

shameful defeat, in company with Hans, all leaving their rifles behind them. "Was it not our own property that they took? I wish that thou hadst shot me rather than suffer this disgrace." And in a bitter rage he left Weinleidtner.

Having reached home, Peter went to his desk, and taking from it all his ready money, and a large parchment, covered with numerous seals, he mounted his horse and left his estate. It was well for him that his military guests had not returned from their morning's feat of heroism.

"As thou camest to me, so do I part from thee," said he, smiling, as at the gate he cast a farewell look at the Schüppelhof. Soon afterwards he made a hurried visit to Weinleidtner's cottage. "Hans," said he, drawing him aside, "I am going to the good King of Prussia. The Schüppelhof was not made for me, nor I for it; I have therefore given it to Barbara and her brothers. Here is the deed of gift, which I had privately prepared, and had it legally confirmed long ago. The present time is the best to put you in possession of it. Ask me no questions. Do not detain me. The knife is at my throat, and the clergy at my heels. I should not like to count the steps that lead down to the dungeons in Castle Werffen. Thou wilt know soon enough what has happened." Thus saying, he shook them all by the hand, bade them a hasty farewell, and departed.

CHAPTER XVI.

A SEQUESTRATION was laid upon the Schüppelhof, and the soldiers quartered there were immediately withdrawn. Such of them as had formerly lodged in Manlicken's cottage, now again occupied it, thereby occasioning the greatest inconvenience to the family. Nevertheless, Hans, guided by sound discretion, forbore to assert his claim to the Schüppelhof, because then the estate would have been completely dissipated by new and oppressive burdens, and an immoderate quartering of soldiers. He therefore thought it best to wait for peaceful times. Meanwhile, the imperial cavalry, consisting of the dragon regiments under the command of the Princes Eugene and Staremburg, together with the cuirassiers of Prince Philip of Wurtemberg, advanced into the little mountainous district, so that the total number of foreign soldiers amounted to six thousand. Among the dragoons of Prince Eugene, there were many Protestants, who, instead of annoying the Salzburgers, rendered them every possible assistance, prayed with them, read the Bible to them, and encouraged them to adhere steadfastly to their faith. This, however, was no sooner discovered, than they were withdrawn and replaced by others, who delighted in placing every obstacle in their way to prevent the exercise of their religion.

Encouraged by the support of so large a body of imperialists, the archbishop now thought that he might safely bid defiance to the multitude of Protestants, and therefore threw off the mask of seeming indulgence towards them. An archiepiscopal edict was issued on the 31st October, 1731, the anniversary of the Reformation, threatening the Protestants with an irrevocable expulsion. By the peace of Westphalia all emigrants on account of their religion were allowed the space of three years to arrange their affairs; but the archbishop in this instance granted to those who were not proprietors of land, only fourteen days from the date of the publication of the edict, to the period at which they were to leave the country; to landowners whose possessions were under the value of one hundred and fifty florins, one month was given, and above that and under five hundred florins, two

months; to those who had more than five hundred florins in immovable property, such as fields, grounds, and tenements, he allowed the space of three months to settle their pecuniary affairs. At the same time they were prohibited to sell their cattle, either in foreign countries or to foreigners. The same interdict was placed on their landed property. In consequence of these orders, the Salzburgers were compelled to dispose of their possessions at nearly nominal prices; this indeed was the object that the advisers of the misguided archbishop had in view, and by which they expected to fill their pockets at the expense of the unfortunate sufferers. The latter, moreover, were obliged to pay into the treasury a part of the money obtained by the sale of their effects, by way of fine for having rebelled against their prince. Those who referred to the articles of the peace of Westphalia, were answered that they did not relate to unmarried persons, day-labourers, and non-proprietors, and that the archbishopric of Salzburg in particular was not comprehended in that treaty. The Protestant workmen in the salt works, smelting-houses, foundries, timber-drifts, and similar establishments, were forthwith discharged; and the possessors of the largest farms were only allowed to have one man, and one woman servant, up to the time of their expulsion. The Protestants were not permitted to attend divine service, and their artisans and other tradespeople were compelled to abandon their avocations, and in the mean time the Catholics were allowed to profit by them. No oppression, however, could overcome the constancy of these poor people. They still relied with great confidence on the protection of the Protestant sovereigns, who through their ambassadors transmitted energetic remonstrances to the archbishop. Even the Emperor Charles VI publicly condemned what he termed the inhumanity and barbarity of Leopold Von Firmian; but all remonstrance was ineffectual to procure more than the space of two months longer to the landowners.

