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THE MOUNTAINS OF SPAIN. By JOHN ORMSBY.

AS Spain is generally said to be, after Switzerland, the most mountainous country in Europe, its mountains may seem a rather comprehensive subject for a short paper. I have no intention, however, of trying to condense a complete orography of the peninsula into these limits; indeed, the materials for such a work do not exist, so little has been done in the way of mountain exploration or measurement. All I mean to attempt is a rough general sketch of the mountain features, and a few notes on some of the principal groups.

The Spanish peninsula is sometimes described as being all one mountain, and to a certain extent the description is accurate; but to get a correct notion of its conformation we must go a little further into detail. The framework of the structure, as will be seen by looking at any tolerably good map, is very simple. It may be compared to the letter T, the horizontal stroke being represented by the line of the Pyrenees (including the mountains of the Asturias and Galicia), and the vertical by that long irregular range, called by some geographers the Iberian, which, branching off from the Pyrenees near Reinosa, runs in a direction generally south down the entire length of the peninsula to the Mediterranean. The latter must be considered as the crest of the mountain, if Spain is to be regarded as one mountain; and from it spring the buttresses between which lie the basins of the Guadalquivir, Guadiana, Tagus and Duero. The most southerly of these, however, ought in strictness to be reckoned the continuation of the crest, being a part of the primary watershed of the peninsula and of Europe—the long tortuous ridge which begins at Tarifa Point, west of Gibraltar, and ends on the shore of the

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Arctic Ocean, east of the Gulf of Kara, separating the Mediterranean basins from those of the Atlantic and Northern Seas. This is the Andalusian chain, the chief links of which are the Serrania of Ronda, the Sierra Tejada, between Malaga and Alhama, the Sierra Nevada, and the Sierras Sagra and Segura, enclosing the head of the Guadalquivir basin. The most interesting of these, in respect of scenery as well as height, is the Sierra Nevada, containing the culminating point of the peninsula, which, however, has been already too fully dealt with in the pages of this 'Journal' to require any further notice here. North of the Sierra Segura is the Sierra de Alcaraz, where Andalusia joins New Castile and Murcia. From this the Iberian range runs north, passing by Cuenca, as far as Molina; there it makes an elbow to the west at Medinaceli, and then another to the east at the Moncayo, after which it runs in a NW. direction, separating the basin of the Duero from that of the Ebro, until it joins the Pyrenean chain at the Peña Labra, just above the source of the last-named river. In several places its continuity as a mountain-chain is, on the western, or Castilian side, at least, nearly imperceptible to the eye. This is due not so much to a falling off in height—for at its lowest depression the ridge is still some 2,500 feet above the sea—as to the elevation of central Spain. All that portion of the peninsula which comprises the two Castiles, Estremadura and Leon, forms one great table-land or plateau, with a mean height above the sea-level of more than 2,000 feet, or about three times the mean height of the continent of Europe. It is to this conformation that many of the peculiarities which strike the traveller's eye in Spain are due. The westerly and south-westerly winds from the Atlantic are robbed of the greater portion of their moisture before they can reach the level of this elevated tract. While the districts along the Atlantic coasts have an annual rainfall of from 40 to 50 inches, and Valencia and Catalonia from 20 to 25, the central table-land has one of from 8 to 10 only; and even this scanty supply is in a great degree lost. There are no woods or forests, and hardly any coating of vegetation to catch, retain, and distribute the rainfall slowly, and it rolls back off the plateau much as it might off a house-top. Hence the 'tawny Spain' of the poets—the bare, brown, sunburnt country that has been so often described, with its soil of brickdust, and its glaring cloudless sky overhead, its fierce noontide heat and chill night wind. Hence, too, that grim monotony of landscape of which travellers complain so unceasingly, from the time they lose sight of the Pyrenees until they descend into the basin of the Guadalquivir

or the Huerta of Valencia. Central Spain is to any ordinary hill and dale country what a block of marble is to a statue. The raw material of hills and valleys is there, but the water forces that should have carved it have been wanting. It is, in fact, on a smaller scale just such a region as Mr. Shaw describes High Tartary, and from the same causes.

The Iberian range, which from the coast between Alicante and Barcelona looks like a well-defined mountain ridge, is in reality in many places merely the scarp of this table-land; and, as Bruguère observes in his 'Orographie de l'Europe,' the traveller from Valencia to Madrid is surprised, on reaching the crest of these mountains, to find no descent corresponding to the steep and toilsome ascent from the sea. The village of Minaya, which is almost on the watershed, is 2,362 feet, while Madrid, which is nearly the centre of the plateau, is 2,148. Near Cuenca, however, the character of the range changes. It there forms the complicated knot of the Albarracin mountains, rising in the Cerro de San Felipe to about 6,000 feet. Here are the sources of the Tagus, the Jucar, the Guadalaviar, and several minor streams; and so intricate are the windings of the watershed, that the Tagus, flowing west, rises south and east of the source of the Jucar, which runs into the Mediterranean below Valencia. From this knot, too, a secondary range, through which the Ebro cuts its way above Tortosa, branches off to the north-east and runs parallel to the coast up through Catalonia to the Pyrenees, with which it is connected by the long Sierra de Cadi, south of Puycerda. The most important summit, however, next to those of the Sierra Nevada, is the classic Moncayo, the Mons Caunus of Livy and Calvus of Martial, at the elbow which the chain makes to the east, near Zaragoza. Owing probably to its commanding and almost isolated position, its height has been generally very much over-estimated, some geographers claiming for it as much as 10,000 feet. Coello gives 7,696, which I have no doubt is as nearly as possible the true height. It is scarcely necessary to say that with such an elevation not a vestige of snow remains on the mountain in summer. But apparently it was not so eighteen centuries ago, if Martial was accurate in mentioning (I. 50) the 'sterile Calvum nivibus' as one of the things to be seen during a summer visit to the neighbourhood of Bilbilis. This would argue a great difference of climate in central Spain, but perhaps not too great to be accounted for by the denudation the face of the country has since undergone. From the same poet, *passim*, it would appear that all this mountain region was in his day clothed with forests, of which the sole remains now

