



The Indians are unable to give the stones so lively a polish as we give them in EUROPE; and this, I believe, is due to the fact that their wheel does not run so smoothly as ours. For, being made of steel, in order to grind it on the emery, of which it has need every twenty-four hours, it has to be taken off the tree, and it cannot be replaced so as to run as evenly as it should do. If they possessed the iron wheel as we do, for which one does not require emery but the file, it not being necessary to remove it from the tree in order to file it, they could give the stones a better polish than they do.

I have stated that it is necessary to rub the wheel with emery or to file it every twenty-four hours, and it is desirable that it should be done every twelve hours if the workman is not lazy. For when the stone has run a certain time the part of the wheel where it has pressed becomes polished like a mirror, and if the place be not roughened by emery or the file, the powder does not stick to it. When it remains one does more work in one hour than in two when there is not any on the wheel.

Although a particular diamond may be by nature hard, having, so to speak, a kind of knot,¹ such as is seen in wood, the Indian diamond-cutters would not hesitate to cut such a stone, although our diamond-cutters in Europe would experience great difficulty in

¹ Certain points of a stone are often found to be exceptionally hard, as, for instance, when a facet is cut on the angle where two cleavage planes meet, or, so to speak, across the grain of the stone. (See p. 57 n.) A difficulty of this nature is mentioned by Messrs. Garrard as having been experienced when the *Koh-i-nur* was recut. (See Professor Tennant's lecture *On Gems and Precious Stones*, Society of Arts, 1852, p. 86.)



doing so, and as a general rule would be unwilling to undertake it; but one pays the Indians something extra for their trouble.

I come to the government at the mines. Business is conducted with freedom and fidelity. Two per cent on all purchases is paid to the King, who receives also a royalty from the merchants for permission to mine. These merchants having prospected with the aid of the miners, who know the spots where the diamonds are to be found, take an area of about 200 paces in circumference, where they employ fifty miners, and sometimes a hundred if they wish the work to proceed rapidly. From the day that they commence mining till they finish the merchants pay a duty of 2 *pagodas*¹ *per diem* for fifty men, and 4 *pagodas* when they employ a hundred men.

These poor people only earn 3 *pagodas*² per annum, although they must be men who thoroughly understand their work. As their wages are so small they do not manifest any scruple, when searching in the sand, about concealing a stone for themselves when they can, and being naked, save for a small cloth which covers their private parts, they adroitly contrive to swallow it.³ The chief of all the merchants who embark in mining

¹ Say 16s.

² Equal to about one rupee or 27 pence per mensem, or less than a penny a day. In some remote parts of India labour can still be obtained at about that rate, or from 3 *pice* to an *anna*, i.e. $1\frac{1}{8}$ d. to $1\frac{1}{2}$ d.

³ Owing to the belief which exists in India that diamond dust is a poison, it is thought by some persons that native miners would not swallow diamonds. I have seen several authentic records of their having done so. Garcia de Orta, for instance, refers to cases as evidence that the diamond is not poisonous. Once a diamond had been smuggled away from the mines, its possessor was not only safe, but if it was of large size, and he offered it to either the King of Golconda or the King of Bijapur, he had every



one day pointed out to me one of these miners, who had worked for him for many years, and who had stolen a stone from him which weighed a *mangelin*, i.e. nearly two of our carats.¹ He had concealed it in the corner of his eye, but it was taken from him as soon as the theft was discovered. In order to prevent these knavish tricks there are always twelve to fifteen watchmen employed by the merchants to see that they are not defrauded of anything.

If by chance a stone is found which weighs above 7 to 8 *mangelins*, it is taken to the master of the mine, who by way of recompence gives a *sarpo*,² which is a piece of cotton cloth to make a turban, of the value of 25 to 30 *sols*,³ and generally with it half a *pagoda* in silver, or otherwise a *pagoda*,⁴ when rice and a plate of sugar are not given.

The merchants who go to the mine to buy, remain in their dwellings, and every morning at from 10 to 11 o'clock the masters of the miners, after they have dined (for the *Banians* never leave their houses till they have washed and eaten), take their diamonds to show to them. If the parcels are large, and contain many stones of the value of from 2000 up to 15,000 or 16,000 *écus*,⁵ they leave them, confiding them to the foreign merchant for seven or eight days or more in order that he may examine them with care. When the

chance of selling it well, and being presented with a robe of honour. (See the *Account of the Diamonds, etc.*, presented to the Royal Society by the Earl Marshal of England, *Phil. Trans.*, vol. xii, 1677, p. 907.)

¹ See Appendix, vol. i.

² This is *Sirpáo*, or more properly *Sar-o-pá*, a complete dress of honour, from head to foot. (See Yule in *Hedge's Diary*, vol. i, p. 136 n.)

³ 1s. 10½d. to 2s. 3d.

⁴ About 8s., if new *pagodas*.

⁵ £450 to £3600.



stones have been examined, and are returned by the merchant, if they suit him he should conclude the transaction at once, otherwise the owner of the stones wraps them in a corner of his waistband, his turban, or his shirt, and departs, so that one never sees the same stones again, or at least they are mixed with others, should the miner return in order to bring another parcel. When the transaction is concluded the purchaser gives an order for payment on the *Shroff* or person who issues and receives bills of exchange. If you have agreed to pay in three or four days, and delay longer, you have to pay interest at the rate of $1\frac{1}{2}$ per cent per month. Most frequently, when the merchant is known to be solvent, a bill of exchange on AGRA, GOLCONDA, or BIJAPUR is preferred, but more especially one upon SURAT, where, as it is the most famous port in INDIA, the dealers desire to purchase the commodities which come in vessels from foreign countries, and which are suitable for their wants.

It is very pleasant to see the young children of these merchants and of other people of the country, from the age of ten years up to the age of fifteen or sixteen, assemble every morning under a large tree which is in the square of the town. Each has his diamond weights in a little bag suspended on one side, and on the other a purse attached to his waistband, which contains as much as 500 or 600 gold *pagodas*. They seat themselves there awaiting the arrival of any one who wishes to sell diamonds, either of the place itself or of some other mine. When any one brings a stone he places it in the hands of the eldest of these children, who is, so to speak, the chief of the band; he looks at it and places it in the hand of him who sits next. Thus it



goes from hand to hand till it returns to the first one without any one saying a word.

He then asks the price of the article, in order to purchase, if possible; and if by chance he buys at too high a price he is responsible. In the evening these children count up what they have purchased, and after examining the stones separate them according to their water, weight, and cleanness. Next they price each as they expect to dispose of them to strangers, and by this they see how far the value exceeds the cost of purchase. They then carry them to the great merchants who always have a number of parcels to match, and all the profit is divided among the children, save only that their chief receives a quarter per cent more than the others.

Young as they are, they know the value of all the stones so well that if one of them has bought a stone and is willing to lose a half per cent, another gives him cash for it. Seldom can you show them a parcel of stones, containing a dozen, where they will not discover among them four or five having some flaw or some point or some defect at the angles.

It remains to be said that these Indians have much regard for strangers, and especially for those whom they call *Franks*.¹ Immediately on my arrival at the mine I went to call upon the Governor of the place, who also rules the Province on behalf of the King of BIJAPUR. He is a MUHAMMADAN, who having embraced me, assured me I was welcome—not doubting that I had brought gold with me (for at all the mines of GOL-

¹ *Fringuis* for *Franguis* in the original, for Franks, i.e. Europeans. (See vol. i, p. 6.)



CONDA and BIJAPUR they speak but of new *pagodas*,¹ which are golden coins), and that I had only to place it in my lodging, where it would be safe, and he would be responsible for all I had. Besides the servants whom I brought with me he allotted me four others, and commanded them to keep a watch on my gold by day and night, and to obey all my orders. Shortly after I had left him he sent to recall me, and on my return: "I sent to seek you," he said, "in order to assure you again that you have nothing to fear—eat, drink, and sleep, and have a care for your health. I have forgotten to tell you to be careful not to defraud the King, to whom 2 per cent is due on all your purchases. Do not attempt," he continued, "to do as some Muhammadans did who came to the mine, and combined with the merchants and some brokers to withhold the royalties of the King—saying that they had only purchased to the value of 10,000 *pagodas*, while they had invested more than 50,000." I then commenced to purchase, and saw that there was a sufficiently large profit to be made, all being 20 per cent cheaper than at GOLCONDA, in addition to which, one sometimes, by chance, met with large stones.

One day towards evening a *Banian*, poorly clothed, having indeed only a band round his body and a miserable handkerchief on his head, came towards me politely and seated himself by my side. In this country one pays no attention to dress, and a person who has but a miserable ell of calico about his loins may sometimes have a good parcel of diamonds concealed. I, on my part, treated the *Banian* with civility, and after

¹ They were worth about 8s., more exactly 3½ rupees. (See vol. i, p. 413.)



he had been for some time seated by me he asked me through my interpreter¹ if I wished to buy some rubies. The interpreter told him to show them to me, upon which he drew a number of small rags from his waistband, in which he had about a score of rings mounted with rubies. After I had examined them I said that they were too small for me and that I sought large stones. Nevertheless, remembering that I had been asked by a lady at Ispahan to bring her a ruby ring of the value of about 100 *écus*, I bought one of his rings which cost me nearly 400 *francs*. I knew well that he did not value it at more than 300 *francs*, but willingly risked the additional 100 *francs* in the belief that he had not sought me to sell the rubies only, and because I understood from his manner that he desired to be alone with me and my interpreter in order to show me something better. As the time of prayer of the MUHAMMADANS approached, three of the servants appointed by the Governor left, and the fourth remaining to wait upon me, I found an excuse for getting rid of him by sending him to buy bread, where he remained a sufficiently long time. For all the people of this country being idolaters, content themselves with rice, not eating bread, and when a person wishes for it it is necessary to have it brought from a distance, from the fortress of the King of BIJAPUR, where the MUHAMMADANS reside. The *Banian*, seeing that he was alone with me and the interpreter, after having, with a good deal of mystery, removed his headdress, untwisted his locks, which, according to the

¹ From this and other similar references we learn that Tavernier did not acquire a knowledge of the native languages. The fact is indeed referred to contemptuously by some of his critics, especially Chardin.



usual custom, were bound round his head. Then I observed a small rag appearing amongst these locks, in which there was concealed a diamond, weighing $48\frac{1}{2}$ of our carats, of beautiful water and of *cabuchon* shape, three-quarters of the stone clear, save for a small flaw which was on one side and appeared to penetrate some distance into the stone. The remaining quarter was full of flaws and red spots.

While I examined the stone, the *Banian*, seeing the attention which I gave to it, said, "Do not trouble yourself now, you will see it to-morrow morning at your leisure when you are alone. When a fourth of the day has passed," it is thus that they speak,¹ "you will find me outside the town, and if you wish for the stone you will bring the price of it with you," and he then stated the amount he wanted for it. For it should be stated *en passant* that after this fourth of the day the *Banians*, both male and female, disappear into the city or town where they dwell, both for the purpose of satisfying the ordinary necessities of nature and for the purpose of bathing, as well as for the prayers which their priests require them to repeat. The *Banian* having named this hour—because he did not wish any one to see us together—I did not fail to go in search of him, and carried with me the price he had asked, less by 200 *pagodas*, which I kept apart, in reserve. But in the end, after we had bargained for a short time, I gave him 100 *pagodas* extra. On my return to SURAT I sold the stone to a Dutch captain, from which transaction I earned a fair profit.

Three days after I had bought this stone a

¹ The day is divided into four *pahars* which terminate at 9 A.M., 12 M., 3 P.M. and 6 P.M.



messenger arrived from GOLCONDA who had been sent by an Apothecary, named BoËTE, whom I had left at GOLCONDA to receive and take care of a part of my money, and in the event of the *Shroff* paying in rupees, he was to change them into golden *pagodas*. The day following that upon which he had received payment, he was seized by so serious a disorder in the stomach that he died in a few days. By the letter which he wrote to me he informed me of his sickness, and that he had received my money, which was all in my chamber in sealed bags; but, as he did not believe that he would survive two days, he exhorted me to hasten my return, because he did not think that my money would be safe in the hands of the servants whom I had left with him. Immediately on receipt of this letter I waited on the Governor in order to take leave of him, at which he was astonished, and inquired if I had expended all my money. I replied that I had not spent half of it, and that I had still upwards of 20,000 *pagodas*.¹ He then said that if I wished he would afford me an opportunity of investing it, and that I should certainly not lose upon what he would enable me to buy. He further asked if I was willing to show him my purchases, although he was not ignorant of their extent, since those who sold were obliged to make a return of all to him, on account of the charge of 2 per cent duty which is due to the King by those who buy. I showed him then what I had bought, and told him what they had cost me. This agreed with the book of the *Banian* who received the King's dues.

¹ *I.e.* about £8000, which shows the extent of our author's transactions. At the same time we know that he bought largely on commission for the Dutch officials.



