

have ridden through scores of them, and seen them in many varieties of form and structure, my description shall generalize as much as possible. The word is derived from the Arabic *Raml*, which signifies a sandy or gravelly heap.

The natural drainage of all parts of Spain, but especially of the east and south, takes place under circumstances altogether exceptional when compared with the rest of Europe. The total quantity of rain that falls annually is small in amount, and distributed over the year and over the country very unequally. It falls chiefly in the mountains, and on the Atlantic side of the Peninsula; and as the mountains are generally steep and moderately lofty, while the plains are very much above the sea-level, and in steps or terraces almost flat, there is a total absence of those hills and slopes which in other parts of Europe allow the rain that has fallen to trickle down as it were into the lower country gently and soberly. At the same time, owing to the absence of tree vegetation on the plains and high ground, no check whatever is offered to the immediate running off down the mountain-sides and river-courses of the whole quantity of rain that falls. So entirely is this the case, that, as I have already had occasion to observe, there is not a river in Spain, with the exception of the Ebro and the Guadalquivir, that has not occasionally been dry within the last few centuries. Besides the natural causes tending to dry up the rivers, there is another, not unimportant, since most of them are taken even from their sources, and the water is diverted from its channel to irrigate the neighbouring meadows. Thus, almost all the rain that falls on the whole Peninsula either runs off the surface at once, or is evaporated back again into the air.

Streams of the nature thus described being in fact little beyond mountain-torrents at one season, and hardly visible for the greater part of the year, cannot be expected to take a steady course in making their way to the sea. Guided by the smallest and least important local accident at or near their origin, they sometimes go in one direction and sometimes in another; always, however, carrying down with them enormous quantities of sand and gravel, besides blocks of stone and boulders, varying according to the circumstances of the case. In the course of time, the rain falling over a district thus cuts out for itself, and partly fills up, numerous channels, any one of which would be far more

than sufficient, if there were an average steady current, but which are all barely enough to carry off its waters when swollen by any unusual circumstance. The sand, gravel, boulders, and other material brought down, are found in many cases to form a wide irregular channel, or dry bed, through some part of which the stream, if any, always flows; and when, as is often the case, the direction is strictly limited by lofty and almost vertical walls of rock, the whole intervening space at the bottom of such a gorge (or *barranca*) is occupied by alluvial matter, and affords the only passage from one part of the country to another, not only for the water, but the inhabitants. A river-channel of this kind, either permanently dry from the entire removal of the water to another direction or its entire re-evaporation; or occasionally dry, and generally capable of being traversed as a road, is a true Spanish Rambla:—the fashionable walk in some large cities, as Barcelona, where the ground has been raised, and the stream permanently directed into another course; the true and constant river-course over many plains; the actual and only road in many mountain tracts; and the sandy or gravelly path almost always, fully answering to the Arabic origin of the term. When dry, no road is better marked, and none more easily traversed on horseback; when rain has fallen, none can be more treacherous, dangerous, and uncertain. A few hours of heavy rain on the mountains will bring down a torrent that carries away trees, houses, and bridges, if they stand in the way; while a few hours of dry weather reverse the scene, and a few weeks clothe the once desert tract with rich vegetation. Many of the Ramblas, indeed, are more permanent, and trees of many years' growth attest the comparative tranquillity that has reigned; but all partake of the same general character. There is no phænomenon of nature in northern European climates that in any way resembles this: and were a change to take place by which these channels became permanently covered with any depth of water, a large proportion of the towns of the south of Spain would be as effectually cut off from all ordinary means of intercommunication as if they were placed on a group of detached islands.