The King of Prussia was the first German prince who, soon after these events, strenuously interfered in behalf of the oppressed. He declared the exiles to be his subjects, and threatened to indemnify them for their losses by giving them the property possessed by the Catholics in the bishoprics of Magdeburg, Hulberstadt, and Ravensburg. A similar reparation was menaced by the Danish minister, Von Holtze, in the name of his sovereign. Holland, however, was the first to make reprisals on the Catholics, by closing several of their churches. These steps in their favour were not quite unknown to the Salzburgers, although on all the frontiers spies were stationed, and all letters were intercepted. They therefore deemed their expulsion an improbable event, and, devoid of anxiety, continued daily to follow their wonted employment.

THE GOLD-FIELDS AND DIAMOND-BEDS
OF SOUTH AFRICA.

BY T. BAINES, F.R.G.S.

THE existence of gold-fields in South Africa is no new discovery. Vasco di Gama, after rounding the Cape of Good Hope, reached the Zambesi, or river of good signs,* in 1498. In 1502, he visited Sofala, and among the productions of the country gold was heard of specially. In 1569, three ships, with a thousand men,

* He found at Mozambique large vessels with sails of palm-leaf matting, but without decks, manned by Arabs, who not only traded along the coast, as had been their practice from early times, but, being acquainted with the use of the compass, extended their voyage to India.

mostly volunteers of rank, sailed from Lisbon to take possession of the gold-mines of Monomotapa, to the westward of Tette, on the Zambesi, and those of Manica, more to the south-west. They were abundantly supplied with horses, asses, camels, and provisions. At Senna, on that river, they found many Arab and other traders, who offered much resistance to their progress. Their horses died, probably from the bite of the Tsetse fly, though they suspected the Arabs of poisoning them. Barreto, the leader, continued his march with five hundred and sixty men, but they suffered so terribly from hunger and thirst, and the assaults of the natives, that he failed to reach the gold-fields.

When the Portuguese settled on the Zambesi, the washing of soil for gold dust became a recognised branch of industry, which was carried on at various points, north, south, west, and south-east of Tette. A merchant with his slaves carrying goods would proceed to the selected spot, and making a present to the chief, would obtain liberty to commence work. His slaves were told off into gangs, each of which had a confidential head man to oversee their work, and also to purchase gold dust for his master, and grain for the support of the party from the natives. And in this manner about 130 pounds of gold or more per annum were obtained; but when the slave trade offered a more lucrative mode of disposing of the native labour the washings were almost abandoned, and the supply of gold fell to eight or ten pounds yearly.

Dr. Livingstone, in passing from Linyanti to Tette in 1856-7, noticed among the hills between the Kafue and Loangwa, to the west of Zumbo, on the Zambesi, a strongly-marked depression, evidently waterworn, as if the current had been deflected northward toward the Maravi country, north of Tette. In this lay many of the principal gold-washings. Dr. Livingstone, during his stay in Tette in 1856-7, examined what were formerly the gold-washings of the rivulet Mokoroze, ten or twenty miles north, in the sixteenth degree of south latitude, where the banks were still covered with fine mangotrees, planted by the Portuguese who engaged in the work. The sand was put into a wooden bowl with water, and washed with a half rotatory motion, which caused the coarser particles of sand to collect on one side: they were removed by hand, and the process continued till only the gold remained.