At the same time I paid him the 2 per cent for the King's dues, having received which he remarked that he perceived that the *Franks* were persons of good faith. He was the more persuaded of this, however, when, drawing forth the stone of $48\frac{1}{2}$ carats, I said, "Sir, this is not in the *Banian's* book, and there is no one in the town who knows that I have bought it, nor would you yourself had I not told you. I do not wish to defraud the King of his rights—here is what is due to him on account of the price paid by me for this stone."¹ The Governor appeared altogether surprised and much edified by my proceeding; he praised me much, and said that this was an action worthy of an honest man, and that there was not another merchant in the country, whether Muhammadan or Hindu, who would act in the same manner if he believed that no one was aware of what he had purchased. Upon this he summoned the richest merchants of the place, and having told them the facts, ordered them to bring with them the best stones they possessed. This was done by three or four of them, and thus I expended my 20,000 *pagodas* in one or two hours. The transaction having been completed and the money paid, he told the merchants that as they had dealings with an honest man they ought to present me with a souvenir. This they did with a good grace, giving me a diamond worth nearly 100 *écus*.² As for the Governor himself, he gave me a turban and waistband.

I have to record a rather singular and curious account of the manner in which the Indians, whether

¹ Unlike his usual habit of giving prices, Tavernier carefully omits all mention of what he paid for this stone.

² £22 : 10s.



they are idolaters or Muhammadans, make their sales of all kinds of commodities. All passes in complete silence and without any one speaking.¹ The seller and the buyer are seated facing one another, like two tailors, and one of the two opening his waistband the seller takes the right hand of the buyer and covers his own with the waistband, under which, in the presence of many other merchants, who occupy themselves sometimes in the same manner, the sale is accomplished secretly without any one having cognisance of it. For the seller and buyer talk neither by means of their lips nor their eyes, but only by the hand, which they manage to do in the following manner :—When the seller takes the whole hand of the buyer that means 1000, and as many times as he presses it so many thousands of *pagodas* or rupees, according to the coin which may be in question. When he takes only five fingers that means 500, and when he takes only one it means 100. In taking only the half up to the middle joint, 50 is meant, and the end of the finger up to the first signifies 10. This is the whole of the mystery employed by the Indians in their sales, and it often happens that in the same place, where there are many people, a single parcel will change hands five or six times without those present knowing for how much it has been sold on each occasion. As for the weight of the stones, one need not be deceived if he does not buy in secret. For when one buys them in public there is a man specially employed by the King to weigh diamonds,

¹ This system of selling by means of secret signs has often been described by Indian travellers. For a recent account of it reference may be made to the *St. James' Gazette*, January 20, 1887; and for early notices see *Anglo-Indian Glossary*, Art. "Sofala," p. 645.



who receives no fees from private persons. When he names the weight, both buyer and seller accept his statement, since he has no interest in favouring either party.

Having completed my business at the mine, the Governor gave me six horsemen, in order that I might traverse, with greater security, the tract under his authority, which extends up to a river¹ separating the Kingdom of BIJAPUR from that of GOLCONDA. The transit of this river is very difficult, because it is wide, deep, and rapid, and there is neither bridge nor boat. In order to cross it the same contrivances are used as those of which I have elsewhere spoken for the passage of certain Indian rivers, alike for men as for their goods, carriages, cattle, and horses.

A round vessel of 10 or 12 feet in diameter made of branches of osier, like our hampers, and covered outside with ox hides, serves in place of a boat,² and I have described in the same place how the passengers adjust themselves. Good boats or a bridge over this river might be provided, but the Kings of GOLCONDA and BIJAPUR do not allow them, because the river serves to separate the two Kingdoms.

Every evening the boatmen on both banks are obliged to report to the two sub-governors, who reside on either side, at about a quarter of a league from the river, an exact statement of the people, beasts of burden, and merchandise which have crossed during the day.

¹ *I.e.* the Kistná with its tributary the Bhimá which separated the ancient Kingdoms.

² Coracles (see vol. i, pp. 294 and 299). Tavernier is probably not correct in saying that they were made of osiers or willow; more probably they were made of bamboo.

When I arrived at GOLCONDA, three days had elapsed since the death of BoËTE, the apothecary, and the room where I had left him had been sealed with two seals—one being of the *Kāzi*, who corresponds to the Chief Justice, and the other of the *Sháh-Bandar*, who is the Provost of the merchants. An officer of justice watched the door of the chamber together with the servants whom I had left with the defunct. Immediately on my arrival the fact was announced to the *Kāzi* and the *Sháh-Bandar*, and forthwith they sent to seek for me.

After I had saluted them, the *Kāzi* asked me whether the money which was in the chamber of the defunct was mine, and how I could prove it. I said I had not any better proof to give him than the letters of exchange which I had given to the *Shroff*, and that since my departure he had by my orders paid the sum to the defunct; that I had instructed the latter in case the *Shroff* paid in silver to change it into golden *pagodas*, and forward them to me. Upon this reply which I made to them, they sent to call the two *Shroffs* who had paid my bills, to know if it was true, and as they averred that it was, the *Kāzi* forthwith ordered his lieutenant to go and open the door of the room, and see if the seals were intact on all the bags. He did not leave till he had my assurance that I had found the full sum, and nothing was wanting.

I returned with him to make the same declaration to the *Kāzi* and the *Sháh Bandar*, and to thank them for their trouble, and it ended by my signing a document which they had written in Persian, in which I testified my satisfaction.

The lieutenant told me that I must pay the



charges of the burial of BoËTE, and those due to the persons who had placed the seals, as well as those of the officer who had kept guard at the door of the chamber. These all amounted to but 9 rupees, or $4\frac{1}{2}$ *écus* of our money.¹ One would not have got off so easily in most places in EUROPE.

¹ *I.e.* £1:0:3.



CHAPTER XVI

Journey of the Author to the other Mines, and concerning the method of searching for Diamonds.

AT seven days' journey eastwards from GOLCONDA there is another diamond mine, called GANI in the language of the country, and COLOUR in the Persian tongue.¹

¹ This mine has been identified in the *Economic Geology of India*, by the routes in vol. i, p. 173, and vol. ii, p. 94, with Kollur on the Kistná, where, according to a MS. map by Col. Mackenzie, there was a mine in 1798. The word *Gani* is equivalent to the Persian *Kán-i*, signifying "mine of." It is found in use by writers of the present century in connection with another mine, namely *Gani-Partiál*. It is the title for this mine most commonly used in works on mineralogy and precious stones, sometimes considerably modified in spelling, as *Garee*, etc. But it cannot be correctly used as the *name* of the mine where the Great Mogul or any other diamond was found. The date assigned to the discovery of this mine by Tavernier, namely about the middle of the sixteenth century, is of no value any more than the period assigned for the discovery of the Ramulkota mine. One hundred years, the native estimate, means a long time, that is all.

Somewhere about the year 1622, William Methold, together with Sir Andreas Socory and Sir Adolf Thomason, visited from Masulipatam certain diamond mines, which the first-named describes as being situated "*at the foot of a great mountayne, not far from a river called Christena*," the mining town being 2 miles off, and distant 108 English miles, or 12 *Gentine* leagues (*gows*, or *gos*?) from Masulipatam. In all respects, save as regards the distance, the description of the mines and the methods of working correspond with Tavernier's account of *Coulour* or *Gani*, i.e. Kollur. The distance given by Tavernier is 36 coss, or 72 miles from Masulipatam—the true distance is about 100 miles.

In the *Histoire Generale des Voyages*, vol. xiii, p. 20, Methold is



It is close to a large town on the same river which I crossed when coming from the other mine,¹ and at a league and a half from the town there are high mountains which are in the form of a cross. The space which intervenes between the town and the mountains is a plain where the mine is situated and the diamonds are found. The nearer one searches towards the mountains the larger the stones which are found, but when one ascends too high nothing is found.²

It is only about 100 years since this mine was discovered, and it was by means of a poor man, who, digging a piece of ground where he purposed to sow millet, found a *point naïve*³ weighing nearly 25 carats. This kind of stone being unknown to him, and appearing to him something special, he carried it to GOLCONDA, and by good luck addressed himself to one who traded in diamonds. This trader having ascertained from the peasant the place where he had found the stone, was much surprised to see a 'diamond of such a weight,

misquoted as though he said the mines were but 2 leagues from Golconda, whereas he says 2 miles from the temporary town, containing 100,000 persons, which had grown up in connection with the mines. He says that they were closed for a time, in consequence of a demand made by the Mogul for a *vyse* (i.e. 3 lbs. English) of the finest diamonds. The farmer paid the King 300,000 *pagodas*, say £120,000, per annum for the mine, the King retaining all stones above 10 carats. This sum is possibly an exaggeration—*vide* Purchas's *Pilgrims*, 1626, vol. v, p. 1002. There is, as already stated, an account of the diamond mines of Golconda and Bijapur in the *Phil. Trans.*, vol. xii, No. 136, 1677. Ruins of houses, etc., and old mines are still to be seen at Kollur. (See *Kistna Manual*, pp. 170 and 244.)

¹ I.e. the Kistna, crossed on the route from Raolconda (i.e. Ramulkota) to Golconda (see p. 69).

² The probable explanation of this is that the diamond-bearing strata do not extend far up the slope.

³ This term was applied to natural octahedra and other modifications of the cube which the diamond assumes.



especially because, before that, the largest that had been seen did not exceed 10 or 12 carats.¹

The noise of this new discovery quickly spread abroad throughout all the country, and some persons of wealth in the town commenced to mine in this land, where they found, and where they still find, large stones in greater abundance than in any other mine.² There are found here at present, I say, a quantity of stones from 10 up to 40 carats, and sometimes indeed much larger; but among others the great diamond which weighed 900 carats before cutting, which MIR JUMLA presented to AURANGZEB,³ as I have elsewhere related, was obtained from the mine.

But if this mine of KOLLÚR is of importance on account of the number of large stones which are found there, it is a misfortune that, as a rule, these stones are not clear, and that their water contains indications

¹ This statement is quite incorrect, as will be seen in Appendix I.

² In the paper in the *Phil. Trans.*, which has just been referred to, the largest diamonds are said to have been obtained at the mine of Currure, *i.e.* Wajra Kurur in Bellary, where some of a *seise* (*seer*?) weight = 9 ounces troy, or $81\frac{1}{2}$ *pagodas*, were reported to have been discovered. This mine, though unknown to Tavernier, had been taken possession of by Mir Jumla about the year 1640? Probably there is some mistake in the weight.

In the same paper this Kollur mine is called Quolure, it is said to have been the first mine used in the Kingdom, but was then nearly exhausted. Many of the diamonds found there were well formed and pointed, and of good lively white water, others were yellow, brown, etc., and had a greenish transparent skin. The weights ranged from 6 to a mangelin up to 5 or 6, and even rarely 10, 15 or 20 mangelins each. In consequence of its exhaustion, the King permitted the mine at Melwillee, *i.e.* Mulavilly or Muléli, to be regularly worked in the year 1673.

³ This statement contains two mistakes. The stone was presented by Mir Jumla to Sháh Jahán, not to Aurangzeb, and in three other places Tavernier gives its weight as 900 *ratís* or upwards, not carats; the latter misprint has unfortunately often been quoted. (See Appendix I.)

of the quality of the soil where they are found. If the soil is marshy and humid, the stone tends to blackness; if it is reddish, it tends to red, and so with the other conditions, sometimes towards green, sometimes towards yellow, just as there is diversity of soil in the area between the town and the mountain. Upon the majority of these stones, after they are cut, there always appears a kind of grease which necessitates one always carrying a handkerchief in the hand in order to wipe them.

As regards the water of the stones, it is to be remarked that instead of, as in Europe, where we employ daylight for the examination of stones in the rough (*brutes*), and, so, carefully judge of their water and any flaws which they may contain, the Indians use the night; and in a hole which they excavate in a wall, one foot square, they place a lamp with a large wick, by the light of which they judge of the water and the cleanness of the stone, holding it between their fingers. The water which they term "celestial" is the worst of all, and it is impossible to ascertain whether it is present while the stone is in the rough. But little though it may be apparent on the mill, the never-failing test for correctly ascertaining the water is afforded by conveying the stone under a leafy tree, and in the green shadow one can easily detect if it is blue.

The first time I was at this mine there were close upon 60,000 persons who worked there, including men, women, and children, who are employed in diverse ways, the men in digging, the women and children in carrying earth, for they search for the stones at this mine in an altogether different manner from that practised at RAMULKOTA.



After the miners have selected the place where they desire to work, they smooth down another spot close by, and of equal or rather greater extent, around which they erect an enclosing wall of two feet in height.