Along such paths, formed naturally by alluvial sand and gravel, and liable at a few hours' notice to be swept away, and altogether remodelled in many essential points, the communication from Orjiba towards Berja is entirely carried on. The river

bed of sand and alluvial gravel cut in the tertiary deposits, rises gradually towards the east, till it attains a considerable elevation near the peak of Muley-Hassan before referred to; it then terminates abruptly, and the steep mountain-sides rise all around; but a path has been cut over these mountains, barely sufficient for the meeting of two mules even in the wider portions, and we thus pass from one Rambla to another in a different watershed, which has to be traversed in a similar manner. There is something singularly strange and new in first seeing and following these dry water-courses. With every mark of violent water-action, scarcely a drop of water is to be seen; and, at most, there are a few little pools and a sluggish stream, often barely visible, and almost always contemptible. We go on and on, over miles of such natural road, solitary, barren, and waste, often shut in by naked rock many hundred feet high and steeply escarped, but everywhere reminding us that a day of reckoning must be looked for, and that the great blocks of limestone and schist under our feet are not permanent deposits. They are, in fact, mere play-things, dashed about, and carried down to the sea at a very short notice, as soon as the rains once more descend, and the mighty torrents coming down from the steep Sierra unite and plough out a fresh channel through the heaps accumulated in some former progress. The road, if so it can be called, proceeds onwards through these paths in a wilderness of valleys, until at length it reaches the important transverse valley of the Adra. From this it soon diverges, crossing another ridge of some elevation, commanding a fine view of the Sierra de Gador, and descends at length into another part of the same valley near the rich and prosperous town of Berja, the centre of the mining district of the Sierra de Gador.

Berja is not situated in the valley between the Sierra Nevada and the limestone sierras immediately to the south, but between these latter and the coast range, or rather in the opening near them, and between the Sierra de Gador and that of Lujar. It has been greatly enriched by the successful mining operations in the Sierra de Gador, and contains some modern and neatly built houses. The whole place, indeed, is modern; as the older town was almost destroyed by an earthquake in the early part of this century; and thus it possesses but few Moorish characteristics, beyond the general style of the buildings, clearly adapted from

the ancient inhabitants. The habits of the people, too, are Asiatic, although the taste of the Moors is certainly not shown in the church and town-hall, the public buildings that adorn the market-place.

From Berja the fine range of the Sierra Nevada is well seen through the opening between the Sierras de Gador and Lujar, and the town is almost enclosed by high ground. Being tolerably well supplied with water, the vegetation as well as the scenery is very interesting. From one window of my apartment, I looked across a garden with orange, lemon, pomegranate, fig, and palm trees, to the distant white patches of the snowy range; from the other window I could see the Sierra de Gador with its countless mines, indicating a large but concealed population; while my rest both by day and night was disturbed by the incessant clatter of the hoofs of mules and donkeys bringing down the ore to convey it to the coast, or returning lightly laden with the few necessaries required by the miners, who, however, receive all their food, wine, &c., and even their water, conveyed in this way for a distance of many miles.

A path, if so it can be called, in the ever-changing Rambla, affords for the greater part of the way the only means of communication with the sea-coast at Adra, where the ores of lead are smelted, and whence they are exported chiefly to Marseilles and the United States. Here the climate approaches that of the tropics, and admits of the successful cultivation of the sugar-cane, as well as rice, in the lower plains where irrigation is possible. Indeed the ordinary canes of this part of Spain are sufficiently remarkable for their luxurious growth, and in some places they reach not less than twenty or thirty feet in height, forming a kind of forest on either side of the gravelly bottom of the valley. The sugar-cane is not so lofty. I also noticed some very finely-grown plantains, but was informed that the fruit of these more distinctly tropical productions rarely ripens to perfection. The cactus (prickly pear) is luxuriant beyond everything, and at the time of my visit (late in August) the hedges were covered with millions of its grotesque but not very pleasant fruit. The aloe also flowers freely, and numerous stalks, twenty or thirty feet high, stand staring in the landscape, like so many decayed telegraph poles, while the dingy and decayed-looking flower, when present, hardly added to the beauty.