There were also six well-known washing-places, east and north-east of Tette—Mashinga, Shindundo, Missala, Kapata, Māno, and Jāwa, gold being found both in clay thole and quartz. At the range Mushinga, to the N.N.W., the rock was so soft that the women pounded it in wooden mortars previous to washing. Round to the west, the Portuguese spoke of a rich station, called Dambarari, on the river Panyamē, near Zumbo. Farther west was the now unknown kingdom of Atūtua, famous for its gold; and then, coming round toward the south and east, were the gold-washings of the Mashona, or Bazizulu. And still more east the yet richer district of Manica, the supposed Ophir, the gold dust of which seen by the doctor was as large as grains of wheat. A pair of compasses with one leg placed at Tette, and the other extended to three and a half degrees, brought round from the north-east of Tette, to west, to south, and to south-east, would touch most of the gold country, the richest parts being nearest the circumference, while a valuable coal-field near, almost on the fertile banks of the Zambesi, lies in its centre.

Major Secard, the kind-hearted commandant of Tette, presented Dr. Livingstone with a golden rosary, the work of an instructed native, and specimens of native

gold and coal, which are now in the Geological Museum at Jermyn Street, London. When I was myself on the Zambesi, in 1858, I saw several of the slaves, or rather serfs, of Major Secard, working very cleverly in native gold. A pan of charcoal, a few crucibles of various sizes, a couple of feet of a musket barrel for a blowpipe, a plate of steel or iron pierced with holes for wire-drawing, and a few rough-looking hammers, pincers, etc., composed the apparatus with which, squatting on the ground under the shelter of a rude straw hut, they turned out really very creditable specimens of rings, chains, crosses, and other ornaments. And a Portuguese gentleman of whom, by Dr. Livingstone's desire, I had painted a portrait, presented me with an exceedingly neat watch-guard of fine wire, worked up exactly in the manner of the Trichinopoly chain. This, as a specimen of native material and work, I valued very highly, but it was unfortunately stolen from the officer who kindly undertook to convey it to England for me.

I may also mention that in 1849, when I was in the country of the Dutch African emigrants, north of the Vaal River—now the Trans Vaal, or South African Republic—I frequently heard of native chiefs to the north, in whose country gold was found in considerable quantities. I do not remember at this moment that I actually saw any specimens; and it would have been imprudent to evince much curiosity on the subject, as the Boers did not engage in search for it, and rather wished to keep its existence a secret, lest English adventurers should be tempted into their adopted country, and they themselves again be brought into subjection to the British Government. Nevertheless, with the aid of my friend and fellow-traveller, Joseph Macabe, I constructed a map of the Trans Vaal country and the Limpopo River, so far as he had explored it; and this, incorporated by Mr. H. Hall in his map of South Africa, approximated so nearly to correctness, that though additions have been made, no alteration that I am aware of has been yet found necessary. I mention this chiefly because it is in the country bounded by the Limpopo on the south and the Zambesi on the north, that the gold-fields which our countrymen are now successfully working out are situated; and before relating the circumstances that have led to their occupation, I will so far trespass on the patience of the reader as to quote from the annual address of Sir Roderick Impey Murchison, the president of the Royal Geographical Society, a few remarks bearing on this subject:—

“The colony of Natal seems destined to rise to considerable importance if the coal—which is plentiful in its north-western parts—should be rendered useful by the construction of railroads to convey it to Pieter-Maritzburg and Durban. I have reason to think this coal is of palæozoic times, and of the best quality. I have recommended her Majesty's Government to send out a mining engineer to report upon it, for the capability of supplying our steamships with fuel on the coast of Africa would be an immense advantage. The colony has also been much excited by the discovery of gold in and near Moselekatse's country, to the north-west of the Trans Vaal territory, and hitherto noted chiefly for its ivory and ostrich feathers.

