

# Listing the Irish hills and mountains

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## ABSTRACT

Published lists of Irish hills and mountains are described and differences between them noted. Attention is drawn to potentially useful topographic information contained within the lists and where scope exists for other compilations.

**Key index words:** Hills, mountains, Ireland.

## Introduction

Either consciously or subconsciously hills and mountains pervade many aspects of geographical enquiry at global, regional and local scales. In physical geography, hills and mountains are frequently associated with high-energy environments in which geomorphological processes cause rapid downslope material transfers that can prove catastrophic to human life and property. In human geography, hills and mountains are usually regarded as those areas that are marginal with respect to human adaptation and utilisation and are a focus of study because of that.

Ireland has both hills and mountains. Texts inform readers, for example, that this land is “ringed with hills” (Mould, 1976), “encircled almost completely by mountains” (Mulholland, 1980) and has mountains “located in a broken rim around the island” Ryan (1987). Ask geographers in, say, Belfast, Dublin, Cork and Galway to name an Irish mountain range and they will probably offer, respectively, the Mourne, the Wicklows, the Reeks and the Maum Turks or Twelve Bens. It is also highly likely that the same responses would be received if the question were asked of members of the general public in those same cities. Thus, some of the mountains would seem to be well known; but defining hills and mountains is problematic - rigorous definitions do not exist.

The Oxford English Dictionary (1989) defines a mountain as “a natural elevation of the earth’s surface rising more or less abruptly from the surrounding level, and attaining an altitude which, relatively to adjacent elevations, is impressive or notable.” In Ireland, as in Great Britain, it has been customary to regard a mountain as land exceeding an elevation of 610m (2000ft) OD. This may seem straightforward enough but, as will be seen, requires clarification when attempting to determine how many mountains there are in Ireland.

A hill, on the other hand, is defined by The Oxford English Dictionary (1989) as “a natural elevation of the earth’s surface rising more or less steeply above the level of the surrounding land. Formerly the general term, including what are now called mountains; after the introduction of the latter word, gradually restricted to heights of less elevation; but the discrimination is largely a matter of local usage, and of the more or less mountainous character of the district, heights which in one locality are called mountains being in another reckoned merely as hills. A more rounded and less rugged outline is also usually connoted by the name”. In Ireland, if heights exceeding 610m OD are considered to be mountains then hills must be elevations of lesser height; but there does not seem to be a minimum elevation for a hill.

Clearly, defining hills and mountains on the basis of absolute elevation is but one way of establishing which land areas fall into each category. Other criteria (flora, fauna, climate, and agricultural activities) can and have been used in order to identify 'upland' regions that, presumably, encompass both hills and mountains. However, Cabot (1999) considers Irish 'upland' to be land between 300m and 600m OD; these areas are noted to have "extreme ecological conditions".

It has been the practice in many countries for some time now for individuals and organisations to prepare lists or tables of hills and/or mountains occurring within the national boundary. These lists provide basic statements of what exists above a certain elevation threshold using the criteria specified for inclusion/exclusion, and they have also become of significant interest to hill and mountain walkers, many of whom now strive to complete ascents of all the listed summits. One of the earliest lists was published by Sir Hugh Munro in the *Scottish Mountaineering Club Journal* for 1891. Munro compiled a table of all the then known Scottish mountains of 3000ft and above. This list, modified on several occasions in accordance with revised Ordnance Survey mapping and the views of the Scottish Mountaineering Club on what constitutes a 'separate mountain' as opposed to a 'subsidiary summit', is in publication today (Bearhop, 1997) and has provided the model for several other lists of other hills and mountains in Great Britain. Scotland's 3000ft (914 m) mountains have become known collectively as Munros, and with some subsequent hill and mountain lists the name of the compiler is used in a similar collective context. Listing the hills and mountains is not restricted to Great Britain - for example, lists exist of the 4000ft mountains of New England and the 4000m peaks of the European Alps. Lists have also been prepared of the hills and mountains of Ireland.

