel maggio 1970 da Tanaka e Ozaki, spedizione giapponese)