are the pine-woods of the Albarracin and those on the Guadarrama, above La Granja. Besides, we have it on record that Madrid, which now stands on an absolutely treeless plain, was surrounded by forest only three hundred years ago; and it is not improbable that the whole or the greater part of the vast plateau was thickly wooded in the first century, and that central Spain had a climate no warmer than that of central Europe at the present. But the Moncayo deserves notice for another reason. It is not much of a mountain to look at, being indeed rather a very big hill than a mountain; but it affords, I think, the finest panoramic view of the Pyrenees to be obtained from any point north or south. I confess to a weakness for panoramic views of mountains, especially for those which, besides their merits as views, help out the imagination, and realise to the eye some great geographical feature, some map-idea, so to speak. Such a view, for instance, is that grand one of the northern slope of the Alps from the Feldberg in the Black Forest, where the eye takes in at one sweep the loftiest portion of the great dorsal ridge of Europe, from the Diablerets away into the Vorarlberg. The view of the Pyrenees from the Moncayo will bear comparison with this. There is nothing, it is true, in it so grand as the Oberland group seen from the Feldberg, but it has its own particular charms, especially if seen, as I strongly recommend, at or shortly after sunrise. The axis of the Pyrenees runs from WNW. to ESE., and to a spectator on the Moncayo the sun therefore rises well behind the chain. Consequently, for a couple of hours after sunrise, the whole range shows in silhouette of a deep indigo tint against a bright sky. It is scarcely any exaggeration to say the whole range, even using the phrase in its most literal sense; for, owing to the position of the Moncayo with the broad basin of the Ebro for a foreground, the entire line of the Pyrenees is in view, from the mountains that separate the Basque Provinces from Navarre to those rising on the north side of Andorre; the only part wanting being the comparatively low portion between Puycerda and the Mediterranean, which is, I imagine, hidden by the projecting Sierra de Cadi above mentioned. So distinctly traced is the outline of the chain, that the notch of the Brèche de Roland, and even the Fausse Brèche and the truncated pillar of rock to the west of it, are plainly discernible, although at a distance of about 110 miles as the crow flies. But as the sun mounts higher and the light falls upon the southern slope, the view changes as completely and almost as suddenly as a slide in a magic-lantern. The dark jagged profile projected

strongly against the sky behind fades away, and in its place stands the glittering crest of snow stretching from the Pic de Néthou to the Vignemâle. The Pyrenees are unfortunately a rather cloudy chain, and it is not every morning, when there is a bright blue sky overhead in the valley of the Ebro, that such a view as this is to be had from the top of the Moncayo. But if there is a reasonable prospect of it, I think it is worth trying for; and it can be easily managed *viâ* Tudela and Tarazona, from which latter place it is about five hours to the top, or about four to the shrine of 'Our Lady of the Moncayo,' just below the summit where there is a sort of caravanserai for the pilgrims, which will afford night-quarters, and, I believe, even food. The rest of the range from the Moncayo to its junction with the Pyrenees is very uninteresting, being little more than a bare bleak chain of hills, rising at its highest point in the Sierra de Oca, east of Burgos, to 7,555 feet.

So far for the central ridge of the peninsula. We now come to the secondary ranges which branch westward from the central stem. The first of these, commencing from the south, is that which is best known as the Sierra Morena, and which branches off at the Sierra de Alcaraz, separating the basins of the Guadalquivir and Guadiana. It is more owing to Cervantes than to nature that this is perhaps the most famous of all the mountain ranges of Spain. Its elevation is everywhere insignificant. It is, indeed, rather the southern escarpment of the central plateau than an actual range of mountains. From the plain of La Mancha it seems hardly more than a long line of hills; and though from Cordova, owing to the much lower level of the Guadalquivir basin, it looks far more lofty, still even there it is a very moderate mountain chain. It has been credited by M. Bory de St. Vincent with a height of about 5,500 feet at the Cumbre de Aracena, north-west of Seville, but Coello's map of 1863 gives no such elevation. According to that authority, at the gorge of the Despeña-perros (the part described in 'Don Quixote'), the height is 2,427 feet, and 2,142 north of Cordova. The Serra de Monchique, in Portugal, which may be considered a portion of the Sierra Morena, cut off by the sudden bend the Guadiana makes to the south, contains, according to Coello, the highest point, the Foya (3,828 feet), near Cape St. Vincent.