Adra itself is rather a lively and pleasing town in the autumn, when a good many people come from the interior to enjoy the sea-bathing. The accommodation could hardly be more primitive. A very small hut (one only) like an Indian wigwam, very scantily covered with reeds and dead grasses, serves as the dressing-room, but is at some little distance from the water. When ready for the bath, the lady who has prepared herself here, (the gentlemen despise such little luxuries,) makes the best of her way to the sea, and there enjoys the satisfaction of bathing, whilst watching the various promenaders on the shore passing within a few yards of her. When she wishes to retire, a nymph, who seems to act the part of laundress and fishfag as well as bathing-woman, comes down with a large cloth and a kind of dressing-gown, and receives the lady on coming out of the water, throwing the cloth round both together. In the kind of extempore tent made thus by the attendant and the cloth, the lady arranges herself in the dressing-gown as well as she can, and then quietly walks up the two or three hundred yards to the hut, where she dresses as quickly as possible, to make room for another.

Although an old town, founded by the Phœnicians, and provided with a picturesque tower, said to be Roman, and the remains of a fine Moorish castle, Adra owes all its importance to the smelting-houses for lead, which have directed hither a large part of the lead ore not only from the sierras immediately adjacent, but from various places along the coast, as far as Carthagenæ. A considerable shipping business is thus produced, as the smelting requires fuel, which is obtained from England chiefly, and the lead, when produced, has to be exported. The principal smelting-house includes a manufactory of sheet-lead, lead pipes, shot, red lead, white lead, and even pigments, and was established originally by the late consul, Mr. Kirkpatrick, but it is now chiefly in Spanish hands. The lead is desilverized by Pattinson's process, and the machinery and arrangements were evidently very complete when first established.

The country that intervenes between Berja and the coast consists chiefly of slaty and schistose rock, in which, as far as I could learn, no fossils had been found. The geological age, indeed, of all the older rocks in this part of the Peninsula must be considered as still very doubtful; and the main facts to be

observed and remembered are rather those of structure than age. No minerals of value have yet been found in this southern range, which is probably a repetition of the rock of the Sierra Nevada, brought up at a later date, and elevating the overlying shales and limestones with a somewhat northerly inclination.

From Adra through Berja is the regular and, indeed, almost the only road at present used to reach the mining district of the Sierra de Gador, and I followed this route on more than one occasion, first merely to the mountain summit, and afterwards across the summit into the Eastern Alpujarras. The whole mass of the upper part of the Gador range consists of hard, semi-crystalline, and highly metamorphosed limestone, abounding with crevices and irregularities. It is generally of dark colour, but greatly veined with white and more crystalline portions, and occurs in beds of various degrees of hardness, occasionally containing large quantities of remarkably pure sulphuret of lead (galena), mixed with a loose calcareous sand, in bunches or floors. The depth of the mines hitherto worked is not very great (rarely if ever reaching 100 fathoms), but the surface over which small shafts have been sunk is extremely large.

The rise to the upper part, or mining district, from the rather high valley of Berja, is extremely steep, one side of a narrow gorge being cut into a long tortuous path, which it takes a horse or mule at least three hours to ascend. The views both of the near and more distant scenery, in rising towards the upper part of the Sierra, are extremely fine, and extend across the whole of the lower intervening metamorphic ridge, into the valleys beyond, and far across to the deep blue waters of the Mediterranean. The mountains themselves, and even the barrancas, are cold, gloomy, barren, and desolate. After a weary progress of a couple of hours, vast heaps of loose alluvial sand and gravel mark the first approach to the mining ground, and afford a curious proof of the abundance of the ore, since these are produced by the labours of poor miners, who earn a scanty livelihood by digging and sifting the alluvial gravels for fragments of lead ore buried amongst them. This operation resembles that elsewhere called "streaming," and followed commonly enough in the case of gold and tin ores, where water is at hand; but it is singular enough to find it adopted here, where not a drop of water is available even for drinking that is

not carried several miles on a mule's back up the long and steep ascent. It is evident that a large quantity of ore must have been some time or other removed from the parent rock, to admit of this system being in any sense economical; but it is said to yield a very certain though only a small profit, and is permitted by the government to be carried on without any preliminary claim being set up, or any legal and formal grant being made.