“M. Carl Mauch, a young German geologist, leaving Trieste in 1863, has been travelling in South Africa since 1865, and becoming acquainted with Mr. Hartley, an elephant hunter, who has traversed all the highlands which form the broad-backed watershed between the Zambesi on the north and the Limpopo on the south, and who informed him of the existence in these high and rocky lands of the relics of ancient metalliferous excavations, M. Carl

Mauch explored them in two localities, one in south latitude $20^{\circ} 40'$, on an affluent of the Limpopo, and the other on an affluent of the Zambesi, about forty miles south of Tette. He discovered rich auriferous white quartz rocks, embayed in a variety of ancient crystalline rocks, whether hard slates (probably Silurian) or various igneous rocks, including a great predominance of granite and diorite. The loftiest part of this elevated tract being 7,000 feet above the sea, in south latitude $19^{\circ} 50'$, and east longitude $28^{\circ} 35'$, presents in parts great accumulations of these broken masses of granite, to which my illustrious friend, the late Leopold von Buch, assigned the appropriate name of Felsen Meer, or a sea of rocks. Many travellers have considered these to be boulders, whereas they are, in fact, the results of decomposition *in situ* as seen in many granite countries.

"The auriferous quartz rock which, in places, is still seen to rise a few feet above the surface, has, where rich in gold, been quarried down in open trenches to the depth of six feet or more. The works seem to have been abandoned from the influx of water, and in one spot remains of smelting operations, with slag scoriae and relics of lead ore, were observed.

"Of the auriferous territories, the northernmost, on a tributary of the Zambesi, is the most sterile, and this explains why the Portuguese never made much of it, only small quantities being washed down by the rivers south of Tette.

"On the other hand, the rich tract on the river Thuti or Tuti, an affluent of the Limpopo, and the proof of ancient works there, favours the suggestion I offer, that the Ophir of Solomon was near the mouth of that great stream. The tract is precisely where, as a geologist, I should have expected to find gold, *i.e.*, in the elevated ancient slaty quartzose rocks (probably Silurian), with granite and greenstone, which form the mountains in south latitude 21° , that form the watershed of some of the tributaries of the Zambesi and Limpopo.

"This discovery leads me to consider the suggestion made two years ago by Mr. George Thompson, that the Ophir of Solomon might, after all, have been on the country of the Limpopo—in support of which he quoted the current reports of the existence on that stream of the ruins of an ancient city. It was this belief that led the Portuguese to send expeditions to south-east Africa, where the relics of churches built by the Jesuit fathers may still be traced; but they were not successful, having failed to search far enough south from the Zambesi.

"It was at one time thought that Ophir was in Arabia; but this is not likely, as from the structure of the country the traders from Tarshish could find no gold on the shores of the Red Sea. The African rivers north of the equator bring down no gold dust, neither is the country between Zanzibar and the Zambesi auriferous. It is only on reaching to the south that auriferous rocks occur in the interior, from which the waters flow to the Zambesi on the north, but chiefly to the Limpopo on the south. I venture therefore to say that this was in all probability the source which supplied the ancient Ophir. It was rich in ivory; and if Hebrew scholars think that the Biblical writers might not clearly distinguish between the feathers of the peacock and the ostrich, another difficulty vanishes. It is also rich in ebony, and these may have been the almug-trees of which Solomon made pillars for the house of the Lord—sandal-wood, as suggested by the late Mr. Crawford, being too small for that purpose."

With regard to the discovery of the gold-fields, I can only say briefly that I have long known of Mr. Hartley

as a most enterprising trader and elephant hunter, and I can well believe a story which I have recently heard of him, as being characteristic, not only of himself, but as showing the sort of man needed to make his way among, and win the confidence of, the wild tribes of the interior. Hartley, with some other hunters, mostly Dutch, had made his way to the residence of the despotic chieftain Moselekatse, who, not content with the presents they had selected for him, determined to possess himself of everything, even to their cattle, their waggons, and their guns. The rest submitted to be robbed, but Hartley stoutly refused; he had given all he could spare, but he could not shoot elephants without his gun, and he would not part with it. The chief felt a sentiment of respect for a man with spirit enough to dispute his will, and lent Hartley the waggon he had just accepted from him, upon his promise to return it after he had collected his ivory and carried it to Natal. Of course Hartley kept his word. He bought new waggons with the proceeds of the ivory, returned the original waggon to Moselekatse, and became the privileged hunter in the tyrant's domains.