At the base of this little wall they make openings, at every two feet, for the escape of the water, which they close till it is time for the water to be drawn off. This place being thus prepared, all who are about to engage in the search assemble, men, women, and children, together with their employer and a party of his relatives and friends. He brings with him a figure in stone of the god whom they worship, which being placed standing on the ground, each prostrates himself three times before it, their priest, however, offering up the prayer. This prayer being finished, he makes a particular kind of mark upon the forehead of each one with a paste composed of saffron and gum, in order that it may sustain seven or eight grains of rice, which he places upon it. Next, having washed their bodies with the water which each of them carries in a vessel, they place themselves in ranks to eat that which is presented at the feast given by their employer at the beginning of their work, in order to give them courage and induce them to acquit themselves faithfully. This feast merely consists of a portion of rice to each, which is distributed by the *Brahmin*, because every idolater can eat what is served to him by the hands of the priests. There are among them some so superstitious that they will not even eat what is prepared by their own wives, and prefer to cook for themselves.¹ The plate upon which the rice is placed is made of the

¹ This is, I believe, still true of some castes.



leaves of a tree attached together ; to some extent they resemble our walnut leaves.¹ To each there is also given about a quarter of a pound of melted butter in a little cup of copper, with some sugar.

The repast being finished, each commences to work, the men to excavate the earth, and the women and children to carry it to the place which has been prepared as I have above said. They excavate to 10, 12, or 14 feet in depth, but when they reach water there is nothing more to hope for. All the earth being carried to this place, men, women, and children raise the water with pitchers from the hole which they have excavated, and throw it upon the earth which they have placed there, in order to soften it, leaving it thus for one or two days, according to the tenacity of the clay, until it assumes the condition of soup. This being done, they open the holes which they made in the wall to let off the water, then they throw on more, so that all the slime may be removed, and nothing remain but sand. It is a kind of clay which requires to be washed two or three times. They then leave all to be dried by the sun, which is quickly effected on account of the great heat. They have a particular kind of basket made something like a winnowing fan, in which they place the earth, which they agitate as we do when winnowing grain. The fine part is blown away, and the coarse stuff which remains is subsequently replaced on the ground.

All the earth having been thus winnowed, they

¹ In Western Bengal these would be the leaves of the *Sál*, *Shorea robusta*, Gaertn, the giant creeper, *Bauhinia vahlii*, W. and A., or the *Dhák* or *Pulas*, *Butea frondosa* Roxb. I cannot say what species would be used in the region referred to by Tavernier.



spread it with a rake and make it as level as possible. They then all stand together on the earth, each with a large baton of wood like a huge pestle, half a foot wide at the base, and they pound the earth, going from one end to the other, always pounding each part two or three times; they then again place it in the baskets and winnow, as they did on the first occasion, after which they spread it out again and range themselves on one side to handle the earth and search for the diamonds, in which process they adopt the same method as at RAMULKOTA. Formerly, instead of using wooden pestles for pounding the earth, they pounded it with stones, and it was that method which produced so many flaws in the diamonds.

As for the royalties which are paid to the King, the annual wages to the miners for their work, and the presents which are given to them when they find any large stone which they carry to the master whom they serve, all are the same as at the RAMULKOTA mine.¹ No one hesitated formerly to purchase diamonds which had a green crust on the surface, because when cut they proved to be white and of very beautiful water.

About thirty or forty years ago a mine situated between KOLLUR and RAMULKOTA² was discovered, but the King ordered it to be closed on account of fraud, as I shall explain in a few words. Stones were found in it which had this green crust, beautiful and transparent, they were even more beautiful than the others, but when one attempted to grind them they broke in pieces.

¹ *Vide ante*, p. 59.

² I have elsewhere suggested (see *Economic Geology of India*, p. 16) that this mine was situated near Damārapād and Malawaram on the Kistna in Lat. 16° 35', Long. 79° 30', where old excavations are still to be seen.



Whenever they were ground by another stone of the same quality which had been found in the same mine they submitted to the grinding without breaking, but were unable to bear the wheel, upon which they immediately flew into pieces. It is on this account that one is careful not to buy those which have been ground in this way, through fear of their breaking, and it is, as I said, on account of the deceptions which have been practised with these stones that the King ordered the mine to be closed.¹

While the Messrs. FREMLIN and FRANCIS BRETON were Presidents at SURAT on behalf of the English Company, a Jew named EDWARD FERDINAND, a free merchant, that is to say not subject to any Company, combined with these two gentlemen to purchase a stone, a short time after the mine was discovered. This stone was clean and of good form, and weighed 42 carats.² EDWARD went to EUROPE, and Messrs. FREMLIN and BRETON placed the stone in his hands to sell to the best advantage, and render an account to them. On his arrival at LEGHORN³ he showed it to

¹ A little known but very important paper on the diamond mines of Golconda, of which twenty-three are named, and of Visapore, *i.e.* Bijapur, of which fifteen are named, is to be found in the *Phil. Trans.*, No. 136, June 25, 1677, vol. xii, p. 907. The anonymous author must have been in that part of India within ten or fifteen years of Tavernier's last visit. It is but quite recently that I found this paper, unfortunately too late to make the full use to which it might have been put in these footnotes. It contains names which have long puzzled me owing to the confused way in which they have been introduced into the literature of the subject. It has been referred to already on pp. 54 and 74, and will be quoted again in Appendix II.

² The extent to which investments in diamonds for themselves and their friends in England were made by English officials at a later period is very fully brought out in the letters recently published by Colonel Yule in his account of the Pitt diamond (See *Hedge's Diary*, *Hakluyt Society*).

³ Ligorne in the original.



some Jew friends, who offered him 25,000 *piastres*¹ for it. But as he asked 30,000 he was unable to let them have it, and took it to VENICE to get it cut. It was well cut, without any injury, but upon being put upon the wheel it was immediately broken into nine pieces. I myself was on one occasion deceived by one of these stones, which weighed 2 carats; it broke into small pieces on the wheel when it was only half finished.

¹ Say £5625.



CHAPTER XVII

*A continuation of the Author's Journeys to the
Diamond Mines*

I COME to the third mine, which is the most ancient of all, and is situated in the Kingdom of BENGAL. You may call it by the name of SOUMELPOUR,¹ which is a large town near to which the diamonds are found, or rather by the name KOEL, which is that of the river in the sand of which they are found. The country through which this river has its course belongs to a *Raja* who was formerly a tributary of the GREAT MOGUL, having withdrawn from his allegiance during the wars between SHÁH JAHÁN and JAHÁNGIR his father. Immediately on his coming to the throne

¹ Among a host of writers of this century, so far as I know, Karl Ritter (*Erdkunde Asien*) and Francis Buchanan (in Martin's *Eastern India*, vol. i, p. 535) alone suggested that this locality was not to be identified with another diamond locality, Sambalpur on the Mahánadi, in the Central Provinces. I have been able to show that it was situated in the District of Lohárdagá and subdivision of Palámau in Chutiá Nagpur, and that the *Gouel* river is identical with the Koel, which traverses that District. It joins the Sone not far from the fortress of Rohtás, and so its waters find their way northwards to the Ganges. It is probable that both Sambalpur and Soumelpour derive their names from the *Semul* tree (*Bombax*), and about the site which I assign to the latter there are the remains of an old town called Semah—Lat. 23° 35' N., and Long. 84° 21' E. As the available details regarding these long-forgotten mines are too long for a footnote, they will be found in an Appendix at the end of this volume.



SHÁH JAHÁN sent to demand tribute from this *Raja*, both for the present and the past; and the *Raja*, as his property was not sufficient to discharge the whole, quitted the country and fortified himself together with his subjects in the mountains. Upon the news of the refusal which the *Raja* first made, SHÁH JAHÁN, who did not know that he purposed to hide, but believed that he intended to defend himself, sent an army into his country, where he was persuaded that he would find an abundance of diamonds. It happened otherwise, however, for those who were sent into the country of the *Raja* found neither diamonds, inhabitants, nor food, the *Raja* having ordered all the grain which his subjects could not carry with them to be burnt, and this was so effectually done that the greater portion of SHÁH JAHÁN's army perished of famine. The final result of the matter was, that the *Raja* returned to his country on agreeing to pay a light annual tribute to the GREAT MOGUL.

The following is the route to be followed from AGRA to this mine :—

From AGRA to HALABAS (ALLAHÁBÁD) . . . 130 *coss*.

„ HALABAS to BANAROUS (BENARES) . . . 33 „

„ BANAROUS to SASERON (SASSERAM) . . . 4 „

From AGRA to SASSERAM¹ you travel eastwards,

¹ This route is also given in Book I, chap. viii, pp. 113 to 120, but the details are very different. In the first place Sasseram and the large town are here misplaced. The latter is probably the Gourmabad, *i.e.* the Khurmábád, of p. 120, but the distance, which there amounts to 27 *coss*, is here stated to be only 21 *coss*. The true distance is about 58 miles. After Khurmábád, not before it, Sasseram comes as the next stage, distant 4 *coss*, the true distance being 12 miles; but after it again the distance to Rohtás is understated at 4 *coss*, it being really about 24 miles. These discrepancies may be explained by the fact that Tavernier does not appear to have gone to Rohtás from Sasseram. If he visited



but between SASSERAM and the mine you turn to the south and come first to a large town—21 *cos*s. This town belongs to the *Raja* of whom I have just spoken, to whom the country belongs which is traversed by the river in which the diamonds are found.

After this town one reaches a fortress called ROHTÁS¹—4 *cos*s. It is one of the strongest places in ASIA, situated upon a mountain having six great bastions and twenty-seven pieces of cannon, with three trenches full of water where there are good fish. There is but a single path by which to ascend the mountain, where there is a plain of half a league or so in area, where corn and rice are cultivated. There are more than twenty springs which irrigate the soil, and all about the mountain from the base to the top there are precipices covered for the most part with forests. The *Rajas* ordinarily held this fortress with from 700 to 800 men, but it at present belongs to the GREAT MOGUL, who acquired it by the skill of that great Captain MIR JUMLA of whom I have so often had occasion to speak. The last *Raja* left three sons who betrayed each other; the eldest was poisoned, the second attached himself to the court of the GREAT MOGUL, who gave him the command of 4000 horse, and the youngest maintains his position in the country by paying tribute like his father. All the Kings of INDIA, successors of TAMERLANE, have besieged this place without being able to

it and the diamond mine, as is probable, he almost certainly did so from Patna, in which neighbourhood he was for some time in 1640 and again in 1665-6. (See Index.)

¹ Rodas in the original—Rohtásgarh, Lat. 24° 27' 30", Long. 83° 55' 50". (See Sir W. W. Hunter's *Statistical Account of Bengal*, vol. xii, pp. 209-212.) There are also detailed descriptions and plans in Montgomery Martin's *Eastern Asia*, vol. i, p. 432.



take it, and indeed two of these Kings died in the city of SASSERAM.

From the Fortress of ROHTÁS to SOUMELPOUR it is 30 *coss*.

SOUMELPOUR¹ is a large town with houses built of clay only, and thatched with the branches of the cocoa-nut tree.² These thirty *coss* traverse forests which are dangerous, because the thieves, who know that merchants do not visit the mine without carrying money, attack them sometimes for the purpose of murdering them.³ The *Raja* lives at half a *coss* distance from the town, and his dwelling is in tents placed on an eminence. The KOEL passes the fort, and it is in this river that the diamonds are found. It comes from the high mountains to the south and loses its name in the GANGES.⁴

This is the manner in which diamonds are sought for in this river. After the great rains are over, that is to say usually in the month of December, the diamond seekers await the conclusion of the month of January, when the river becomes low, because at that time, in many parts, it is not more than two feet deep, and much of the sand is left uncovered. Towards the

¹ This name is left in its original form in the text, as its identification with Semah, although most probable, has not been absolutely proved.

² Although the cocoa-nut has been observed nearly as far inland as this locality, I do not think there are any in that part of the country now. It is possible that the leaves of the Tal palm (*Borassus flabilliformis*, Linn.) are meant.

³ Descendants of the thieves belonging to the Dom tribe still roam about Palámau. Out of three occasions when my camp was robbed during seventeen years' travelling in India, two were in this district and the third not very far from its limits.

⁴ It joins the Sone, which flows into the Ganges. It is possible that Pliny's mention of the Ganges as yielding precious stones may be connected with this fact.



end of January or commencement of February, from the town of SOUMELPOUR and also from another town which is 20 *coss* higher up the same river, and from some small villages on the plain, about 8000 persons of both sexes and of all ages capable of working assemble.

Those who are expert know that the sand contains diamonds beneath, when they find small stones in it which resemble those we call "thunder stones."¹ They commence to search in the river at the town of SOUMELPOUR and proceed up-stream to the mountains where it takes its rise, which are situated about 50 *coss* from the town.² In the places where they believe there are diamonds they excavate the sand in the following manner. They encircle these places with stakes, fascines, and clay, in order to remove the water and dry the spot, as is done when it is intended to build the pier of a bridge. They then take out the sand, but do not excavate below the depth

¹ It is to be noted in reference to these "*pierres de tonnerre*," which I take to be ferruginous concretions, that in the *Tusuk-i-Jahāngiri* as translated by Blochman (J. A. S. B., vol. xl, p. 114) there occurs the following passage: "When the river contains little water, tumuli and hollows are formed. The diamond diggers know from experience that those tumuli contain diamonds over which insects(?), called by the Hindus *jhinga*, hover." It seems just possible that the term "*jhinga*" (shrimps?) may in this instance have been applied technically to the particular kind of pebbles which Tavernier denominated as above, and that the late Mr. Blochman was unaware of the technical application of the term.