Continuing along the mule-track, we soon come in view of one of the most remarkable parts of this district, where the ground is literally turned inside out by thousands of human moles, who have burrowed, generally with pretty fair success, but have unfortunately left behind them no other indication of the nature of their work than the earth-heap at the top of the deserted shaft. The colour of this heap, however, especially where the work is still going on, marks at once whether the operations are succeeding or have failed. The ore is found associated with a white sandy substance, and this has only to be separated by sifting. Where the heap, therefore, is white and dusty, ore is being obtained; where blue or brown, the result is hitherto unsatisfactory. Clouds of the white dust are blown by every breath of air about the top and sides of the Sierra, and afford ample proof to the instructed eye of the general success attending the subterraneous work.

The top of the Sierra de Gador is not a ridge, but a plateau, occasionally broken or hollowed out, and showing on the whole the main characteristics of a lofty plain. Although rain occasionally falls, the water soon runs off, and the surface remains as it is usually seen, dry, parched, barren, and desolate. Not a tree, scarcely a blade of grass is to be found; and a few miserable *ventas*, and the houses, or rather huts of the smallest size (*cortijos*), placed near the shafts, at once for shelter and protection, are the only things that break the dreary monotony of the dusty hillocks already referred to. Although tolerably familiar with mining ground, I know no district which possesses so exclusively its own characteristic aspect as this Sierra in the South of Spain.

Down a partial depression in the limestone surface, and past other mines only in operation within a short time, I proceeded to descend the northern face of the Sierra, and enter the principal valley of the Alpujarras on this the eastern side. During

one of my visits the whole mountain was enveloped in cloud, which became rain indeed only at its lower extremity, but which effectually concealed everything at a distance of more than a few yards. On another occasion I saw enough of the magnificent mountain range and intervening valley to enable me to judge of the effect. The descent on the north side is exceedingly steep, and the scenery grand in the extreme, affording a mixture of the weathered and broken schists, the fractured but jagged limestone, and the deeply-worn soft tertiary sands and clay, these materials affording great variety and great beauty both of form and colour. Continuing to descend, we come at last into the valley, where several Moorish villages and towns are passed one after another, making an admirable foreground and middle distance to the landscape. These lie at the foot, or nearly so, of the great snowy range, but far below the limit that the snows approach even in winter, and being for the most part removed some distance from the only path along the valley, they are hardly ever entered by strangers. The land around is beautifully wooded, and some of the finest and oldest olive-trees I have ever seen grow in the district. All this ground is high but sheltered, and the vegetation partakes of the usual character of that seen in the valleys of the south of Spain away from the coast. Maize grows abundantly. The orange and lemon exist, but are not very common; the fig, the pomegranate and the pear are the principal fruits, and the olive and vine afford the oil and wine so necessary in this country. Melons are, as usual in Spain, infinitely abundant, and for the most part of large size and fine quality.

I stopt at night at the village El Fondon, near some lead mines of the same name, and enriched by the vicinity of these mines. From this place there are several miles of road well planned, and once well executed, leading towards Almeria. The road, however, laid out by the government at a time when all mines were the property of the crown, has been entirely neglected for nearly half a century, and is in many places so entirely out of repair, that it is hardly passable for the very roughest kind of wheel-carriage. It conducts to the rambla of the Rio di Almeria, and passes a number of very grand mountain gorges in the limestone on the Sierra de Gador side, coasting that range for the whole distance, and laying bare its



geological structure at various points. The centre of the valley is occupied with tertiary deposits and alluvial detritus to a vast thickness, and deeply intersected by other and smaller gorges; whilst on the opposite side, where the limestone is absent, the shales and schists rise out of the tertiary accumulations, and form the slopes of the loftier Sierra in that direction.