Hartley informed Carl Mauch of the existence in those rocky highlands of the relics of ancient metalliferous excavations, and the ardent young geologist accompanying him explored the localities; and though the suspicions of the natives, aroused by his strange and to them inexplicable proceedings, checked him considerably, he obtained and sent home specimens sufficient to establish beyond a doubt the richness of the veins. Some of these, in small grains, embedded in quartz, and others in alluvial soil, were shown us at the rooms of the Royal Geographical Society, by J. J. Pratt, Esq., the consul for the South African Republic.

The Cape papers of April 16th contain the record of the starting of the first party of gold diggers, under the leadership of Mr. Hartley and Captain Black; and from others of July 16th and later dates, we learn that they are working with every prospect of success, not less than sixty or seventy men being at work between the Tatin and the Ramakhoban. They had left off washing in the alluvial ground; but, attracted by the richness of the gold veins in the surface quartz, had commenced blasting the reefs, the vein growing richer as they advanced, being sometimes more than an inch broad, and small pieces of quartz containing from £1 to £3 worth of pure gold. One specimen received at Port Elizabeth was valued at the rate of £12,000 per ton.

The public at home will be glad to learn that the gold-diggers are at present on good terms with the native chief, Matjen, whose independence it appears has been acknowledged by Moselekatse. They are paying the chief £1 per man for six months' licence to dig, and one of the Europeans is acting as his agent to collect his dues; and, of course, they have to purchase from him or his people such grain or other provisions as the country affords, and to hire natives as servants or assistants in various capacities. But Matjen has sense enough to perceive that complications may arise, and that he is not competent to the task of governing an already large and still increasing community of Europeans; and therefore, with the concurrence of his missionary, he has written to the governor of Cape Colony, requesting him to take measures for the government of his own people. I sincerely trust that such equitable measures will be taken, as while they secure to our countrymen the due reward of their own labour, will also guarantee the chief against any loss of dignity among his own people, and will make the contact with industrious Englishmen a benefit and a blessing to the natives.

I find I have left myself but little room to speak of the other source of wealth, the finding of diamonds on the borders of the Cape Colony. The Orange River has long been looked on as a probable place in which to search for jewels; but remote farmers are not generally competent judges of the value of the stones picked up, and some, which were valuable diamonds, were lost through carelessness, while one was smashed to fragments upon an anvil, because a diamond was supposed to be the *hardest* of all known substances, whereas, in reality, it is also nearly the most brittle, and it would be dangerous to let a valuable diamond fall upon the floor. At length one was sent down to my friend Dr. Atherstone, in Grahamstown, and he decided on forwarding it to the Cape, whence, after being valued, it was sent to the Paris Exhibition. Much anxiety was manifested by the finders of this and subsequent jewels, as to the right of the Crown to all minerals and precious stones; but the governor, Sir Philip Wodehouse, very properly and liberally took upon himself to waive that right for the present, thus giving the finders the full advantage of their good fortune.

I believe six well-authenticated diamonds have been found, one of them by a Hottentot, near the missionary station of Pneil, about the junction of the Vaal and Orange Rivers. He showed it to his missionary, who sent it to Dr. Atherstone. He pronounced it a diamond of great value, worth perhaps £500 or more, and received instructions to send it to the care of the colonial secretary in Cape Town, to be held or disposed of for the benefit of the finder. I have just seen two of the diamonds, which have been bought by Sir P. Wodehouse and are in the possession of Messrs. Garrard, jewellers to her Majesty, in the Haymarket. One weighs $21\frac{1}{2}$ carats, and the other $8\frac{1}{2}$ carats. The smaller one would be worth £200. The other, if placed on a half-sovereign, would not project over its rim, but is a trifle heavier, and a thousand times more valuable, than that coin. The fact of six or seven such diamonds having been found almost in one locality, in so limited a time, is remarkable, Brazil producing one of such value only in about twelve months. And Mr. Tennant directs the attention of searchers to small stones and dust which are worth £50 per ounce, pointing out that if diamond dust could be gathered in such abundance as to reduce its price to £5 per oz., many substances which cannot now be profitably worked would become useful.

THE MIDNIGHT SKY AT LONDON.

DECEMBER.

BY EDWIN DUNEIN, F.R.A.S., ROYAL OBSERVATORY.