The next ridge is that which, branching off from the Cerro de San Felipe, north of Cuenca, separates the basins of the Guadiana and the Tagus, and which Bruguière, in his 'Orographie,' calls the 'Oréto-Herminienne.' The range is scarcely as lofty as the title. It is only to the south-west of Toledo

that it shows a well-defined crest, and a little further west, in the Sierra de Guadalupe, in Estremadura, it reaches its highest elevation, 5,114 feet, after which it loses itself in the hilly region of Alemtejo, in Portugal.

The third range is called by Bruguère the 'Carpéto-Vettonique'; but a far simpler, apter, and more practical designation would be the Castilian chain. It is the principal geographical feature of the Castiles, separating the New from the Old, Estremadura from Leon, and the basin of the Tagus from that of the Duero. It springs from the central range near Medinaceli, where it has a height of about 4,000 feet. Further towards the west it takes the name of the Sierra de Guadarrama, a name which puzzles Ford a little, being the Spanish form of the Arabic 'Wad-er-raml,' 'the river of sand'—an obvious misnomer for a massive wall of granite. But there is a Guadarrama River, rising in the chain and flowing into the Tagus near Toledo.\* The river gave the name to the town of Guadarrama, and that again, no doubt, to the Sierra at the foot of which it stands. This is the fine bold range which forms such a striking feature in the view to the north from Madrid. The highest point there visible is the cluster of the Siete Picos, overhanging the puerto leading to La Granja and Segovia; but the highest point of all is the Peñalara (7,874 feet) on the other side, over La Granja. On the southern side, about 3,000 feet above the sea, is the colossal palace of the Escorial, immediately west of which begins the grim tract of the Parameras, across which the railway works its way. This curious break in the chain almost suggests the action of some crushing pressure from above, which has broken down the crest, and flattened out the range, so as to leave a broad stony plateau, some 4,000 feet in height, stretching nearly all the way from the Escorial to Avila.

West of the Parameras the range takes the name of the Sierra de Gredos, and there reaches its greatest height. On this point there has been a good deal of confusion. Most of the authorities, even the most careful and trustworthy, such as Keith Johnston, and Lavallée, in his 'Géographie physique,' have given this group a height of more than 10,500 feet, while Coello gives nearly 2,000 feet less—viz., 8,694 feet. I have no doubt, however, that Coello's measurement is the correct

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\* There is also the river 'Jarama,' which is no doubt the same word. 'Rambla,' indeed, is a common name in Spain for a very common feature in that land of general drought and occasional torrents—a thread of stream trickling along a bed of gravel, such as gave its name to what is now the principal street of Barcelona.

one, though I did not verify his figures here, as I was enabled to do in some other cases afterwards. Another statement, which has crept into such books as Malte-Brun's 'Geography,' is that the Tormes, the river of Salamanca, issues from a glacier at a place called the Palacio de Almanzor. These statements I have traced through Bruguière up to M. Bory de St. Vincent, whose geographical facts in connection with Spain I have frequently found to be largely adulterated with fancy. There is no glacier in the Sierra de Gredos, nor are there the materials or conditions for one. Permanent snow there is, but it is in the form of isolated patches and banks in sheltered positions, some of which, it is true, help to feed a chain of small tarns, the highest, but not the principal, source of the river Tormes. The highest part of the Sierra is a curious bit of mountain scenery. The crest is scooped out and honeycombed into a series of deep basins, around and between which rise a dozen or so of granite peaks, some of them to the eye almost as sharp and slim as a church steeple. 'Palacio' or 'Plaza' de Almanzor I found to be names unknown to the natives, but the highest of these peaks they called the Risco de Almanzor. 'Risco,' in the Academy Dictionary, is explained to be 'a lofty, scarped rock, difficult and hazardous to ascend'—the word is in fact cognate with our 'risk'; and this was entirely the view which my guide took of it: for when we had reached the crest, or rather narrow plateau, from which the peaks spring, he sat down, rolled a cigarette, and, like a man whose troubles were over, remarked that we were 'here.' This truism, of course, I had to cap by another to the effect that we were not 'there,' pointing to the highest peak; to which he replied, with a pitying whistle, that no man ever had been, or ever would be, 'there.' Unfortunately for his assertion and prediction, I had just then with the telescope caught sight of an unmistakable pole on the top of the peak in question, set up, I afterwards learned, by the engineers the year before, which proved an argument he could not get over. These Gredos peaks are of a very curious formation. I suppose there is a solid core of rock in each, but all those that I examined had the appearance at least of being built of huge detached blocks of granite, piled and poised one upon the other. Disrupted granite is intelligible, but what force could it have been that piled up these blocks in such a fashion? Rocks of this sort are not the very pleasantest or easiest climbing, but they have generally the merit of being practicable, and a rough scramble brought us to the desired point, rather, I think, to the disappointment of my guide. It is hard, after you have, at the cost of some