Entering at length the rambla of the Almeria river, we pass other and more populous villages, and discover indications of a much warmer climate than in the upper valleys. Here the palms and plantains may be counted by hundreds instead of tens, the canes are luxurious, the fruit-trees loaded with fruit, and everything announces the approach to those subtropical strips so remarkably characteristic of the south coast of Spain. The soil is rich and entirely tertiary; the mines, though they do not disappear, become less important, but still a few smelting-houses, at rather distant intervals, are to be seen on the hills. On the opposite or east side of the rambla rises the Sierra de Alhamilla, a continuation of that of Gador, terminated towards the coast by erupted porphyries and serpentines, where nickel, and subsequently silver and copper, have replaced the lead. In the Alhamilla itself indeed, lead appears as in the Sierra de Gador, but the mines have not been much worked, nor are the results hitherto very favourable. Between the two Sierras in this wide gorge is a singularly extensive development of the tertiary sands and conglomerates, and some semi-detached hills form a partial ridge, almost appearing to rival the limestone range itself in elevation, but belonging evidently to a very modern period.

In this part of the country, and not more than ten miles from the coast, there is abundant proof of recent local elevation on a considerable scale, sometimes, no doubt, preserving the horizontality of the deposits, but sometimes communicating local disturbances of dip to the extent of  $15^{\circ}$  to  $20^{\circ}$ . All this district has been long subject to earthquake action, and many of the small towns and villages have suffered more or less by various shocks within the last century. Of late, however, and for several years, the ground has been much more quiet, and the people having observed this, attribute it to the opening of the mines. However this may be, it is certain that there are few

spots in Europe where the earth has been more perseveringly burrowed into.

From the rambla we at length emerge into a road commenced but only partly finished, like most things in Spain, and intended to communicate from Almeria to Granada. It was once traversed by a kind of diligence, but this has ceased, as the speculation was unsuccessful. The road is tolerable for some distance, and the entrance to Almeria is pretty. The town is first seen on reaching the summit of the last of a series of tertiary hills of considerable elevation, and presents an outline of singular beauty, owing to the extensive remains of an old Moorish castle and fortifications. Within the walls the town is lively and cheerful, the streets pretty good, and the houses small. Being the chief town of a province, it is of some importance, and a considerable amount of trade is done with various Mediterranean ports; but the accommodation at the best inn, or rather boarding-house, prettily situated, by the way, in a small *alameda* or public walk, is wretched beyond description. Bare whitewashed walls, two or three rickety chairs, a much more rickety table of minimum dimensions, a washhandstand that might go into the smallest cabin of an emigrant-ship, and two tressel-beds, formed the accommodation. Walls, table, floor, and washhandstand were so filthily dirty, that one might easily have scraped off a considerable quantity of useful enough material for manure, and the beds were far more adapted for the satisfaction of fleas than the repose of bipeds. Such, alas! is Spain too frequently. Nature has done all in her power, and has showered every luxury of climate and fertility on these shores. The inhabitants, however, are utterly indifferent to everything; they allow these rich gifts to take their own course; the fruits may ripen or rot as they will, and cleanliness, comfort, and even the commonest decencies of existence are totally disregarded.

Beyond the valley of the Almeria river, the district of the Alpujarras terminates, and the character of the scenery, as well as the structure of the country, appears to change. The whole tract is singularly interesting, both for its present condition, its physical and geological peculiarities, and its past history. Here, in the history of nature, have been formed some of the grandest modifications of limestone rock and shale to be seen in Europe;