THE midnight sky is perhaps more brilliant in December than in any other month of the year at the same hour. Some of the finest constellations which adorn the heavens south of the zenith are now in conspicuous positions. Among these, Aries and Taurus, west of the meridian, Auriga, Orion, and Canis Major, almost due south, or on the meridian, and Canis Minor, Gemini, and Leo, in the east, may be specially mentioned. Adding to the above the circumpolar constellations north of the zenith, Ursa Major, Ursa Minor, Draco, Cassiopeia, and others, we have at one view the majority of the principal stars visible in the northern hemisphere. Any one stationed so as to command the whole of the sky above the horizon, can at this time perceive the following first-class stars:—Aldebaran, Betelgeuse, Rigel, Delta, Epsilon, and Zeta Orionis (the three stars in the belt of Orion), Capella, Sirius, Procyon, Castor,

Pollux, Regulus, Denebola, Alpherat, Vega, Deneb, and the stars composing the well-known groups of Ursa Major, Perseus, and Cassiopeia.

Beginning as usual with the south-western quarter of the sky, or the right-hand side of the lower diagram, the observer is requested to look overhead, when he will notice a very bright star, Capella, about eight degrees from the zenith. Due west of Capella, the Perseus group can be distinguished in the Milky Way; its principal star, Alpha Persei, will be found inserted in the upper diagram, while Algol is in the lower, the imaginary line separating the two views passing between these stars. Alpha and Beta Arietis, the chief stars in Aries, are below Perseus towards the west; they can be identified in the diagram near the right-hand upper corner. Between Aries and the western horizon, the space is wholly occupied by Pisces. Taking Capella as a zero-point, and looking towards the south-west, we pass over the thickly-studded constellation Taurus, the position of which is easily recognised by the Pleiades group, and by Aldebaran, with its companion stars the Hyades. Below Taurus and Aries, in this direction, Eridanus and Cetus extend to the horizon. The stars immediately below Aries belong to Cetus, and those near the south-west horizon to Eridanus.

From the zenith to the horizon, along the plane of the meridian, we pass over Auriga, which now occupies the sky directly overhead. Its principal stars, Capella and Beta Aurigæ, are near the zenith, the latter being on the meridian. Below Auriga, the two signs of the zodiac Taurus and Gemini join each other, and beneath these the brilliant assemblage of stars composing the Orion group is at its greatest elevation. Directly below Orion, the small constellation Lepus can be identified by some moderately bright stars; and south of Lepus, very near to the horizon, a few stars in Columba can be seen on clear nights when the south horizon is free from haze. The bright star about half-way between the zenith and the upper stars in the quadrilateral of Orion is Beta Tauri, or Nath, the second star in Taurus. We have given on another page a separate diagram of Orion on a larger scale than that adopted in the sky views, and have also inserted the names of all the principal stars in that favourite constellation. For this reason it will be sufficient, therefore, to state here that the north-western star of the quadrilateral is Bellatrix, or Gamma Orionis; that in the north-east is Betelgeuse, or Alpha Orionis; that in the south-west corner is Rigel, or Beta Orionis; and that in the south-east is Kappa Orionis. The most westerly of the three stars in the belt is Mintaka, or Delta Orionis; the central one is Anilam, or Epsilon Orionis; and the most easterly star is Zeta Orionis, or Alnitak.

Some very prominent stars are contained in the south-eastern quarter of the sky, but still a considerable portion of this division of the heavens is comparatively bare, especially east of Orion and Canis Major. Sirius, the most conspicuous of all the fixed stars, and several other objects in Canis Major, are now visible in the S.S.E.; some of them are, however, near the horizon. At some distance east of Betelgeuse, after passing across the Milky Way, Procyon can be detected as much from its intrinsic lustre, as by its forming, with Betelgeuse and Sirius, the most splendid stellar equilateral triangle in the heavens. North of Procyon, the twin stars Castor and Pollux can be recognised at a glance. The tolerably bright objects between Pollux and Orion all belong to Gemini. Looking due east all the stars in Leo are distinctly visible; many of them are, however, very near the eastern horizon. In the left-