² The distance of the source of the river is here very much overstated, but by crossing the watershed, the Sank river is met with, and in it diamonds used to be found. (*Vide* map in Appendix III.) The sources of these rivers are close to one another, and there the diamond stratum should be looked for. Unfortunately I had not made this identification of Tavernier's site when traversing that part of the country, and there is, so far as I know, no local tradition of diamonds having been found in the Koel.

of two feet. All this sand is carried and spread upon a large place prepared on the banks of the river and surrounded by a low wall of a foot and a half high, or thereabouts. They make holes at the base, and when they have filled the enclosure with as much sand as they think proper, they throw water upon it, wash it and break it, and afterwards follow the same method as is adopted at the mine which I have above described.

It is from this river that all the beautiful *points* come which are called *points naïves*¹ (natural points), but a large stone is rarely found there. It is now many years since these stones have been seen in EUROPE, in consequence of which many merchants have supposed that the mine has been lost, but it is not so ; it is true, however, that a long time has elapsed since anything has been obtained in this river on account of the wars.²

I have spoken elsewhere of another mine of diamonds in the Province of Carnatic, which MIR JUMLA, General-in-Chief and Prime Minister of State of the King of GOLCONDA, commanded to be closed,³ not wishing that it should be worked further, because the stones from it, or rather from these six mines (for

¹ *I.e.* diamonds having crystalline facets and angles. (See p. 73.)

² From this circumstantial account it would seem probable that Tavernier visited this locality himself during his stay at Patna in 1640 or in 1666. The statement on p. 53 that he had visited the four mines which he describes and one of the two river washings is puzzling, because, if Gandikot is to be classed as one of the mines, then he describes none of the river washings, as he calls Soumelpour the third "mine" on p. 81.

³ See Book I, chap. xviii. This appears to be a different case from that mentioned on p. 78, where the green crust and friability of the diamonds caused the mines to be closed. It is probably the one which Mir Jumla told Tavernier of at Gandikot. (See vol. i, p. 288.)

there are six of them, close to one another) were all black or yellow, and not one of good water.

There is, finally, in the Island of BORNEO,¹ the largest of all the islands in the world, a river called SUCCADAN, in the sand of which beautiful stones are found, which have the same hardness as those of the river KOEL, or of the other mines of which I have made mention.

General VANDIME once sent six of them, of 3 to 4 carats each, from BATAVIA to me at SURAT, and he believed that they were not so hard as those from other mines, in which he was mistaken, because there is no difference in that respect; it was in order to ascertain the fact that he sent them to me. When I was at BATAVIA one of the chief officers of the Company showed me a *point naïve* of $25\frac{1}{2}$ carats, a perfect stone, obtained in this river of SUCCADAN. But at the price which he told me it had cost him he had paid more than 50 per cent more than I should have been willing to buy

¹ In 1609 Captain John Saris found a considerable trade being carried on at Soekadana in the diamonds which he says were found in great abundance there and in the river Lave. He says they were obtained, as pearls are, by diving. I think it well to refer here to a footnote to Linschotens' *Travels* (*Hakluyt Society*, vol. ii, p. 134), where Mr. Tiele gives an explanation of a statement, first made, I believe, by Garcia de Orta, that diamonds were found at Taniapura in Malacca. Here Malacca, it seems, means Borneo, and Taniapura stands for Tanjongpura. There is hardly a work on precious stones which does not erroneously cite Malacca as a diamond locality. I have been informed by Mr. D. F. A. Hervey that Tanjongpura is situated about 30 miles up the river Páwan in the northern portion of the Mátan District, adjoining Soekadana, according to De Carubee's Netherlands India Maps. The question of the distribution and mode of occurrence of diamonds in Borneo, though now well understood, is too large to enter upon here. Probably the best account is by Dr. Theodor Posewitz. (Vide *Mith a. d. Jahrb. d. Kgl. Ung. Geolog. Anst.*, Bd. vii, 1885; see Appendix.)



it for. It is true that I have always heard that these stones are very dear. The principal reason which has prevented me from going to this river of BORNEO is that the Queen of the Island does not allow foreigners to carry away the stones, and there are great difficulties in conveying them thence—the insignificant number which are carried away secretly are sold at BATAVIA. I shall be asked, without doubt, why I only mention the Queen of BORNEO, and not the King. The reason is that in this Kingdom it is the women who govern and not the men, because the people are so particular about having for their sovereign a legitimate heir to the throne that the husband not being certain that the children which he believes to have had by his wife are his very own, and the wife being, on the contrary, quite certain that the children are hers, they prefer to have a woman for their ruler, to whom they give the title of Queen, her husband being her subject, and not having more power than that which she chooses to confer upon him.¹

¹ Descent by the mother's side obtains in some other Oriental countries, and is observed among the Nairs of Malabar.



CHAPTER XVIII

The different kinds of Weights for weighing Diamonds at the Mines; the kinds of Gold and Silver in circulation; the routes by which one is able to travel; and the rule in use for the estimation of the Prices of Diamonds.

I COME now to some details as to the traffic in diamonds, and in order that the reader may understand easily—believing that no one has previously written of this matter¹—I shall speak in the first instance of the different kinds of weights which are in use, both at the mines and in other places in ASIA.

At the mine of RAMULKOTA they weigh by *mangelins*, and the *mangelin* is equal to $1\frac{3}{4}$ carats, that is to say, 7 grains.²

At the mine of (GANI³ or) KOLLUR the same weights are used.

At the mine of SOUMELPOUR in BENGAL they weigh by *ratis*, and the *rati* is $\frac{7}{8}$ ths of a carat, or $3\frac{1}{2}$ grains.⁴

¹ In this Tavernier was mistaken, several Portuguese writers having treated of this subject before his time.

² Seven modern diamond grains = 5.55 grains troy, the proportion being 3.17 troy grains to the carat of 4 diamond grains.

³ See p. 72 for meaning of *Gani*.

⁴ This (= 2.77 troy grains) was the pearl *rati*, much greater than the ordinary *rati*, which varied from 1.75 to 1.84 grains troy, or even more. (See on this point vol. i, Appendix, and Preface, vol. ii for correction.)



This last weight is used throughout the whole of the Empire of the GREAT MOGUL.

In the Kingdoms of GOLCONDA and BIJAPUR *mangelins* are also used, but the *mangelin* in these places is only $1\frac{3}{8}$ carats.¹ The Portuguese use the same weight name in GOA, but it is then equal to only 5 grains.²

I come now to the kinds of money with which diamonds are purchased in INDIA.

Firstly, in the Kingdom of BENGAL, in the territories of the *Raja* of whom I have spoken, as they are included in the dominion of the GREAT MOGUL, payment is made in rupees.

At the two mines³ which are in the Kingdom of BIJAPUR, in the neighbourhood of RAMULKOTA, payment is made in the new *pagodas* which the King coins in his own name, being entirely independent of the GREAT MOGUL. The new *pagoda* does not always bear the same value, for sometimes it is valued at $3\frac{1}{2}$ rupees,⁴ sometimes more and sometimes less, according as it is elevated or depressed by the state of trade, and according as the money-changers arrange matters with the Princes and Governors.

At the mine of KOLLUR (or GANI), which belongs to the King of GOLCONDA, payment is made in new *pagodas* of equal value with those of the King of BIJAPUR. But one has to buy them sometimes at from 1 to 4 per cent premium, because they are of better gold, and because the merchants do not accept others at this mine.

¹ *I.e.* 4.36 troy grains. These weights and their modern equivalents are discussed in vol. i, Appendix. Elsewhere Tavernier seems to imply that Ramulkota being in Bijapur, this *mangelin* was used there.

² *I.e.* 3.962 troy grains.

³ The second mine here referred to was possibly the one mentioned as having been closed (see p. 78 *n.*)

⁴ *I.e.* 7s. 10½d.

These *pagodas* are made by the English and Dutch, who have obtained from the King, either by agreement or by force, permission to manufacture them, each in their own fortress. And those of the Dutch cost 1 or 2 per cent more than those of the English, because they are of better quality, and the miners also much prefer them. But as the majority of the merchants are influenced by the false reports that the people at the mine are unsophisticated and almost savages, and that, moreover, the routes from GOLCONDA to the mines are very dangerous, they generally remain at GOLCONDA, where those who work the mines have their correspondents to whom they send the diamonds. Payments are made there with old *pagodas*, well worn, and coined many centuries ago by different Princes, who reigned in INDIA before the Muhammadans gained a footing in the country. These old *pagodas* are worth $4\frac{1}{2}$ rupees,¹ i.e. 1 rupee more than the new, although they do not contain more gold, and consequently do not weigh more; this will be a cause of astonishment if I do not explain the reason. It is that the *Shroffs* or Changers, in order to induce the King not to have them recoined, pay him annually a large sum, because they themselves thereby derive a considerable profit; for the merchants never receive these *pagodas* without the aid of one of these Changers to examine them, some being defaced, others of low standard, others of short weight, so that if one accepted them without this examination he would lose much, and would have the trouble to return them, or perhaps lose from 1 to even 5 or 6 per cent, in addition to which he must pay the *Shroffs* $\frac{1}{4}$ th per cent for their trouble. When you pay

¹ I.e. 10s. 1½d.



the miners, they will also only receive these *pagodas* in presence of the Changer, who points out to them the good and bad, and again takes his $\frac{1}{4}$ th per cent. But to save time, when you desire to make a payment of 1000 or 2000 *pagodas*, the Changer, when receiving his dues, encloses them in a little bag, on which he places his seal, and when you wish to pay a merchant for his diamonds you take him, with the bag, to the Changer, who, seeing his own seal intact, assures him that he has examined all the coins, and will be responsible if any do not prove good.

As for rupees, the miners take indifferently those of the GREAT MOGUL and those of the King of GOLCONDA, because those coined by this King would have been the coinage of the GREAT MOGUL if these monarchs had remained on good terms.

The natives of INDIA have more intelligence and subtlety than one thinks. As the *pagodas* are small, thick pieces of gold of the size of the nail of the little finger, and as it is impossible to clip them without it being apparent, they bore small holes in them all round, from whence they extract 3 or 4 *sols* value of gold dust, and they close them with such skill that there is no appearance of the coins having been touched. Moreover, if you buy anything in a village, or when you cross a river, if you give the boatmen a rupee, they immediately kindle a fire and throw the rupee into it, from whence if it comes out white they accept it, but if black they return it; for all the silver in INDIA is of the highest quality, and that which is brought from EUROPE has to be taken to the mint to be recoinced. I say also that those are very much deceived (as a merchant tried to make me believe in



my first journey) who imagine that it answers to take to the mines spices, tobacco, mirrors, and other trifles of that kind to barter for diamonds; for I have fully proved the contrary, and am able to assert that the merchants at the mine who sell the diamonds require good gold, and the best too.

Now let us say something as to the routes to be followed to the mines. Some modern rather fabulous accounts represent them to be, as I have said, dangerous and difficult, and frequented by tigers, lions,¹ and barbarous people; but I have found them altogether different from what they were represented to be—without wild beasts, and the people full of good will and courtesy to strangers.

As for GOLCONDA, one need know but little of the map to be cognisant of its position; but from GOLCONDA to RAMULKOTA, where the principal mine is, the route is less known, and this is the one which I followed. The measure of distance in this country is the *gos*, and a *gos* is equal to 4 French leagues.²

From GOLCONDA to CANAPOUR ³	1
„ CANAPOUR to PARQUEL (BOORGUL)	2½
„ PARQUEL to CAKENOL (KOADGUL ⁴)	1
„ CAKENOL to CANOL-CANDANOR (KUNDANOO)	3
„ CANOL-CANDANOR to SETAPOUR ⁵	1
„ SETAPOUR to the river (<i>i.e.</i> KISTNA)	2

¹ Lions are not likely to have occurred so far south in India in Tavernier's time.

² *I.e.* to say about 8 miles. (See vol. i, Appendix, p. 420.)

³ *Canapour* has not been identified; it was probably near Narkodá of the Atlas Sheet. The identifications of some of the localities on this route published in *Jour. As. Soc.*, 1881, vol. i, part ii, p. 219, as my informant included places off the true route, prove to be incorrect.

⁴ Koadgul is 10 miles from Boorgul and 24 from Kundanool.

⁵ *Setapour* does not appear on the Atlas Sheet.



This river is the boundary between the Kingdoms of GOLCONDA and BIJAPUR.

From River to ALPOUR (ALUMPUR)	$\frac{3}{4}$
„ ALPOUR to CANOL (KARNUL)	$\frac{3}{4}$
„ CANOL to RAOLCONDA (RAMULKOTA) where the mine is	$2\frac{1}{2}$

Thus in all it is 17 *gos*, or 68 French leagues from GOLCONDA to the mine.¹

From GOLCONDA to the mine of COLOUR, or GANI,² it is $13\frac{3}{4}$ *gos*, which amounts to 55 of our leagues.