### **Lists of Irish hills and mountains**

Several lists of Irish hills and mountains have been compiled in recent years using different criteria for inclusion/exclusion of individual summits. These lists are, in the main, based on heights taken from the 1:50,000 map series and therefore replace earlier lists that derived information from 1:10,560, 1:63,360 and 1:126,720 series mapping.

#### *The 600/610m summits of Ireland*

Three compilations of the 600m or 610m mountains of Ireland are currently in circulation - Dillon (1992), Clements (1997) and Lynam (1997). Dillon based his list entirely on "on-site appraisals" of whether summits of 610m and above were worthy or otherwise of separate mountain status. The list is therefore a subjective assessment of what constitutes a distinct and separate mountain. There can be little doubt about the status of isolated mountains such as Errigal (Donegal) and Nephin (Mayo); the difficulty with this subjective approach becomes apparent in the Wicklows or Comeraghs where several summits are plateau-like and closely grouped. However, Dillon produced a total of 212 mountains, of which 200 were between 610m and 914m OD and twelve exceeded 914m (3000ft) OD.

In contrast to Dillon's subjective approach, Clements (1997) and Lynam (1997) applied strict criterion for the inclusion of summits in their lists that reflect the degree of separateness from neighbouring summits. In both cases separateness was defined in terms of the minimum amount of height-gain from the highest adjacent col. Following recent practice in defining 610m mountains in England and Wales, Clements (1997) adopted a 30m height-gain rule for

defining separate Irish mountains; this gave a total of 211 summits (now revised to 212 (Hewitt, 1998)). Although this is the same as the number of summits listed by Dillon (1992), there are several between-list differences in the actual summits included. The mountains tabulated by Clements form part of a wider list known as Hewitts (Hills in England, Wales or Ireland over 2000 feet high).

The list compiled by Lynam (1997) represents a thorough revision of the list produced in 1952 by Vandeleur and Lynam, and published with minor revision in Wall (1976). It is also a list of the mountains above 600m rather than 610m and requires that there should be at least 15m of height-gain above the highest adjacent col for summits to qualify for inclusion. The lower limit of 600m was chosen because "it seems logical", and has given an additional 21 summits over what would have been the total had 610m been the lower limit. Accordingly, there are 276 Lynams in Ireland.

Frequency distributions of Irish Hewitts and Lynams (Figure 1) reveal several interesting facts, some of which might previously have been suspected although definite statements do not seem to have been made. First, the majority of Irish mountains are found within the two 50m class intervals that cover the height range 600/610-699m (Hewitts 55.6 percent : Lynams 60.5 percent). Furthermore, greater proportions of summits in both lists occur within the 650-699m class interval than the 600/610-649m interval. Second, within the class intervals 700-749m and 750-799m the proportions of summits are constant both within and between lists (Hewitts 14.1 percent : Lynams 12.7 percent). Third, above 849m OD the proportions of summits in each 50m class interval are collectively less than the proportion in the 800-849m interval of each respective list. Fourth, with the exception of the 600/610-649m interval the maximum difference in the proportion of summits in each class between lists does not exceed 1.8 percent. The 6.7 percent difference between lists for the 600/610-649m interval reflects the lower class limit used for Lynams and the additional 21 summits thus incorporated.

#### *The 500-610m summits of Ireland*

An informal (unpublished) listing of Irish hills between 500-610m in height, compiled by Myrddyn Phillips, was made available to the Mountaineering Council of Ireland in 2000. Adopting a height-gain of at least 30m above the highest adjacent col, Phillips listed 191 hills. A further 29 hills were identified that required more accurate surveying to determine whether or not they qualified for inclusion. Between seven and thirteen of these 29 hills were thought to be strong contenders for inclusion and if that should prove to be so it would bring the total to c. 200. Phillips noted that several hill ranges that do not figure in the lists of 600/610m summits are represented in his compilation (e.g. Ox Mountains, Antrim Hills) and that no Irish island has a 500m hill.