near here has been elevated one of the loftiest mountain-chains of Europe; here have been accumulated some of the largest deposits of pure galena known to exist in the world; here have been executed, perhaps, more surface and shallow mining works than are elsewhere to be found on an equal space of ground; here have dwelt and mined the old Phoenicians and Carthaginians, the Romans, and the Moors, first in their glory, then in their decline; and still more recently have been brought here the mixed race of Castilian conquerors, who endeavoured to annihilate their hated enemies by the most perfidious infraction of all agreements made with them, and drove them at last to seek refuge and revenge in acts of piracy, which long harassed the commerce of the various ports of the Mediterranean. Within this district may be found the products of Africa, Asia, and tropical America, flourishing side by side with those of temperate Europe. We find here all climates, from that of perpetual frost to an unvaried spring or burning summer; torrents of rain, and spots where rain hardly ever falls; streams abounding with trout and other fishes, and dry river-courses where there is hardly moisture enough to support the cactus or the fig. We have here some of the finest and grandest mountain-scenery in Europe, some of the wildest and most savage desolation, some of the most charming secluded valleys richly clothed with wood, and some of the most picturesque villages and houses embosomed in gardens, and surrounded with honeysuckle and other charming flowers. There is here a strip of coast fringed by the blue waters of the Mediterranean; and one may indeed say, in the words of an Arabian poet, that, so far as nature has willed, it is "a land where, if thou walkest, the stones are pearls, the dust gold, and the gardens paradise."

# ISLAND OF SARDINIA.

I. THE COAST, THE COUNTRY, THE TOWNS, AND THE  
PEOPLE.

II. THE MINES AND MINERAL RESOURCES.



## THE ISLAND OF SARDINIA.

### CHAPTER THE FIRST.

#### THE COAST, THE COUNTRY, THE TOWNS, AND THE PEOPLE.

Fig. 9.—Group of ancient Roman Vases from the Western Coast.



Of the countless herds of English and other travellers who are always to be met with in almost all the better known and much-talked-of cities of Italy, scarcely more than half-a-dozen in a year, and often not so many, cross the channel that separates the States of the Church and the Kingdom of the Two Sicilies from the large and important islands of Sardinia and Corsica. These form an almost continuous ridge of very high land, extending for nearly 400 miles in a direction due south of Genoa, from whence Cape Corso, the most northerly point of

Corsica, is about 100 miles distant. Of the two islands, Corsica, which is much the smaller, is almost connected with the main land of Tuscany, by the string of islands, Gorgona, Capraia, Elba, Pianosa, and Monte Christo, the channel between these and the Corsican shores being about eighteen or twenty miles wide. Corsica, again, is only separated from Sardinia by the Straits of Bonifacio, about four or five miles wide; and thus all these islands together may be regarded as links of a chain, mountainous throughout, and generally very lofty, branching from the Apennines where the latter first leave the Maritime Alps, and exceeding in importance, in a geographical sense, that more celebrated but hardly more interesting range.

On the voyage from Genoa to the Island of Sardinia, the land is kept in sight, while sailing along the Italian coast, past the Gulf of Spezzia, as far as Leghorn. At this point the small islands of Capraia, Monte Christo, Gorgona, and others are in sight together, and conduct the eye to the Island of Elba on the one side, and the mountains of the northern promontory of Corsica on the other. Of these, Elba and Capraia have every appearance of being identical in composition; and while touching at the latter island, a number of geological specimens were brought on board, most of them so strictly identical with the well-known iron ores of Elba, that one was almost induced to speculate whether the fisherman had not brought over the specimens from this locality. I believe, however, they are from veins which seem to crop out very prominently on the north side of the island, and are perhaps continuous with the great iron lode of Elba. Before passing Capraia, the mountains of Corsica come into view, and the shores of the island, even from the northernmost extremity, are exceedingly bold and often grand, consisting of a succession of capes, between which are bays of greater or less extent. The coast is well seen on approaching Sardinia, as the only regular means of communication is by steamers leaving Genoa every five days, and running alternately to Cagliari, the capital of the island, situated in the extreme south, and Porto Torres, near Sassari, a large town at the northern extremity. My business requiring my presence in the south of the island, I took advantage of the steamer to Cagliari, leaving Genoa the 10th May. This voyage generally occupies about forty-two hours, but the