From GOLCONDA to ALMASPINDE (ALMASGOODA ?)	$3\frac{1}{2}$
„ ALMASPINDE to KAPER (?)	2
„ KAPER to MONTECOUR (MOONOGODOO)	$2\frac{1}{2}$
„ MONTECOUR to NAZELPAR (NAGOOLPAD)	2
„ NAZELPAR to ELIGADA (LINGALLA ?)	$1\frac{1}{2}$
„ ELIGADA to SARVARON (SURRAWARAM)	1
„ SARVARON to MELLASEROU (MAILACHEROO)	1
„ MELLASEROU to PONOCOUR (?) ³	$1\frac{3}{4}$

Between PONOCOUR and COULOUR or GANI (KOLLUR) there is only the river⁴ to cross.

¹ This route crossed two rivers, namely the main stream of the Kistná and its tributary the Tungabhadra, Alumpur being situated in the fork between, and Karnul being on the south bank of the Tungabhadra. The total of these distances, as printed, is $14\frac{1}{2}$ *gos*, which at 4 leagues to the *gos* would be equal to 58 leagues. The true distance by this route would be about 135 miles, which is equal to the 17 *gos*, or 68 leagues. Hence some of the stages must be understated.

² See p. 72, where it is shown that Gani (Kán-i) is only a Persian prefix signifying "mine of," and that *Coulour* is identified with Kollur on the Kistná.

³ The total of these distances is $15\frac{1}{4}$ (not $13\frac{3}{4}$) *gos*, which, as above, would be equal to 61 leagues. The distance of the first stage is evidently wrong, being in reality only about 10 miles. The distance by the route given in Book I, chap. xi, is 76 *cos*.

⁴ The river here mentioned is the Kistná, and *Ponocour* must have been in the position of Vellutar. Vellatoor, lower down the Kistna, is quite distinct.



I come now to an important subject which is little understood in EUROPE.

Rule for ascertaining the proper price of a Diamond of whatsoever weight it may be, from 3 up to and above 100 carats.

I do not mention diamonds below 3 carats, their price being sufficiently well known.

It is first necessary to know what the diamond weighs, and next to see if it is perfect, whether it is a thick stone, square-shaped, and having all its angles perfect; whether it is of a beautiful white water, and lively, without points, and without flaws. If it is a stone cut into facettes, which is ordinarily called "a rose," it is necessary to observe whether the form is truly round or oval; whether the stone is well-spread, and whether it is not one of those lumpy stones; and, moreover, whether it is of uniform water, and is without points and flaws, as I described the thick stone.

A stone of this quality, weighing 1 carat, is worth 150 *livres*¹ or more, and supposing it is required to know the value of a stone of 12 carats of the same degree of perfection, this is how it is to be ascertained:—

• Square the 12, this amounts to 144; next multiply

¹ Say £11 : 5s., at 1s. 6d. to the *livre*. Thevenot gives 15 to 16 *écus* as the price of stones of 1 or 2 *mangelins*, but those of 3 *mangelins* were worth at the rate of 30 *écus* the *mangelin*. (*Voyage des Indes*, Paris Ed., 1684, p. 289.) As Thevenot gives the value of a *mangelin* at 1.6 carats, 3 would be equal to 4.8 carats, and the price 90 *écus*, or £20 : 5s., while Tavernier's valuation for a stone of 4.8 carats would be $4.8 \times 4.8 \times 150 = 3456$ *livres* = £259 : 4s. This enormous discrepancy must be due to a mistake by Thevenot.



144 by 150, *i.e.* the price of 1 carat, and it amounts to 21,600 *livres*—

$$12 \times 12 \times 150 = 21,600.^1$$

This is the price of a diamond of 12 carats.

But it is not enough to know the price of perfect diamonds only, one must know also the price of those which are not so; this is ascertained by the same rule, and on the basis of the price of a stone of 1 carat. This is an example—

Suppose a diamond of 15 carats which is not perfect, the water being not good, or the stone badly shaped, or full of spots or flaws. A diamond of the same nature, of the weight of 1 carat, would not be worth more than 60 or 80 or 100 *livres* at the most, according to the beauty of the diamond. You must then square the weight of the diamond, *i.e.* 15 carats, and next multiply the product 125 by the value of the stone of 1 carat, which may for example be 80 *livres*, and the product, which is 10,000² *livres*, is the price of the diamond of 15 carats.

It is easy to see from this the great difference in

¹ *I.e.* £1620. Whatever may have been the case, it is now apparent that no hard and fast rule can be given to determine the selling value of diamonds, as it is subject to very great variations.

Among other formulæ, however, the following may be mentioned :—

$\frac{m}{2} (m+2) a$ where m = the number of carats, and a the value of 1.

This is given in *Handbuch der Edelstein*, A. Schrauf, Vienna. A stone of 12 carats, similar in quality to that above given, so calculated, would be worth £945.

² £750. But this calculation, though represented graphically as a sum in figures, in the original, is wholly incorrect, as $15 \times 15 = 225$, not 125, and the product of its multiplication by 80 is 18,000 instead of 10,000 *livres*, the value of the diamond consequently would be £1350. In the edition of Tavernier of 1679, I find that this sum is correctly calculated as above.



value between a perfect stone and one which is not so. For if this stone of 15 carats had been perfect, the second multiplication would be by 150, which is the price of a perfect stone of 1 carat, and then it would amount not to 10,000 *livres*, but to 33,750 *livres*, i.e. to 23,750¹ *livres* more than an imperfect diamond of the same weight.

According to this rule, the following is the value of the two largest among the cut stones in the world—one of them in ASIA belonging to the GREAT MOGUL, the other in EUROPE belonging to the Grand Duke of TUSCANY—as will be seen by the subjoined figures.

The GREAT MOGUL'S diamond weighs 279 $\frac{9}{16}$ carats, is of perfect water, good form, and has only a small flaw which is in the edge of the basal circumference of the stone.

Except for this flaw the first carat would be placed at 160 *livres*, but on that account I do not estimate it at more than 150, and so calculated according to the above given rule it reaches the sum of 11,723,278 *livres*, 14 *sols*, and 3 *liards*. If this diamond only weighed 279 carats, it would have been worth 11,676,150 *livres* only, and thus these $\frac{9}{16}$ ths are worth 47,128 *livres*, 14 *sols*, 3 *liards*.²

The Grand Duke of TUSCANY'S diamond weighs 139 $\frac{1}{2}$ carats, is clear, and of good form, cut on all sides into facettes, and as the water tends somewhat to a citron colour,³ I estimate the first carat at only 135

¹ I.e. £2531:5s., and £1781:5s. The former is correctly calculated, but the latter should be 33,750 - 18,000 *livres* = 15,750 *livres* = £1181:5s.

² These amounts are equivalent to £879,245:18:1 $\frac{1}{2}$, £875,711:5s., and £3534:13:1 $\frac{1}{2}$ —the *livre* being 1s. 6d., and the *sol* 9d.

³ This description and that in chap. xxii, as also the figure of



livres, from which the value of the diamond ought to be 2,608,335—that is to say, two million six hundred and eight thousand three hundred and thirty-five *livres*.¹

In concluding the remarks which I have made in this chapter, I should say that in the language of the miners the diamond is called *iri*;² that in Turkish, Persian, and Arabic it is called *almas*,³ and that in all the languages of EUROPE it has no other name than diamond.

This, then, in a few words is all that I have been able to discover with my own eyes in regard to this subject during the several journeys which I made to the mines; and if by chance some other has written or spoken of them before me, it can only have been from the reports which I have made of them.⁴

the stone, correspond in all important respects with the "Austrian yellow," now in the possession of the Emperor of Austria. Its weight is $133\frac{1}{2}$ Vienna carats according to Schrauf, which would amount to 134 French carats, the proportion in milligrams being 206.13 : 205.5, and not to $139\frac{1}{2}$ as stated in the work quoted below. The value of the stone has been variously estimated at £40,000, £50,000, and even £155,682. (See *The Great Diamonds of the World*, by E. Streeter, London, 1882, and *Murray on the Diamond*, Second Edition, London, 1839.) The figure which the latter gives of the Matan diamond is really of Tavernier's "Grand Duke," not so the figure purporting to be of itself.

¹ The equivalent of 2,608,335 *livres* is £195,625 : 2 : 6.

² Linschoten has *iraa*, both are from the Sanskrit *hira*, the term now used in Hindustani, and some other languages in India.

³ *Almās* is believed to be closely related with the *adamas* of the Greeks and Romans—the latter term, however, does not appear to have been originally applied to the diamond but to corundum.

⁴ It has already been shown that Methold had actually visited the mines before Tavernier. (See p. 72, *n.*) And it is probable that Cæsar Frederick had been at Ramulkota, which he describes, about the year 1570. (See Hakluyt's *Voyages*.)



CHAPTER XIX

Concerning Coloured Stones and the places where they are obtained.

THERE are only two places in the East where coloured stones are obtained, namely in the Kingdom of PEGU and in the island of CEYLON. The first is a mountain twelve days or thereabouts from SIREN¹ in a north-east direction, and it is called CAPELAN.² It is the mine from whence is obtained the greatest quantity of rubies, spinelles or mothers of rubies, yellow topazes, blue and white sapphires, hyacinths, amethysts, and other stones of different colours. Among these hard stones others which are soft are found, and are called *bacan*³ in the language of the country. These are not considered to be valuable.

SIREN is the name of the city where the King of PEGU resides, and AVA is the port of the Kingdom. From AVA to SIREN you ascend the river in large flat

¹ *Siren* here is a mistake for Ava. Siriam or Syriam is a port on the Pegu river 6 miles E. of Rangoon. It was famous in connection with Portuguese dealings with Pegu, and was the site of an English factory in the seventeenth century. (See *Anglo-Indian Glossary*.) In the second reference below it would seem that the names *Siren* and *Ava* are transposed, as Ava was the capital and Syriam the port.

² *I.e.* Kyatpyen. Its distance from Ava is about 70 miles. (See Map in vol. i, and Appendix on Burmah ruby mines.)

³ *Bacan*. This is possibly the Persian *pākand* or *bākand*, which signifies ruby.



boats, and it is a voyage lasting about sixty days. You cannot travel by land on account of the forests, which abound with lions,¹ tigers, and elephants. It is one of the poorest countries in the world; nothing comes from it but rubies, and even they are not so abundant as is generally believed, seeing that the value does not amount to 100,000 *écus*² per annum.

Among all these stones you would find it difficult to meet with one of good quality, weighing 3 or 4 carats, because of the strict injunctions against allowing the removal of any which the King has not seen; and he retains all the good ones which he finds among them. This is the reason why in all my journeys I have earned a sufficiently large profit by bringing rubies from EUROPE into ASIA; and I very much doubt the story of VINCENT LE BLANC when he says that he has seen rubies in the King's palace as large as eggs.³

The following is the price of some rubies which might pass as of good quality. During my several journeys I saw them sold by merchants who came from the mine, while I was at MASULIPATAM and GOLCONDA. All rubies are sold by the weight called *rati*,

¹ Lions here, as elsewhere, must be understood as a figure of speech, since there are none in Burmah.

² £22,500. In the year 1855 the revenue from the mines was estimated at from £12,500 to £15,000. Since the conquest of Upper Burmah these mines have, as is well known, been let for a term of years to an English Company. Further information will be found in an Appendix to this volume.

³ I cannot find this statement in the copy of Le Blanc's *Voyages* which I possess, namely, the Paris Edition of 1648. Sir T. Roe speaks of a ruby weighing 13 *tolas*, or about 5½ oz., which was offered to Jahángir for 5 *lakhs* of rupees by the Portuguese, but he offered only one *lakh* for it. (See *Journal*, Calcutta Edition, p. 32.)

which is $3\frac{1}{2}$ grains or $\frac{1}{8}$ th of a carat;¹ and payment is made in the old *pagodas*, of which I have spoken in the preceding chapter :—

A ruby of 1 *rati* was sold for 20 *pagodas*.

„	$2\frac{1}{8}$ <i>ratis</i>	„	85	„
„	$3\frac{1}{4}$ „	„	185	„
„	$4\frac{5}{8}$ „	„	450	„
„	5 „	„	525	„
„	$6\frac{1}{2}$ „	„	920 ²	„

When a ruby exceeds 6 *ratis*, and is perfect, it is sold for whatever is asked for it.

All the other coloured stones in this country are called by the name ruby, and are only distinguished by colour.³ Thus in the language of PEGU the sapphire is a blue ruby, the amethyst a violet ruby, the topaz a yellow ruby, and so with the other stones.

The dealers are so particular about their profit in trade that they will not show you a parcel of rubies, although they may be fine, unless you promise beforehand that in case you do not buy you will make them a small present—as a turban or a waistband; and when one acts somewhat liberally to them they show all their stock, and one can then transact some business with them.

The other place in the East whence rubies and other coloured stones are obtained is a river in the

¹ Namely the pearl *rati* = 2.77 grs. troy (see Appendix to vol. i, and Preface, vol. ii.)