#### *The 914m summits of Ireland - The Irish Munros*

Although Irish mountains of 914m and above are a sub-set of the 600/610m lists, seven compilations of these higher summits have been published since 1980, either as parts of other lists or as free standing lists. These summits are commonly referred to as the Irish Munros - following usage of the term Munros for the 914m mountains of Scotland. However, in spite of Ireland having less than 15 summits above this elevation, there are differences between the lists regarding which summits qualify for inclusion. Table 1 presents these summits and shows in which compilations they appear and do not appear. Excluding Clements (Marilyns)

Table 1: The *Irish Munros* as seen in different listings (X indicates presence in list).

Summit <sup>1</sup>	Height (m OD)	Grid Reference	Lynam	Clements ( <i>Hewitts</i> )	Bearhop	Butterfield	Dillon	Mulholland	Clements ( <i>Marilyns</i> )
<b>The Reeks</b>									
Carrauntoohil	1039	V 803 844	X	X	X	X	X	X	X
Beenkeragh	1010	V 801 853	X	X	X	X	X	X	
Cáher	1001	V 792 839	X	X	X	X	X	X	X
Cnoc na Péiste	988	V 836 842	X	X	X	X	X	X	
Cahar West Top	975	V 789 840	X	X	X	X	X	X	
Maolán Bui <sup>2</sup>	973	V 832 838	X	X	X	X	X	X	
Carrauntoohil Tooth <sup>3</sup>	959	V 800 847	X	X	X	X	X	X	
Cnoc an Chuilín	958	V 823 833	X	X	X	X	X	X	
The Big Gun <sup>4</sup>	939	V 840 845	X	X	X	X	X	X	
Cruach Mór	932	V 841 848	X	X	X	X	X	X	
Unnamed top	926	V 828 834	X	X	X	X	X	X	
<b>Dingle</b>									
Brandon Mountain	952	Q 460 115	X	X	X	X	X	X	X
<b>Galty Mountains</b>									
Galtymore	919	S 879 238	X	X	X	X	X	X	X
<b>Wicklow</b>									
Lugnaquilla	925	T 032 917	X	X	X	X	X	X	X

<sup>1</sup> Names taken from Lynam.

<sup>2</sup> Called Bearná Rua by Butterfield and Unnamed by Mulholland.

<sup>3</sup> Called Knockoughter by Clements and Bearhop.

<sup>4</sup> Called Lackagarrin by Butterfield and Unnamed by Mulholland.