trouble and hardship, explored some unknown region, to find yourself unable to recommend it to future travellers; but I cannot in honesty advise any one in quest of scenery or pleasure, or with any object in view unless it be to study the eccentricities of granite, to try the Sierra de Gredos. Nothing, indeed, can well be more savage or weird than the scenery in the immediate neighbourhood of the top, and I can easily understand the wild legends Borrow heard ('Bible in Spain,' chap. xi.) about the monsters lurking among these crags; but, on the other hand, nothing can well be more monotonous than the general view. To the south there is nothing but the bare, broad basin of the Tagus, backed by the Toledo and Guadalupe mountains, and to the north nothing but the, if possible, barer plain of Salamanca, backed by nothing. To a Briton the view is in one respect a highly interesting one. On one side you have the hard fought field of Talavera, and on the other, to the north, you may make out with the glass the twin hills of the Arapiles, marking the site of the battle of Salamanca. To the naturalist, the Sierra de Gredos may be interesting as the principal remaining habitat of the cabra montes, the Spanish variety of the ibex. Link, in his travels in Portugal in 1798, mentions what seems to be the same animal as being found on the Gerez mountains, north of Oporto, and it exists, I believe, in small numbers in the Toledo and Guadalupe mountains, and in the Sierra Nevada; but I have never heard of it elsewhere in Spain. On the Sierra de Gredos it seems to be not at all uncommon. I saw two or three specimens in the course of my ramblings. One my guide (who had been recommended to me as the mightiest hunter of the Sierra) missed handsomely at about forty yards, at which I rejoiced, for it was a young thing not fully grown; but I shall never forget the style in which another, a fine buck with a good pair of horns, went up the face of what seemed at least to be an absolute precipice. In size, form, and habits, it resembles the bouquetin as closely as possible. In the Museum of Natural History at Madrid there is a good specimen, by the side of which stands an equally fine bouquetin, and to the eye at least, there is scarcely any difference between the two, except in the form of the horns. These in the cabra montes have not the single scimeter-like curve so characteristic of the bouquetin. They bend backwards, outwards, and upwards, following very much the curves of Hogarth's 'line of beauty.' They are, I think, too, more tapering and somewhat longer. A pair that I brought back measure  $21\frac{1}{2}$  inches, following the curve, just the length of the horns of the bouquetin men-

tioned by Mr. Whympster as belonging to the Italian Alpine Club; but I have seen several considerably exceeding this length, and one or two which could not have been less than two feet and a half. There is a fine specimen of this animal in the British Museum, there described as '*Pyrenean Tur—Ægoceros Pyrenaica.*' To judge by the horns occasionally exhibited for sale, the bouquetin of the Pyrenees seems to have been identical with that of the Alps; but I remember seeing in a curiosity shop at Caunterets a pair of the form I have described which could scarcely have been brought up there from Central Spain. If this variety did exist in the Pyrenees, it is, I think, pretty certain that both it and the other have now been for some time extinct. In Ramond's time the bouquetin was already '*devenu si rare que les chasseurs ne le connaissent presque plus.*' I never met any smuggler or izard-hunter on the Spanish side who had ever seen one, or knew of one having been seen; and the veteran Chapelle of Heas, who has killed more izards than any man in the Pyrenees, has never come across one in the course of fifty years' hunting. If the King of Italy's attempt to preserve the bouquetin does not succeed, probably the last home of the ibex in Europe, except Elbruz, will be the Sierra de Gredos.

The next link in the chain is the Sierra de Bejar, which rises north-west, separated from the Gredos by the Puerto de Tornavacas. El Trampal, its highest part, not much inferior to the Sierra de Gredos, is one of the most curious mountain-tops I ever saw. The Gredos peaks are uncommonly like a cluster of skittles, but this is like the corresponding skittle-ground. It is a narrow flat, a couple of miles long, and as level as a table, with nearly precipitous sides all round. It looks as if Nature, having roughly blocked out a mountain, had been unluckily called off to attend to some more pressing job elsewhere, just as she was going to carve the top into peaks, pinnacles, and ridges, according to pattern, and either has not had leisure since to return to El Trampal, or else has forgotten all about it, which is not unlikely, seeing that the region is perhaps the most out-of-the-way in all Europe. In the very next group of mountains, the Sierra de Gata, on the borders of Portugal, is the valley of Las Batuecas, of the existence of which nobody knew anything till the reign of Philip II., when it was discovered, so the story goes, to be inhabited by a curious prehistoric people. A bishop, I believe, was immediately sent to them, and they became extinct. The last section of this Castilian range is the Serra da Estrella,

of which, with its culminating point, also the culminating point of Portugal, the Canariz (7,526 feet), Mr. Eden gave an interesting account in the 'Journal' (vol. v. p. 122).