² In other words, a ruby of 18 grains troy was sold for about £465 : 15s.—the *rati* being equal to 2.77 grains troy, and the *pagoda* to 10s. 1½d. (See vol. i, Appendix.) According to Mr. Streeter (*Precious Stones*) rubies over a carat in weight vary in value from £20 to £100 per carat at present, but he adds that no definite price can be given to aid the purchaser.

³ A very legitimate system of nomenclature, as they are all of the same chemical composition, viz. alumina or corundum.



island of Ceylon.¹ It comes from high mountains which are in the middle of the island, and as the rains greatly increase its size—three or four months after they have fallen, and when the water is lowered, the poor people go to search amongst the sand, where they find rubies, sapphires, and topazes. The stones from this river are generally more beautiful and cleaner than those of PEGU.

I forgot to remark that in the mountains which run from PEGU towards the Kingdom of CAMBOYA² some rubies are found in certain places, but more *balass* rubies³ than others, many spinelles, sapphires, and topazes. There are gold mines in these mountains, and rhubarb⁴ also comes from these places, which is

¹ In Ceylon sapphire is the variety of corundum most commonly found, but rubies are also sometimes met with. The annual average value of precious stones found in Ceylon is said to be about £10,000 at present. "Stones of inferior kinds are found in the beds of streams about Kandy, Nuwara-Eliya, Badulla, and some of the small rivers in the south; but the more precious stones, such as the ruby, sapphire, topaz, alexandrite, and catseye, must be sought within a radius of 30 or 40 miles from Ratnapura (the City of Gems), the capital of Saffragam, a district of the Western Province, though occasionally rubies are found in Uva." (See *Ceylon Colonial Guide*.)

² The mode of occurrence of rubies in Cambodia and Siam is not very well understood, but I have met with some references to the fact, which appears to be undoubted. Thus Crawford says they are found in hills at Chan-ta-bun in Lat. 12° on the east side of the Gulf. They constitute a rigidly-guarded royal monopoly, but are much inferior in quality to the Ava stones. (*Embassy*, 4to., London, 1828, p. 419.)

³ The distinction made by our author between "*balass*" rubies, and spinelles indicates that already in his time the name had been transferred from its true original application to spinelles—to rubies of a particular shade of colour, probably light, and resembling the spinelle. (See vol. i, p. 382 n.)

⁴ This was probably China rhubarb, which thus found an outlet to Europe. Afterwards it mainly came through Russia. A very interesting account of the rhubarb trade from the earliest times, though Cambodia is not mentioned there, will be found in Fluckiger and Hanbury's *Pharmacographia*, Art. "Rhubarb."



highly esteemed, because it does not spoil so quickly as that which grows in other parts of ASIA.

There are also in Europe two places from whence coloured stones are obtained, viz. in BOHEMIA and HUNGARY. In BOHEMIA there is a mine where flints of different sizes are found, some being as large as an egg, others the size of the fist, and on breaking them one finds in some of them rubies¹ as hard and as beautiful as those of PEGU. I remember being one day at PRAGUE with the Viceroy of HUNGARY, in whose service I then was, as he washed his hands with General WALLENSTEIN, Duke of FRIEDLAND, before sitting at table, he saw on the General's hand a ruby which he admired for its beauty. But he admired it much more when WALLENSTEIN told him that the mine of these stones was in BOHEMIA; and, in fact, at the Viceroy's departure he presented him with about 100 of these flints in a basket. When we returned to HUNGARY the Viceroy had them all broken, and out of the whole of the flints there were only two in which rubies were found, one weighing about 5 carats and the other about 1 carat.

As for HUNGARY, it has a mine from whence opals² are obtained; they are not found in any other place in the world.

Turquoise is only found in PERSIA, and is obtained in two mines. The one which is called "the old rock" is three days' journey from MESHED towards the north-west and near to a large town called NICH-

¹ These rubies, so called, were doubtless only garnets.

² There are early references to the occurrence of opal in India, but I have never been able to identify any local source there. Hungary still retains pre-eminence in this respect, but very beautiful opals are now found in Australia.



BOURG;¹ the other, which is called 'the new,' is five days' journey from it. Those of the new are of an inferior blue, tending to white, and are little esteemed, and one may purchase as many of them as he likes at small cost. But for many years the King of PERSIA has prohibited mining in the "old rock" for any one but himself, because having no gold workers in the country besides those who work in thread, who are ignorant of the art of enamelling on gold, and without knowledge of design and engraving, he uses for the decoration of swords, daggers, and other work, these turquoises of the old rock instead of enamel, which are cut and arranged in *patterns* like flowers and other figures which the (jewellers) make. This catches the eye and passes as a laborious work, but it is wanting in design.

As for the emerald, it is an ancient error of many people to suppose that it was originally found in the East² [*because before the discovery of America they*

¹ Nishapur in Meshed is the classic locality for the true Turquoise. Its mode of occurrence there will be found described in a paper by Mr. A. H. Schindler published in the *Records of the Geol. Survey of India*, vol. xvii, 1884, p. 132. Vambéry in his "Life," p. 290, also describes these mines. Turquoise has been found in some other places, as for instance in the Province of Ferghana at Mount Karumagar, 24 miles N.E. of Khojend. It occurs there in veins in a decomposed felspar porphyry. (*Russian Central-Asia*, by Henry Lansdell, D.D., p. 515.)

² Tavernier appears to have been wholly unaware of the true source of the emerald in early times. Although common beryl is abundant in India the emerald does not appear to have been found there, though highly esteemed and well known at a very remote epoch. All records, and indeed many might be quoted since the times of the Ptolemies, point to certain mines in Egypt, especially at Mount Zabara on the Red Sea, as having afforded the supply. Prof. Maskelyne, *Edb. Rev.* 1866, p. 244, records that when this locality was visited by Sir G. Wilkinson he found several emeralds of pale and poor quality. The matrix was mica schist. Among other authors who have mentioned Egypt as supplying emeralds to India, the following are the principal :—Pliny, the Monk Cosmas, circa A.D. 545, Masúdi, and the Muhammadan travellers

were unable to think otherwise], and likewise still the majority of jewellers and artisans, when they see an emerald of high colour inclining to black, are accustomed to call it an Oriental emerald, in which they are mistaken [*since the East has never produced them*].¹ I confess I have not been able to find the places in our Continent from whence these kinds of stones are obtained. But I am assured that the East has never produced them, neither on the mainland nor on the islands; and having made a strict inquiry during all my journeys, no one has been able to indicate any place in ASIA where they are found. It is true that since the discovery of AMERICA some few rough stones have often been carried by the Southern Sea from PERU to the PHILIPPINE ISLANDS, from whence they have been exported in due course to EUROPE; but that does not justify these being called "Oriental," nor support the view that their source is situated in the East, since both before this discovery and this passage there was no want of emeralds for disposal throughout the whole of EUROPE, and because at present, having left this route, they are all conveyed by the North Sea (Atlantic) to SPAIN.² In the year 1660 I saw 20 of the ninth century. The emeralds of Siberia do not appear to have been discovered before the present century.

¹ The above passages in italics do not occur in the 1676 Edition of Tavernier, but are in that of 1713.

² The foregoing passage is thus rendered in the Edition of 1713:—
"I believe that long before that part of the world which is called the West Indies had been discovered, emeralds were carried from Asia into Europe; but they came from mines in the Kingdom of Peru. For the Americans, before we had knowledge of them, trafficked in the Philippine Islands, where they carried gold and silver; but more silver than gold, as there was more profit on the one than the other, on account of the abundance of gold mines in the East. To-day this trade still continues, and the people of Peru go annually to the Philippines with two or three



per cent less price given in INDIA for emeralds than they would be sold for in FRANCE.

But concerning this navigation and commerce between AMERICA and the PHILIPPINE ISLANDS, it should be remarked that the AMERICANS having arrived at these islands,¹ the people of BENGAL ARAKAN, PEGU, GOA, and other places, carry thither all sorts of cloths, and a quantity of worked stones, as diamonds and rubies, with many manufactured articles of gold and silver, silken stuffs and Persian carpets. But it should be added that they are unable to sell anything directly to these Americans, but only to those who reside in the MANILLAS, and that they resell them again when the former have left. Similarly, if any one obtained permission to return from GOA to SPAIN by the Southern Sea he would be obliged to pay 80 or 100 per cent for transmitting money as far as the PHILIPPINES, without being allowed to buy anything, and to do the same from the PHILIPPINES as far as NEW SPAIN.

*[This it is then which was done with the emeralds before the West Indies were discovered, for they only came to Europe by this long way and tedious journey. All that were not fine remained in this country, and all those that were passed on into Europe.]*²

vessels, whither they only carry silver and a small quantity of rough emeralds, and indeed for some years they have ceased to carry the emeralds, sending them all to Europe by the Northern Sea."

¹ This early traffic between Peru and the Philippine Islands, by which our author strives to explain the source of the emeralds, is somewhat mythical I should suppose. It is curious to note that the agreement between the Spaniards and the Portuguese, that the former should extend their conquests only to the west and the latter to the east of Europe, was disturbed when vessels first crossed the Pacific from South America to Manilla. The Spaniards probably first carried Peruvian emeralds to the Eastern nations. ² Interpolated in Edition of 1713.



CHAPTER XX

*Concerning Pearls and the places where they are
fished for.*

PEARLS are found in the eastern and western seas, and both for the satisfaction of the reader and for the purpose of not omitting anything upon this matter, although I have not been in AMERICA, I shall mention nevertheless all the places where there are pearl-fisheries, commencing with those in the East.

In the first place, there is a pearl-fishery round the island of BAHREN,¹ in the Persian Gulf. It belongs to the King of PERSIA, and there is a good fortress there, where a garrison of 300 men is kept. The water which is drunk in this island and that used on the coast of PERSIA is salt, and has an unpleasant taste, and it is only the people of the country who can drink it. As for strangers, it costs them not a little to obtain good² water, for they have to get it out at sea from half a league distance from the island up to nearly two leagues. Those who go in boats for it should number five or six, one or two of whom dive to the bottom of the sea, having suspended from their waists a bottle or two, which they fill with water and then cork them well. For at the bottom of the

¹ Bahren Island, the well-known centre of the pearl-fishery in the Persian Gulf.

² See vol. i, p. 268.



sea there, for about two or three feet in depth, the water is fresh, and the best that can be drunk. When those who have dived to the bottom of the sea to get this water, pull a small cord which is attached to one of those who remain in the boat, it is the signal to their comrades to haul them up.

While the Portuguese held HORMUZ and MUSCAT, each *terate*¹ or boat which went to fish was obliged to take out a licence from them, which cost 15 *abassis*,² and many brigantines were maintained there, to sink those who were unwilling to take out licences. But since the Arabs have retaken MUSCAT, and the Portuguese are no longer supreme in the Gulf, every man who fishes pays to the King of PERSIA only 5 *abassis*,³ whether his fishing is successful or not. The merchant also pays the King something small for every 1000 oysters.

The second pearl-fishery is opposite BAHREN, on the coast of ARABIA-FELIX, close to the town of EL KATIF,⁴ which, with all the neighbouring country, belongs to an Arab Prince.

The pearls fished in these places are for the most part sold in INDIA, because the Indians are not so particular as we are. All pass easily, the *baroques*⁵ as

¹ Spelt *terrade* in *Persian Travels*, p. 232, Paris Edition, 1676. Various forms of the word, which means a galley or a small ship of war, occur in Portuguese, Spanish, and Arabic. Colonel Yule informs me that its etymology is uncertain.

² Or, allowing 1s. 6d. for the *abassi*, £1 : 2 : 6.

³ 3s. 9d.

⁴ This is *Catifa* in the original. El Katif, on the Persian Gulf, is a considerable Arabian town, with a district of some extent.

⁵ The term *baroques*, which is sometimes written *barocche*, is from the French *baroque*, signifying irregular or uncouth: it is applied to irregularly-shaped pearls. They are much used for grotesque figures.

well as the round; each has its price, all being saleable. Some of them are taken also to BASSORA. Those which go to PERSIA and RUSSIA are sold at BANDAR-CONGO,¹ two days' distance from HORMUZ. In all the places which I have named, and in other parts of ASIA, the water tending slightly to yellow is preferred to the white,² because it is said that pearls the water of which is slightly golden retain their vivacity and never change, but that when they are white they do not last for thirty years without losing their vivacity, and, both on account of the heat of the country and the perspiration of the body, they assume a vile yellow colour.

Before leaving the Gulf of HORMUZ I shall speak a little more fully than I have done in my account of PERSIA³ of that splendid pearl which is possessed by the Arab Prince who took MUSCAT from the Portuguese. He then assumed the name of IMENHECT, Prince of MUSCAT, having been previously called ASAF BIN ALI,⁴ Prince of NORENUÆ. This is but a petty Province, but the best in ARABIA-FELIX. All that is

Castellani says they are specially esteemed in Spain and Poland. (*History of Gems*, p. 172.)