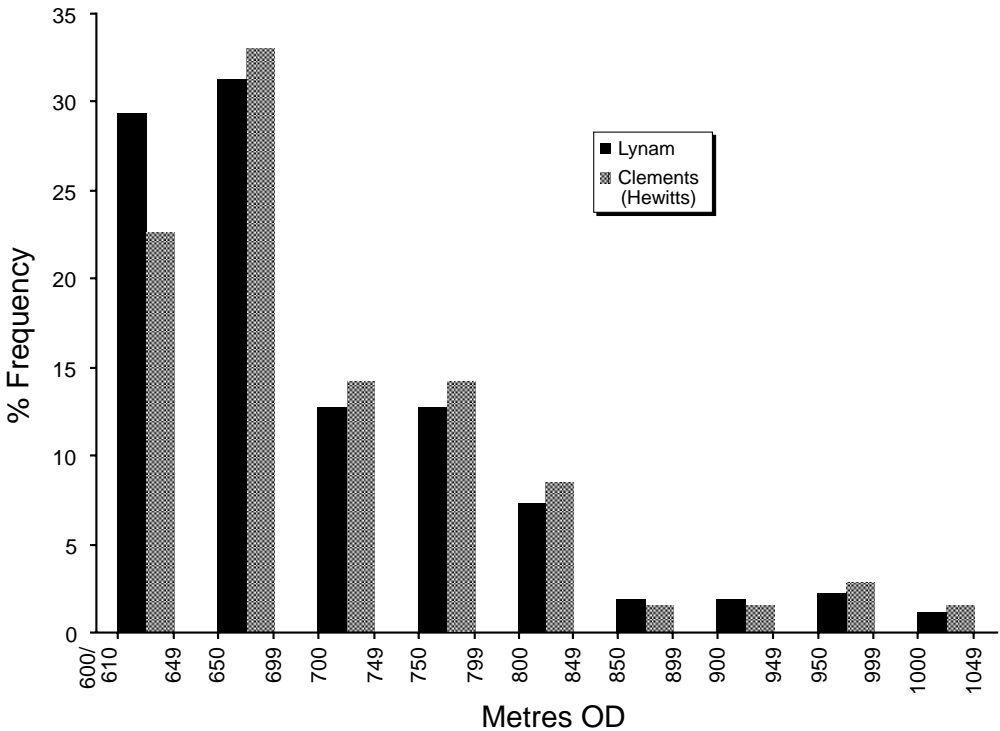


Figure 1: Frequency distributions of Irish mountains as defined by Lynam (1997) and Clements (1997).

(see below for an explanation of this list) there are between eleven and fourteen summits exceeding 914m OD depending on the criteria applied. The 15m height-gain criterion adopted by Lynam (1997) results in the maximum number of summits (fourteen) while the 30m height-gain rule of Clements (Hewitts) produces a total of thirteen summits. The unnamed height top (926m OD, V 828 834) included by Lynam does not qualify for inclusion in Clements list and is also absent from the other lists. This indicates that, except for the unnamed top, all of Lynam’s other 914m summits although identified on the basis of at least 15m of height-gain actually have a minimum height-gain of 30m. Bearhop’s and Butterfield’s lists concur with that of Clements although neither compiler state their criteria for inclusion. Dillon and Mulholland both exclude summits that are found in the other lists: Carrauntoohil Tooth (959 m, V 800 847) being a common absentee.

Interestingly, if 900m rather than 914m was used as the threshold for inclusion of a summit in this list (similar to reducing the threshold from 610m to the rounder value of 600m for Irish mountains generally - Lynam, 1997), no additional summits would be included. In other words there are no mountain summits in Ireland between 900m and 914m OD with at least 15m of height-gain above the highest adjacent col.

*The Irish Marilyns*

Marilyns is the collective term for hills (and mountains) that have a height-gain of at least 150m (492ft) on all sides regardless of distance from neighbouring summits, absolute height or topographical merit. This term and definition were proposed by Dawson (1992) with the

intention of establishing a comprehensive list of hills in Great Britain that are relatively high in comparison to the surrounding area, rather than to OD. The criterion of 150m height-gain was acknowledged as being an arbitrary figure. A list of Irish Marilyns compiled by Clements (1997) identifies 453 such hills (now revised to 455 (Hewitt, 1998)), as against 1551 in Great Britain (1213 in Scotland, 178 in England, 156 in Wales and five in the Isle of Man; England and Wales share one Marilyn).