The Pyrenean chain is the only one that remains to be noticed. As far as Spain is concerned, it may be considered as divided into three sections—viz., the Spanish slope of the Pyrenees proper, from the Mediterranean to the valley of Bastan; the continuation through the Basque Provinces from the valley of Bastan, and the Bidasoa, to the Peña Labra and the source of the Ebro; and the western portion, from the Peña Labra to the Atlantic. This latter, which figures in works on Spain under a variety of names, such as Asturian Pyrenees, Cantabrian Mountains, &c., is perhaps, of all the ranges in the peninsula, the one about which the least is known, and most mistakes have been made. It deserves better treatment; for, on the whole, I am inclined to think it contains finer scenery than any other. There is as may be seen by any map which traces the chains, a remarkable knot of mountains a little to the west of the source of the Ebro, where the provinces of Palencia, Leon, Santander, and the Asturias join. From the Peña Labra the crest of the Pyrenees rises gradually westward till it reaches its highest point in the Peña Prieta (8,297 feet), a sort of nucleus from which several spurs radiate north and south. Those to the south form the wild and picturesque highland country, generally known as the Montañas de Leon, from which the Pisuerga, the Carrion, the Esla, and several other affluents of the Duero issue. These mountains are not high, but their forms are exceedingly bold and abrupt. A more striking little mountain than the Peña Espigüete between the Carrion and Esla valleys it would not be easy to find in any country. It is a very sharp and symmetrical lancet-shaped 'spike' (as the name implies) of pale blue limestone, in form something like a shark's tooth, or one of those flakes of flint which served our ancestors of the Stone age for such a variety of purposes. From many points of view it has a decidedly unscalable look, and for its inches—it is not quite 8,000 feet—it certainly gives trouble; but it is worth it, if only for the view it gives of the Picos de Europa. These are a group of peaks on the north side of the main chain, and joined to the Peña Prieta by the col called the Puerto de Remonio. On the east side of this rises the river Deva, and on the other the Cares, the two streams uniting near the coast, and enclosing between them a space some twenty miles long by twelve wide. Almost the whole of this space is filled up by the Picos de

Europa, a compact mass of limestone rising in most places like a wall out of the valley below, and crowned by an array of peaks the like of which I have never seen out of the Dolomite country. Nor is the resemblance confined to form alone, the pale colour of the rocks helping materially to give a Dolomite character to the group. In Malte-Brun and other authorities the height is put at 9,593 English feet, but Coello gives 8,786 only. At first sight the former would appear to be probably nearer to the truth. The peaks rise so high and in such a lordly style above the valleys on either side, that it is difficult to believe they can be much under 10,000 feet; besides, without being actually snow-capped, they preserve a good deal of snow all through the summer; and then one is apt to fancy the valleys from which they spring much higher than they really are. But in this instance, as in every other in which I had the means of testing them, I found Coello's figures to be trustworthy.\* To the eye, looking at the Picos de Europa from any elevation, it would appear about as hopeless to go in search of the highest peak as it would to try to determine which is absolutely the tallest spine on the back of a hedgehog. My first attempt was on the fine bold crest which rises south-west of the town of Potes, in the Liébana, and overhangs those great zinc mines about which there has been so much talk of late. This, notwithstanding the assertions of the Potes people, I soon found to be inferior to several other ridges further south; and subsequently I learned that the Government engineers had, after some hard work, discovered the highest point to be the Torre de Lambrion, a peak at the southern end, not far from the Puerto de Remonio before mentioned. My informant, one Eusebio, of Santa Marina, in Valdeon, having been of the party himself, undertook to show me the way, but he either overrated his memory or underrated the intricacy of the Picos de Europa. The interior of the massif is something in form like a very dilapidated honeycomb; a labyrinth of crater-like basins separated by walls bristling with aiguilles, all bearing the strongest possible family likeness one to the other. As long as we could keep the top of the Torre de Lambrion and the cairn on it in view it was all plain sailing; but after climbing one or two ridges, it became, so to speak, shuffled with a multitude

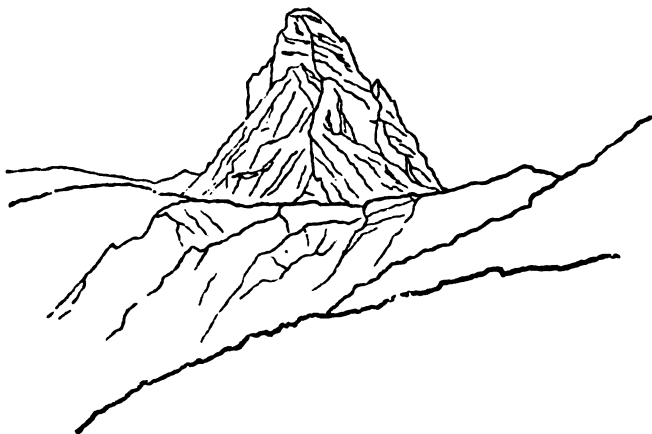
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\* I carried one of Cary's pocket aneroids, which whenever fairly tested, gave very good results—as, for example, at Madrid, where the mean of a week's readings gave the height within two feet of the latest measurement. I found it agree always substantially, and often very closely, with the heights given on Coello's map.