¹ Kongoon, on the Persian Gulf, south-west of Shiraz. Bandar-Congo is mentioned as a port for Lar in the *Persian Travels*, pp. 232-234.

² A statement at the end of chap. xx contradicts this.

³ The account in the *Persian Travels* is that the pearl belonged to the Emir of Vodana, who showed it to M. Constant and our author at Hormuz; it was perfectly round and transparent, and weighed 17 *abás*, or $14\frac{7}{8}$ carats, the *abás* being equal to $\frac{7}{8}$ of a carat. On behalf of the Governor of Surat, the latter, on a subsequent occasion, offered 60,000 rupees, say £6750, to the owner for it, but he refused to sell it. (*Persian Travels*, Book II, chap. ix.)

⁴ Aseph Ben Ali in the original. I have not identified *Norenuæ*, nor can I say whether it is to be regarded as a synonym of *Vodana* in the previous note. *Imenhect* is possibly compounded of Imam or Ibn and some other word.



necessary for the life of man grows there, and more especially splendid fruits, and in particular excellent grapes, from which very good wine can be made. This is the Prince who possesses the most beautiful pearl in the world, not by reason of its size, for it only weighs $12\frac{1}{16}$ carats, nor on account of its perfect roundness; but because it is so clear and so transparent that you can almost see the light through it. As the Gulf opposite HORMUZ is scarcely 12 leagues wide from ARABIA-FELIX to the coast of PERSIA, and the Arabs were at peace with the Persians, the Prince of MUSCAT came to visit the *Khán* of HORMUZ, who entertained him with magnificence, and invited the English, Dutch, and some other *Franks*, in which number I was included, to the festival. At the close of the feast the Prince took this pearl out of a small purse which he carried suspended from his neck and showed it to the *Khán* and the rest of the company. The *Khán* wished to buy it, to present to the King of PERSIA, and offered up to 2000 *tomans*,¹ but the Prince was unwilling to part with it. Since then I crossed the sea with a *Banian* merchant whom the GREAT MOGUL was sending to this Prince to offer him 40,000 *écus*² for his pearl; but he refused to accept that sum.

This account makes it apparent, with reference to jewels, that fine jewels ought not always to be taken to EUROPE,³ but rather from EUROPE to ASIA, as I have

¹ About £6900.

² *I.e.* £9000. Its value is stated to have been £32,000. (See Streeter, *Precious Stones and Gems*, Third Edition, part iii, p. 14.)

³ I remember a case in India some few years ago illustrative of this, which gave rise to a trial. One or two persons residing at Simla bought some stones as a speculation and sent them to England, where

done, because both precious stones and pearls are esteemed there very highly when they have unusual beauty; but CHINA and JAPAN must be excepted, where they are not valued.¹

The other locality in the East where there is a pearl-fishery is in the sea near a large town called MANAR, in the island of CEYLON.² The pearls found there are the most beautiful, both as regards water and roundness, of all the fisheries; but one is rarely found there which exceeds 3 or 4 carats in weight.

There are, moreover, on the coast of JAPAN pearls of very beautiful water and good size, but they are very imperfect; nevertheless they are not fished for, because, as I have said, the Japanese do not esteem jewels.

Although the pearls which are found at BAHREN and at EL KATIF tend somewhat to yellow, they are esteemed as highly as those of MANAR, as I have

they were valued at a lower price than had been given for them. The purchasers thereupon sought by an action to recover their money from the native jewel merchant, but lost their suit.

¹ The Chinese prefer to invest their money in porcelain, lacquer, and other works of art, and ridicule the craze for precious stones.

² I am indebted to Mr. S. Haughton of the Ceylon Civil Service for a copy of *The Overland Ceylon Observer* for 11th April 1888, which contains details of the results of the Ceylon pearl-fisheries from the year 1796 to 1888. In the first period, namely from 1796 to 1837, the total receipts amounted to £946,803:8:3 $\frac{3}{4}$, and the expenditure to £51,752:6:8 $\frac{1}{2}$. An estimate by Captain Stewart, however, makes the total net revenue for the same period only £524,521:14:2 $\frac{3}{4}$. In the second period, from 1838 to 1888, the total revenue was £437,110:4s., and the expenditure £105,656:1:9 $\frac{1}{2}$, or a net average annual profit, inclusive of many years when there was no fishing, of upwards of £6600. The average number of oysters annually fished for the same period amounted to about 3,575,630. In the year 1880, according to the *Colonial Exhibition Handbook of Ceylon*, 25,000,000 oysters sold for only £20,000, whereas in 1881 18,000,000 sold for £59,000.



remarked, and throughout the East it is said that they are mature or ripe, and that they never change colour.

I come now to the fisheries of the West, which are all situated on the great Gulf of MEXICO, along the coast of NEW SPAIN, and there are five of them which succeed one another from east to west.

The first is near the island of CUBAGUA,¹ which is only 3 leagues in circuit, and is distant about 5 from the mainland. It is in $10^{\circ} 30'$ of N. Lat., and 160 leagues from S. DOMINIQUE² in the ISLE OF SPAIN. It is a very infertile land, wanting in all things, and especially water, which the inhabitants are obliged to obtain from the mainland. This island is renowned throughout the west, because it is where the most considerable pearl-fishery is situated, although the largest pearls do not exceed 5 carats. The second fishery is in the island of MARGUERITE, that is to say, the island of pearls, at 1 league from CUBAGUA, which it surpasses much in size. It produces all that is necessary to life except that, like CUBAGUA, it lacks water, which has to be sent for to the river CUMANA, near NEW CADIZ.³ This fishery is not the most abundant of all the five in AMERICA; but it is considered the principal, because the pearls which are found there surpass the others in perfection, both as regards water and size. One of the latter which I possessed, of well-formed pear shape, and of fine water, weighed 55 carats, and

¹ Cubagua is one of the Antilles group. It lies between the isle of Marguerite and the coast of Cumana, and belongs to Venezuela. It was formerly a centre of the pearl-fisheries.

² San Dominique, also one of the Antilles.

³ The positions of Marguerite and Cumana are indicated in the previous note.



I sold it to SHĀISTĀ KHĀN, uncle of the GREAT MOGUL.¹

Many are astonished to learn that pearls are taken from EUROPE to the East, from whence they come in abundance, but it should be remarked that in the Oriental fisheries they are not found of as great weights as in those of the West, added to which all the kings and great nobles of ASIA pay much better than do people in EUROPE, not only for pearls, but for all kinds of jewels—when they are out of the common run—excepting only the diamond.

The third fishery is at COMOGOTE,² near the mainland.

The fourth is at RIO DE LA HACHA,³ along the same coast.

The fifth, and last, is at SAINTE MARTHE, 60 leagues from RIO DE LA HACHA.

All these three fisheries produce pearls of good weight; but generally they are ill-formed and are of a leaden-coloured water.

Finally, as for the pearls of SCOTLAND, and those which are found in the rivers of BAVARIA,⁴ although necklaces are made of them which are worth up to 1000 *écus*⁵ and beyond, they cannot enter into comparison with those of the East and West Indies.

It is possible that of those who have written before me concerning pearls none have recorded that some

¹ See Book I, chap. viii, for details of the sale, and the quarrel it gave rise to. See also p. 130.

² *Comogote* not identified.

³ Rio de la Hacha is in Columbia, being the name of a Province and its chief town.

⁴ Obtained from the *Unios* and *Anodons*, fresh-water mussels.

⁵ £225.



years back a fishery was discovered in a certain part of the coasts of JAPAN, and I have seen some of the pearls which the Dutch brought from thence. They were of very beautiful water, and some of them of large size, but all *baroques*. The Japanese, as I have above said, do not esteem pearls. If they cared about them it is possible that by their means some banks might be discovered where finer ones would be obtained.

Before concluding this chapter I shall make a very important remark in reference to pearls and the differences in their waters, some being very white, others tending to yellow, and others to black, and some which are, so to speak, lead-coloured. As for the last, they are only found in AMERICA, and this colour is caused by the nature of the bottom, which is muddier than in the East. In a return cargo which the late M. DU JARDIN,¹ the well-known jeweller, had in the Spanish gallions, there were included six perfectly round pearls, but black as jet, which weighed altogether 12 carats. He gave them to me with some other things to take to the East, to see if they could be disposed of, but I brought them back again, as I found no one who would look at them.² As for the pearls tending to yellow, the colour is due to the fact that the fishermen sell the oysters in heaps, and the merchants awaiting sometimes up to fourteen or fifteen days till the shells open of themselves, in order to extract the pearls, some of these oysters lose their water during this time, decay, and become putrid, and the pearls become yellow by contact. This is so true that in all

¹ See p. 159.

² Black pearls do not suit dark complexions so well as the lighter kinds.



oysters which have retained their water the pearls are always white. They are allowed to open of themselves, because if they are opened by force, as we open our oysters in the shell, the pearl may be damaged and broken. The oysters of the MANAR Strait open of themselves, spontaneously, five or six days sooner than those of the Gulf of PERSIA, because the heat is much greater at MANAR, which is at the 10th degree of North Latitude,¹ while the island of BAHREN is at about the 27th. And consequently among the pearls which come from MANAR there are few yellow ones found. Finally, all the Orientals are very much of our taste in matters of whiteness, and I have always remarked that they prefer the whitest pearls,² the whitest diamonds, the whitest bread, and the whitest women.

¹ The true Latitude of Manar, a gulf or arm of the sea between Ceylon and Southern India, is about 8° to 9° N. Lat., and of Bahren about 27° as stated.

² On p. 109 it was stated that slightly yellow pearls have the preference.

CHAPTER XXI

*Concerning the manner in which Pearls originate in
Oysters, how they are fished for and at what
Seasons.*

I AM aware that according to the testimony of some ancient authors, who were not well instructed in these matters, it was commonly believed that the pearl originates from the dew of heaven, and that but one is found in each oyster; but experience proves the contrary. For, as regards the first, the oyster does not stir from the bottom of the sea, where the dew cannot penetrate, and sometimes it is necessary to dive for them to a depth of 12 *cubits*, as we shall see presently; and as for the other, it is common to find up to six or seven pearls in a single oyster, and I have seen one in which there were up to ten in process of formation. It is true that they are not all of the same size, because they are produced in the oyster in the same manner as eggs are in the interior of a fowl: as the largest egg advances towards the orifice and goes out first, while the small eggs remain inside to complete their formation; so the largest pearl advances first, and the other, smaller ones, not having arrived at their full perfection, remain under the oyster at the bottom of the shell until they have attained the size which nature

gives them.¹ But it cannot be said that there are pearls in all oysters, and one may open many in which none are found.

Moreover, it should not be supposed that a great profit is earned by those who fish for pearls; for if the poor people who engage in it had anything else to do they would leave the fishing, which merely saves them from dying of hunger.² I have remarked in my account of PERSIA, that from BASSORA up to CAPE JASQUE,³ on both coasts of the Gulf of PERSIA, the land produces nothing. The people there are so poor, and live in so miserable a manner, that they never have any bread or rice, and have only dates and salt fish for their food, and you must travel nearly 20 leagues inland before finding grass.

This fishing in the Eastern seas takes place twice in the year, the first being in March and April, and the second in August and September, and the sale lasts from the month of June till November, but this fishing does not take place every year. For those who fish like to know beforehand whether it will pay. In order not to be deceived they send to the fisheries seven or eight boats, each of which brings back about 1000 oysters, which are opened, and if there is not

¹ This physiological explanation will hardly receive acceptance at the present time. (Comp. *Pliny*, Book IX, chap. 57.)

² Diamond and gold washing have always, likewise, been the most miserably requited trades in India.

³ Cape Jask, or the *Râs Jâshak* of the Arabs, is "a point on the eastern side of the Gulf of Oman near the entrance to the Persian Gulf, and 6 miles south of a port of the same name. The latter was frequented by the vessels of the English Company whilst the Portuguese held Hormuz. After the Portuguese were driven out of Hormuz (1622) the English trade was moved to Gombroon." (Yule-Burnell, *Anglo-Indian Glossary*, p. 345.)



found in every thousand oysters the value of 5 *fanos* of pearls—that is to say a half *écu* of our money,¹—it is accepted as a proof that the fishing will not be good, and that these poor people would not recover the outlay which they would have to incur. For both on account of their outfit and for their food during the time of the fishing they borrow money at the rate of from 3 to 4 per cent per month. Accordingly, if, at the least, 1000 oysters do not yield 5 *fanos* worth of pearls, they do not fish during that year. The merchants buy the oysters on chance, and content themselves with what they find inside. It is a great piece of good fortune when large pearls are found, but it rarely occurs, especially at the MANAR fishery, which produces no large ones, as I have said, the majority being only pearls to be sold by the ounce and ground into powder.² Only a few among them weigh half a grain or a grain, and it is a great event when any of 2 or 3 carats are found. In some years the 1000 oysters contain up to 7 *fanos* worth, and the whole fishing yields 100,000 *piastres* and over.³ While the Portuguese were masters of MANAR they levied toll from every boat, and the Dutch, who have taken possession of it from them, now levy 8 *piastres* from each diver, and sometimes up to 9; this yields them a revenue in the best years amounting to 17,200 *reals*. The reason why the Portuguese took this revenue from these poor people, and why the Dutch take it still, being that they are obliged to protect them against

¹ Or 2s. 3d. The *écu* being worth 2 rupees, or 4s. 6d., therefore these *fanos* were worth 5.4d. each.