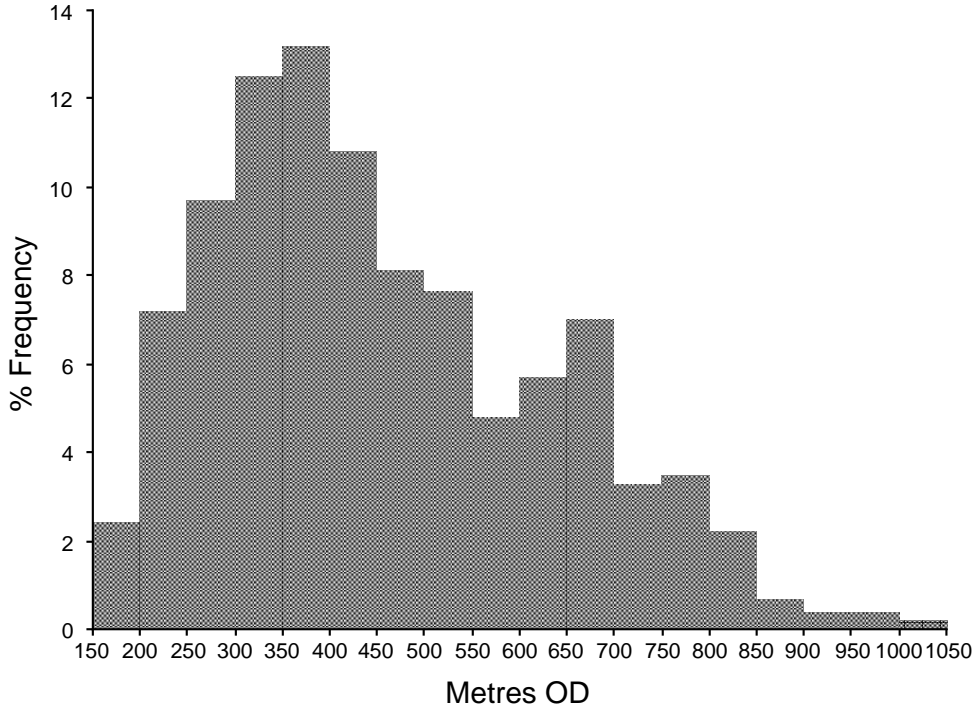


Figure 2: Frequency distribution of Irish Marilyns. Class intervals are actually 150-199m, 200-249m etc. but are shown as round numbers for simplicity.

Figure 2 depicts the Irish Marilyns in the form of a percentage frequency distribution with 50m class intervals from 150m to 1050m - the minimum and maximum of the elevation range. These data reveal the distribution has a strong primary mode in the 350-399m class (60 Marilyns, 13.2 percent) and a secondary mode at 650-699m (32 Marilyns, 7 percent). Furthermore the distribution exhibits marked positive skewness with 348 Marilyns (76.5 percent) below 600m. Using a 610m threshold gives 357 Marilyns below and 98 Marilyns above. Thus, in terms of relative height there are considerably more relatively high hills than relatively high mountains in Ireland. Furthermore, 260 Marilyns (57.1 percent) occur between 300-600m - the upland regions of Cabot (1999).

Other facts emerge when the distribution of Marilyns above 600m is compared to the distributions of Hewitts and Lynams (Figure 1). First, the dominant single class interval in each distribution is 650-699 m. Second, the constant proportions of Hewitts and Lynams noted in classes 700-749m and 750-799m is matched by an almost identical constancy of

Marilyns in the same classes - the slight anomaly being due to a difference of just one Marilyn between the two classes. This is rather surprising because although by definition all Marilyns qualify as Hewitts and Lynams, not all Hewitts and Lynams qualify as Marilyns. This suggests that given the marked variations in the height-gain values chosen to define summits in each list (i.e. 30 m, 15m and 150m) the findings noted above are not due to chance but are a reflection of geological and/or geomorphological controls.

Finally, reason for adoption of the name Marilyn for these hills is not given by Dawson (1992), but when taken together with the name long-used for 914m mountains provides an interesting conjunction of terms: in Ireland five summits can be categorised as Marilyn Munros (Table 1).

### Conclusions

Several lists of the hills and mountains of Ireland are currently available and provide recreational walkers with a long-term objective and geographers with a source of topographical information. Although based on the most recent Ordnance Survey mapping, the criterion of  $x$  metres of height-gain above the highest adjacent col in order for a summit to qualify for inclusion in a list inevitably means that additions and deletions will occur in the future because most col elevations are not defined by spot heights but have been determined by contour interpolation. Changes will also be necessary if more accurate surveying of summit heights should reveal earlier errors. Several challenges remain for list compilers in Ireland: for example, the distribution and number of hills with elevations of 300-600m or 305-610m OD (1000-2000ft) with a 15m and/or 30m height-gain would complement the existing Lynams and Hewitts.

### Acknowledgements

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Note: copies of the list of Irish hills between 500-610m in height, compiled by Myrddyn Phillips, may be obtained from the Mountaineering Council of Ireland, House of Sport, Long Mile Road, Dublin 12.