of other peaks, and Eusebio began to be at fault, at one moment confessing that the track was strange to him, then coming upon some landmark he thought he recollected, then giving way to a conviction that he had *equivocado*—the Spanish euphemism for being completely at sea. I must say of him that, if his organ of locality was defective, he showed himself to be as active and plucky a rock-climber as anyone could desire for a guide. And there were abundant opportunities for proving his quality, for the rocks were often difficult and—without being actually dangerous to anyone fairly furnished with head, heart, and hands—were in places decidedly ugly to look at. So, at least, the man carrying my knapsack thought; for he, when the work grew serious, fairly struck, declined to go farther, and owned to *miedo*—the only time I have ever known a Spanish mountaineer to confess bodily fear. Eusebio, however, persevered, and at last he hailed me to come on; we were all right this time; he could see the cairn, and it was only a little way above us. A quarter of an hour's stiff climbing brought us to the top, and Eusebio sat down upon it and groaned. We had gone up the wrong peak. Right opposite to us was the real Simon Pure only 200 or 300 yards away, but cut off from us by a mighty cleft some 1,500 feet deep. The very same accident had happened to me in the Sierra de Gredos owing to the two points being seen in the same line; but here it was irremediable, as it would have cost a couple of hours to turn the chasm in front of us, involving a night among the rocks, and altogether too much honour for a mountain not 9,000 feet. Eusebio tried to administer consolation by saying it came to very nearly the same thing, as the other point was only thirty or forty feet higher than ours. Taking a rough level, I guessed the difference to be at least twice as much, and the verdict of the aneroid was rather more than 100, assuming that the height given on Coello's map was that of the peak before us.

To any one with an indomitable passion for scrambling, the Picos de Europa may be safely recommended as a rich and unworked field; and whenever virgin peaks of between eight and nine thousand feet come to have an appreciable value in the climbing market, as I suppose some day they must, this district should not be overlooked by the enterprising speculator. In the meantime it is at least worth the notice of those who are retreating before the advancing hordes of irrepressible tourists and all the plagues they bring in their train. The scenery is as fine as scenery can be without snow-mountain or glacier. The valley, or rather congeries of valleys, called the Liébana,

in the eastern angle between the Picos de Europa and the main chain, is as charming a retreat as any one in want of a retreat could desire. Ford calls it 'Swiss-like,' but to my mind it is far more like some of the retired nooks in the South Tyrol. Among the more striking features of the scenery in this country are the deep narrow gorges, something like the cañons of California, through which the waters of these upland basins force their way. On the south side there is a very fine one near Riaño, where the Esla has carved a passage for itself through the limestone out into the great Leon plain. But the finest, grandest, and boldest of all is that of the Cillorigo, by which the Deva issues at the north corner of the Liébana. The frontispiece shows the gateway by which the river enters, but it would be difficult either by sketch or description to convey a correct idea of the interior of the gorge. It is, perhaps, best described as a mixture of the gorge of Gondo and the Via Mala, but in one respect it surpasses them and everything of the kind in the Alps. It is longer than all the Alpine gorges put together, being some fifteen miles from end to end, or probably, allowing for the windings of the road, more nearly twenty. For the greater part of this distance the rocks rise up like walls at each side, crowned above with fantastic battlements and pinnacles that look sometimes as if the first breeze must inevitably send them down on the head of the hapless



PICO DE PEÑAMELLERA.

traveller. The twin river, the Cares, escapes from Valdeon on the west side of the Picos, by a similar gorge, equally beau-

tiful, but on a much smaller scale. In the jaws of the broad valley where the two streams unite stands the curious rock called the Pico de Peñamellera, the outline of which is given here. I remember well the first time I saw it, waking up from a doze in the little diligence which plies between Torre la Vega and Potes. The sun had just set behind the Cobadonga Sierra, and the whole valley was filled with a deep plum-coloured haze, out of which rose up, exaggerated in the failing light, what seemed to be the very ghost of the old Matterhorn. In the rough sketch I made then the resemblance is most absurd, but I prefer the one given here, as it was taken more carefully, and in the prosaic light of noonday. Lest it should fire any member of the Club to rush off to the Asturias in quest of fresh laurels, I think it right to mention that the peak is probably not more than 600 or 700 feet in height, and that it is not a virgin summit, being, I fancy, pretty nearly every day reached by the goats of the neighbourhood. Potes, the chief place of the Liébana, is a very picturesque and very snug little town, and affords fairly comfortable quarters. Indeed almost everywhere in the Asturias country the traveller is far better off in the matter of comfort than in the other out-of-the-way parts of Spain; and the contrast between the clean, well-to-do villages in the Northern valleys, and the miserable, poverty-stricken hamlets on the Leon side of the mountains, is very marked. There there is seldom any regular posada or auberge of any kind, or anything in the way of food procurable, except black bread and perhaps a few eggs. 'Swarming with fleas and children' is the pithy description I find in my note-book of the last Leonese house I put up at (that of Eusebio, above mentioned, in Valdeon, which, by the way, is geographically an Asturian valley, though it belongs to the province of Leon), and if memory serves me, it is no exaggeration. The last-named creatures, I remember, were so numerous that, the house being dark and smoky, it was hardly possible to move without treading upon one of them; in which case, I noticed, Mrs. Eusebio always caught up the sufferer and stopped its mouth by attaching it to her person in the place of the recognised baby. So far as I could see there appeared to be no limit of age; all enjoyed equally the right to draw refreshment from the maternal fountain.