weather being unfavourable, my passage was upwards of fifty, and the vessel did not reach its destination till about two o'clock on the morning of the third day from Genoa. Although the sea was rough, with that short disagreeable swell common to narrow and confined oceans, the weather during great part of the voyage was tolerably clear, and I greatly enjoyed the sight of the coast as we steamed along from Cape Comino across the Gulf of Orosei to Cape Monte Santo, and thence close along the shores of Ogiostro, celebrated for the excellence of its fruit and wines, into the Gulf of Tortoli.

The steamer stops a short time at Tortoli to take up passengers for Cagliari, and exchange mails. The bay is calm, well sheltered, and picturesque in its form. The two extremities or horns stretch far out into the sea, and are continued by islands. Two small towers, one on the shore and another on the headland called Cape Bellavista, not only remind the traveller that the works of man are at hand, but in their construction and condition they speak of the centuries that have passed since the island was first inhabited, and the vast changes that have passed over the human race, without effacing the former works of his hand.

The interior of the bay of Tortoli is flat towards the central part, but the country rises behind towards the fine mountain range, of which Gennargentu, one of the loftiest peaks in the island, is the crowning point. This height is nearly 6000 feet above the sea, and is a true mountain in every sense.

Near Tortoli, and for some distance along the coast, the cliffs are high, and rise very steeply from the sea. The town of Tortoli is situated behind these cliffs, and is not seen from the sea, the eye ranging over a wide extent of coast, and recognizing hills at some distance in the interior without detecting any marks of the small villages and towns which were originally placed out of sight to escape the notice of the dangerous foes who at one time navigated these seas, levying fearful contributions if at any time they descended on the coast.

The mountains approaching the sea at Cape Bellavista, and there projecting to form the headland bearing that name, consist of hard rock, the bedding being nearly vertical, alternating with softer rock easily washed away. The coast between the projecting points is generally pierced with holes, often of large



size, into which the water enters; and over a considerable extent of coast there is evidently deep water immediately off shore, as the fragments that fall from time to time are immediately removed by the action of the waves, and the steep escarped faces of the hard rock go down directly into the water.

Passing from Cape Bellavista, the next point seen is Cape Sferro Cavallo, also a fine headland, having a ferruginous look from the sea, and probably containing much iron ore. Near this point is Tertania, where numerous metalliferous veins have been discovered, containing copper ore, and where some mines are in work, though not at present making much profit. The metalliferous district of the island may be said to commence near Tortoli, on the coast; it extends thence a little to the north-west, but chiefly to the south, reaching in that direction quite down to the southern shore. Another metalliferous district, rich in lead, occupies a somewhat similar position, and is similarly limited, on the opposite or western coast of the island.

After Cape Sferro Cavallo the next principal point is Cape Ferrato, which juts out nearly three miles into the sea, and terminates so abruptly that within half a mile of its extremity there is from sixty to eighty fathoms of water. The true mountain character of the coast is well seen, not only here, but almost everywhere, by the great depth of the water immediately adjacent to the projecting headlands, and occasionally also by the extreme irregularity of the soundings. As a general rule, it will be found that the rocks in this part of the island are nearly vertical, and strike east and west, consisting of some very hard and some much softer portions. The latter being necessarily more rapidly acted on by the mechanical action of the waves and by atmospheric influences, are worn away much more than the former, which are left as headlands or cliffs as the case may be.

After passing Cape Ferrato, night set in, and I saw no more till the next morning when I landed, at about five o'clock, at the little port of Cagliari, beautifully situated, and sheltered from almost all winds by the peculiar arrangement of the hills adjacent. I was soon established in the Albergo del' Universo, but did not at that time stay long in the town. Within a few hours I was again moving on, being however this time provided with a horse, and crossing the country instead of coasting it.