No one should venture into these wilds without a trout-rod and tackle. The trout are not large, but they are fairly abundant in most of the streams, and on them not unfrequently the traveller must depend for his supper. In spring and early summer there is salmon and sea-trout fishing to

be had in the rivers that run into the Bay of Biscay, and for shooting there are partridges, roe-deer (*corzos*), and it is said an occasional stag; and on the Picos de Europa, the Peña Espigüete, and wherever the mountains are high and precipitous enough, the rebecco, as the chamois or izard is called here, is to be found in considerable numbers; besides which there are, in winter at least, plenty of bears, and in some places wolves. The finest and grandest of the scenery is round the Picos de Europa and the mountain knot I have spoken of before; but all through the Asturias westward, as far as the borders of Galicia, the valleys are very beautiful, resembling not a little in character and richness of vegetation those on the Italian side of the Alps. The chain from which these valleys descend is not, however, particularly interesting. None of the summits are remarkable for form, and west of the Peña Prieta there is only one which exceeds 8,000 feet in height. Nevertheless, in almost every work which touches on the subject, even in such standard works as Bruguère's '*Orographie*,' Malte-Brun, Keith Johnston, Lavallée's and Mrs. Somerville's *Physical Geographies*, and others of the highest authority, we find this portion of the Pyrenean chain described as containing summits very nearly equal in height to those of the Central Pyrenees. This I have found to be, as usual, traceable to the imagination of M. Bory de St. Vincent. I own to a grudge against this ingenious gentleman, for to his unscrupulous invention I owe two of the very hardest and roughest journeys I ever made in Spain. On his authority a mountain in the north-west corner of Leon, called the Peña de Peñaranda, over 11,000 feet in height, has gained a place in most maps and books among the mountains of Spain. There was something fascinating in the idea of finding stowed away in this remote nook of the peninsula a rival of the Pic de Néthou, and I went at it with a will, notwithstanding that all the natives professed entire ignorance of its existence. But M. Bory de St. Vincent's description was so precise and circumstantial, and the position he gave such a likely one, just where the long spur separating the Miño basin from the Duero branches off southward, that I continued to believe until ocular demonstration removed all doubt. The whole thing is a myth, compared with which the Iseran case is a feeble instance of invention; for here everything has been invented—height, mountain, and name. The alleged site is a ridge of perhaps 5,000 feet in height, and the highest points within a radius of fifty miles are the Peña Ubiña on the east, 8,202 feet, and the Cueto Albo, 6,332 feet, on the west. Farther west, between

Galicia and Leon, the same geographer has invented another mountain, the Sierra de Peñamarella, with a height of 9,500 feet, which Mr. Packe's sound instinct has led him to mark as doubtful in the list of heights given in his 'Guide to the Pyrenees.' He must expunge it in his next edition, for there is no such Sierra and no such height, the highest points at the part in question being the Picos de Cuiña and Miravalles, which are only a trifle over 6,000 feet. M. Bory de St. Vincent, in fact, seems to have set down heights and mountains in his description of Spain in precisely the same bold, unhesitating way in which the London correspondent of a Paris newspaper, writing from 'Leicester Square,' describes the manners and customs of English society.

Of the two remaining sections of the Pyrenean chain little need be said here. East of Reinosa and the source of the Ebro the crest falls away in height, and all through the Basque Provinces preserves a very moderate elevation, its highest point being the Peña de Gorbea, north of Vittoria, which is only a trifle above 5,000 feet. What these mountains want in height, however, they make up in extent and intricacy; and no one who has ever crossed that picturesque, tortuous Basque country will feel any surprise that regular troops should have always found Carlist hunting a well-nigh hopeless task. The Pyrenees proper, from the Bidasoa to the Mediterranean, have been described nearly as often as the Alps, and from the mountaineering point of view have been so fully dealt with by Mr. Packe and Count Henri Russell, that, in a paper of these limits, it would be, in the strict sense of the word, impertinent to enter into their topography, however strong the temptation may be to dwell upon the glorious scenery of the Spanish side, of which so little is ever seen by the ordinary traveller.\*

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\* As one of the bugbears which help to frighten travellers from the Spanish side of the Pyrenees is, no doubt, the fear of brigands, it may not be amiss to point out that the Spanish Government is by no means so careless about the repression of brigandage as it is generally accused of being. Five out of the seven men who made the attack on Count Henri Russell, of which he gave such a graphic account in the 'Journal' for November 1871, are now in gaol undergoing a sentence of ten years' imprisonment with hard labour. The other two, it was supposed, had got across the frontier. At any rate, they had not been caught last August. This, however, was not properly a case of brigandage. Every one in the neighbourhood ridiculed the idea of regarding it in that light. The men, so the story goes, were simply shepherds, whose cupidity was excited by a legend of a vast sum in gold which Count Russell was said to carry about him. Of course, if

The altitudes of the Spanish peninsula are in general so incorrectly given in works which touch on the subject, that a table of the principal heights, taken from the best sources, and reduced to English feet, may not be out of place here. Where no authority is mentioned, they are taken from the map by Don Francisco Coello, Madrid, 1863:—

	Feet
Gibraltar . . . . .	1,407
Sierra Bermeja: <i>Serrania of Ronda</i> . . . . .	4,757
Sierra Pinar: <i>Serrania of Ronda, W. of Ronda</i> . . . . .	5,626
Sierra Tejada: <i>S. of Alhama</i> . . . . .	7,001
Cerro del Caballo: <i>Sierra Nevada. (PACKE)</i> . . . . .	10,430
Cerro de los Machos: <i>Sierra Nevada. (PACKE-CLEMENTE, 11,106)</i> . . . . .	10,788
La Veleta: <i>Sierra Nevada. (BOISSIER)</i> . . . . .	11,432
Mulahacen: <i>Sierra Nevada. (BOISSIER)</i> . . . . .	11,701
Cerro de Alcazaba: <i>Sierra Nevada. (ROJAS CLEMENTE*)</i> . . . . .	11,254
Pico Lobo: <i>Sierra Nevada. (BORY DE ST. VINCENT)</i> . . . . .	9,163
Sierra Sagra: <i>between Granada and Murcia</i> . . . . .	7,867
Sierra Segura: <i>N. of S. Sagra</i> . . . . .	5,436
Sierra de Alcaraz: <i>junction of the Sierra Morena</i> . . . . .	5,905
Watershed near Minaya . . . . .	2,362
Cerro de San Felipe: <i>N. of Cuenca</i> . . . . .	5,918
Pico de Javalambre: <i>S. of Teruel</i> . . . . .	6,568
Peñagolosa: <i>E. of Teruel</i> . . . . .	5,941
Moncayo: <i>W. of Zaragoza</i> . . . . .	7,696
Pico de Urbion: <i>source of the Duero</i> . . . . .	6,712
Cerro de San Lorenzo: <i>E. of Burgos</i> . . . . .	7,555
Sierra Morena: <i>Despeña-perros</i> . . . . .	2,427
—: <i>N. of Cordova</i> . . . . .	2,142
La Foya: <i>Sierra de Monchique, Portugal</i> . . . . .	3,828
Altos de Cabrejos: <i>eastern end of Montes de Toledo</i> . . . . .	3,792
Sierra de Guadalupe: <i>Montes de Toledo</i> . . . . .	5,114
La Cebollera: <i>Sierra de Guadarrama</i> . . . . .	6,975
Peñalara: <i>Sierra de Guadarrama</i> . . . . .	7,874
Puerto de Navacerrada: <i>road from Madrid to Segovia</i> . . . . .	5,833
Siete Picos: <i>Sierra de Guadarrama</i> . . . . .	7,298
Las Parameras: <i>between the Escorial and Avila</i> . . . . .	4,448

you are robbed or murdered, it matters very little whether it was by a professional or an amateur, but the chances of meeting such a fate are much less if there are no regular practitioners about.

\* Owing to an error in reducing Spanish feet to English, I made Rojas Clemente's measurements rather too high in a paper on the Sierra Nevada in vol. iii. of the 'Journal.' Corrected, they agree much more closely with those of Boissier and Mr. Packe.

	Feet
Sierra de Gredos: <i>Bisco de Almanzor</i> . . .	8,694
El Trampal: <i>Sierra de Bejar</i> . . .	8,023
Peña de Francia: <i>SE. of Ciudad Rodrigo</i> . . .	5,688
Canariz: <i>Serra Estrella, Portugal</i> . . .	7,526
Peña Labra: <i>W. of Reinosa</i> . . .	6,568
Peña Prieta: <i>junction of Palencia, Leon, and Santander</i> . . .	8,297
Peña Espigüete: <i>between the Esla and Carrion</i> . . .	7,982
Picos de Europa: <i>Torre de Lambrian</i> . . .	8,786
Picos de Mampodre: <i>source of the Esla</i> . . .	6,834
Puerto de Pajares: <i>road from Oviedo to Leon</i> . . .	4,471
Peña Ubiña: <i>W. of Puerto de Pajares</i> . . .	8,202
Cueto Albo: <i>source of river Sil</i> . . .	6,332
Pico de Miravalles: <i>between Leon and Galicia</i> . . .	6,361
Pico de Cuiña: <i>S. of P. de Miravailes</i> . . .	6,551
El Teleno: <i>S. of Poferrada</i> . . .	6,233
Peña de Gorbea: <i>N. of Vittoria</i> . . .	5,042
Peña de Oroel: <i>S. of Jaca, Aragon</i> . . .	5,413
Peña Colorada: <i>NE. of Jaca (9,186, ПАККЕ)</i> . . .	9,477
Mont Perdu . . .	10,994
Cotieilla: <i>S. of El Plan</i> . . .	9,547
Pic des Posets . . .	11,047
Pic de Néthou . . .	11,168
Sierra de Cadi: <i>S. of Andorre</i> . . .	8,316
Monserrat: <i>NW. of Barcelona</i> . . .	4,386
Madrid. (MORALES, 'Geografía') . . .	2,148
Valladolid . . .	2,230
Burgos . . .	2,755
Avila . . .	3,608
Salamanca . . .	2,459
Leon . . .	2,631
Segovia . . .	3,147
Toledo . . .	1,476
Guadalajara . . .	2,214
Cuenca . . .	2,962
Pamplona . . .	1,377
Zaragoza . . .	603
Granada . . .	2,198
Ronda . . .	2,450

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ABOUT ENGELBERG. By THOMAS BROOKSBANK.

FOR a time, now so long as to be reckoned by years, there has been from the mightier members of our Club

a doleful song

Steaming up, a lamentation;

though, if it be also 'an ancient tale of wrong,' their own broad