² The term *aljofer* was applied by the Portuguese to seed pearls, said to be from *al'jauhar*, Arab., a jewel. (See *Anglo-Indian Glossary*.)

³ With the *piastre* at 4s. 6d. this would be equal to £22,500.



their enemies, the *Malabaris*, who come with armed boats to capture these fishers in order to make slaves of them.

Whilst the fishing lasts the Dutch always keep, at sea, two or three armed boats on the quarter whence the *Malabaris* come, these precautions being taken so that the work may proceed in safety. The fishermen are for the most part idolaters, but there are also Muhammadans who have separate boats. They never mingle with one another, and the Dutch levy more from the latter than from the others. For the Muhammadans, besides having to pay as much as the idolaters, have also to give one day's take, the particular day being left to the choice of the Dutch.

The heavier the rainfall in the year, the better is the pearl-fishery. But since many think that at the greatest depths at which the oyster is found, the pearl is whitest, because the water is not so hot there, and the sun has more difficulty in penetrating to the bottom, it is necessary to correct this error. The fishing is carried on in from 4 to 12 *cubits* depth on the banks, where there are sometimes up to 250 boats. In the majority (of the boats) there is but one diver, and in the largest only two. These boats sail from the coast every day before sunrise, with a land wind which never fails and lasts till 10 A.M. In the afternoon they return with a wind from the sea, which succeeds the land-wind, and does not fail to blow at 11 or 12 o'clock, as soon as the other has ceased. The banks are at 5 or 6 leagues out to sea, and when the boats have arrived there the oysters are fished for in the following manner :—

A cord is tied under the arms of those who dive,



which those who remain in the boats hold by the end. Attached to the diver's great toe is a stone of 18 to 20 pounds weight, which those who remain in the boat also hold by a rope. They have also a net made like a sack, the mouth of which is surrounded by a hoop to keep it open, and this net is attached like the rest. Then the diver plunges into the sea, and as soon as he reaches the bottom, which he does quickly, on account of the weight of the stone attached to his great toe, he removes the stone, and those who are in the barque draw it up. For as long as the diver is able to hold his breath he puts oysters into the net, and as soon as he feels that he is unable to hold out longer, he pulls the cord which is tied under his arms; this is the signal for him to be drawn up, which those who are in the boat do as quickly as they can. The people of MANAR are better fishers, and remain for a longer time under the water than those of BAHREN and EL'KATIF, for they do not place any clips on their noses nor cotton in their ears to keep the water from entering, as is done in the PERSIAN GULF.

After the diver has been drawn into the boat the nets containing the oysters are hauled up, and it requires about seven or eight minutes to lift the oysters and to give the diver time to regain breath, after which he returns to the bottom as before; this he does many times during ten or twelve hours, and then returns to land. Those who are in want of money sell what they have taken, at once, but those who have what they require to live on, keep the oysters until the whole fishing is finished. The oysters are left unopened, and as they decay open of themselves. There are some of these shells which are four times as large as those of

our ROUEN oysters, but as the flesh of this kind of oyster, of which we speak, is poor and of bad flavour, it is not eaten but is thrown away.

To conclude the discourse on pearls, it should be remarked that throughout EUROPE they are sold by carat weight, which is equal to 4 grains, the same as the diamond weight, but in ASIA the weight is different. In PERSIA the pearls are weighed by the *abás*, and an *abás* is an eighth less than our carat. In INDIA, and in all the territories of the GREAT MOGUL and the Kings of GOLCONDA and BIJAPUR, they are weighed by *ratis*, and the *rati* is also an eighth less than the carat.¹

X GOA was formerly the place where there was the largest trade in all ASIA in diamonds, rubies, sapphires, topazes, and other stones. All the miners and merchants went there to sell the best which they had obtained at the mines, because they had there full liberty to sell, whereas, in their own country, if they showed anything to the Kings or Princes, they were compelled to sell at whatever price they pleased to fix. There was also at GOA a large trade in pearls, both of those which came from the island of BAHREN in the PERSIAN GULF, and those fished for in the straits of MANAR on the coast of the island of CEYLON, as also of those which were brought from AMERICA. It should be known then, that in GOA and in all the other places which the Portuguese hold in INDIA, they have a particular weight for pearls which is not used in the other places where there is a trade in pearls, neither in

¹ Kelly in the *Universal Cambist*, i, p. 278, gives the value of the Persian *abás* as 3.66 diamond grains = 2.25 (2.9?) troy grains. But it has been shown that the pearl *rati* of our author was equal to 2.77 troy grains. (See vol. i, Appendix, p. 417, and Preface, vol. ii, for correction.)



EUROPE, ASIA, nor AMERICA. I do not include AFRICA, because this trade is unknown there, and because in that part of the world the women content themselves, in lieu of jewels, with pieces of crystal, beads of false coral or yellow amber, of which they make necklaces and bracelets to wear on their arms and legs.

The Portuguese, then, in all the places in INDIA where they are in authority, sell pearls by a weight which they call *chegos*, but buy them of the merchants, according to the places from whence they bring them, by carats, *abás*, or *ratis*. The table which follows shows the *ratio* between these *chegos* and carats.

Carats.	Chegos.	Carats.	Chegos.	Carats.	Chegos.	Carats.	Chegos.
1	5	11	84	21	306	31	667 $\frac{1}{4}$
2	8	12	100	22	336	32	711
3	11 $\frac{1}{2}$	13	117	23	367 $\frac{1}{4}$	33	756 $\frac{1}{4}$
4	16	14	136	24	400	34	802 $\frac{3}{4}$
5	21	15	156	25	430	35	850 $\frac{1}{2}$
6	27	16	177 $\frac{3}{4}$	26	469 $\frac{1}{4}$	36	900
7	34	17	200 $\frac{1}{2}$	27	506 $\frac{1}{4}$	37	950 $\frac{1}{2}$
8	44	18	225	28	544 $\frac{1}{2}$	38	1002 $\frac{3}{4}$
9	56	19	250 $\frac{1}{2}$	29	584	39	1056
10	69	20	277 $\frac{3}{4}$	30	625	40	1111 $\frac{1}{4}$ ¹

¹ With such an extraordinary table of equivalents one may easily understand the difficulty that is experienced in reconciling statements about weights and measures. If 1 carat equals 5 *chegos*, it might be supposed that 20 carats would equal 100 *chegos*, and 40 carats 200; but it will be seen that the equivalents above given are 277 $\frac{3}{4}$ and 1111 $\frac{1}{4}$ respectively. (See Preface for explanation.)

The relationship between the real weight called the *mangelin* in Madras, and the nominal weight called *chow*, though it does not elucidate this table, throws some light on the subject. *Rule*—Square the number of *mangelins*, and divide three-fourths of this product by the number of pearls. The quotient is the number of *chows*. *Example*—To find value of 21 pearls weighing 16 *mangelins* at 12 *pagodas* per *chow*, $16 \times 16 \times \frac{3}{4} = 192$, $192 \div 21 = 9$ *chows* 9 $\frac{1}{4}$ parts, which at 96s. per *chow* = £43 : 17 : 8 $\frac{3}{4}$. (See Kelly, *Universal Cambist*, p. 92.)



CHAPTER XXII

Remarks upon the largest and most beautiful Diamonds and Rubies which the Author has seen in EUROPE and ASIA, the figures of which are here given, together with those of large Stones which he sold to the King on his return from his last Journey to INDIA, with a representation of a magnificent Topaz, and the largest Pearls in the World.

I SHALL follow the order of the figures as they are arranged by their numbers, and I shall commence with the heaviest diamond of which I have any knowledge:—

No. 1. This diamond¹ belongs to the GREAT MOGUL, who did me the honour to have it shown to me with all his other jewels. You see represented here its form after having been cut, and, as I was allowed to weigh it, I ascertained that it weighed $319\frac{1}{2}$ *ratis*, which are equal to $279\frac{9}{16}$ of our carats. When in the rough it weighed, as I have elsewhere said, 907 *ratis*, or $793\frac{5}{8}$ carats. This stone is of the same form as if one cut an egg through the middle.²

¹ For full discussion of all the facts connected with the Great Mogul's diamond, see Appendix I, and Index.

² This operation may be performed in either of two ways; from the figure given by Tavernier he evidently means transversely. The Koh-i-núr as it was when brought to England might be described as of

No. 2 represents the form of the Grand Duke of TUSCANY's diamond, which he has had the goodness to show me upon more than one occasion. It weighs $139\frac{1}{2}$ carats, but it is unfortunate that its water tends towards the colour of citron.¹

No. 3 is of a stone² weighing $176\frac{1}{8}$ *mangelins*, which amount to $242\frac{5}{16}$ of our carats. The *mangelin*, as I have said, is the weight used in the Kingdoms of GOLCONDA and BIJAPUR, and it amounts to $1\frac{3}{8}$ of our carats. When at GOLCONDA in the year 1642, I was shown this stone, and it is the largest diamond I have seen in INDIA in the possession of merchants. The owner allowed me to make a model of it in lead, which I sent to SURAT to two of my friends, telling them of its beauty and the price, namely 500,000 rupees, which amount to 750,000 *livres* of our money.³ I received an order from them, that, if it was clean and of fine water, to offer 400,000 rupees, but it was impossible to purchase it at that price. Nevertheless, I believe

the shape of half an egg, cut longitudinally, but this difference of form, as I shall explain, was the result of the mutilation to which it was subjected. (See Appendix I.)

¹ For identification of this stone with the Austrian yellow, now the property of the Emperor of Austria, and known as the Florentine, see *Index*. Its weight, as recently determined by Schrauf, is $133\frac{1}{8}$ Vienna carats, or 27.454 *gramms*. His figure of it corresponds with that given by our Author. The figures of the Austrian yellow by Murray, and following him by Emanuel, represent a distinct stone.

² It is not known whether this stone still exists in the form it had when seen by Tavernier. Mr. Streeter (*Great Diamonds*) devotes a chapter to it under the title "The Great Table." I do not know the source from whence the story which he gives as to its discovery by a Bheel Chief is derived. What has become of it is not known; it has most probably been broken up.

³ £56,250.



that it could have been obtained if they would have advanced their offer to 450,000 rupees.

No. 4 represents a diamond which I bought at AHMADÁBÁD for one of my friends. It weighed 178 *ratis*, or $157\frac{1}{4}$ of our carats.¹

No. 5 represents the shape of the above mentioned diamond after it had been cut on both sides. Its weight was then $94\frac{1}{2}$ carats, the water being perfect. The flat side, where there were two flaws at the base, was as thin as a sheet of thick paper. When having the stone cut I had all this thin portion removed, together with a part of the point above, where a small speck of flaw still remains.²

No. 6 represents another diamond which I bought in the year 1653 at the KOLLUR mine. It is beautiful and pure, cut at the mine. It is a thick stone, and weighs 36 *mangelins*, which are equal to $63\frac{3}{8}$ of our carats.³

Nos. 7 and 8. The two pieces represented are from a cleaved stone, which, when whole, weighed $75\frac{5}{8}$ *mangelins*, or 104 carats.⁴ Although of good water, there appeared so much impurity inside it, that,

¹ The equivalent should be $155\frac{3}{4}$ carats.

² Mr. Streeter (*Great Diamonds*) heads a chapter with this, the "Ahmadábád Diamond," but so far as the stone is concerned, all that can be said is, that nothing is certainly known of its subsequent history. It may have been disposed of in Persia.

³ The equivalent of 36 Kollur or Golconda *mangelins* in carats at $1\frac{3}{8}$, is $49\frac{1}{2}$ carats, and in Ramulkota *mangelins* at $1\frac{3}{4}$ (see p. 89) = 63 carats. Nothing further is known of this stone.

⁴ Strictly $103\frac{63}{64}$ carats, in round numbers therefore 104, the *mangelins* being those of Golconda at $1\frac{3}{8}$ carats in this case.

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as it was large and high-priced there was no one among the *Banians* who dared to purchase it. At length a Dutchman named BAZU ventured to do so, and, having had it cleaved, he found inside it about 8 carats weight of impurity like decomposed vegetable matter.¹ The small piece was clean, save for a nearly imperceptible flaw; but as for the other, where the flaws traversed right through, it had to be divided into seven or eight pieces. The Dutchman risked much in cleaving this stone, and it was a great piece of good luck for him that it did not break into a hundred fragments. Still, for all that, it did not repay him; this makes it sufficiently plain that where the *Banians* refuse to bite there is nothing to be hoped for by the *Franks*.

Figures of twenty Diamonds which the Author sold to the King on his return from his last Voyage to INDIA. The figures before the Reader show the weight, the extent, and thickness of each Stone.²

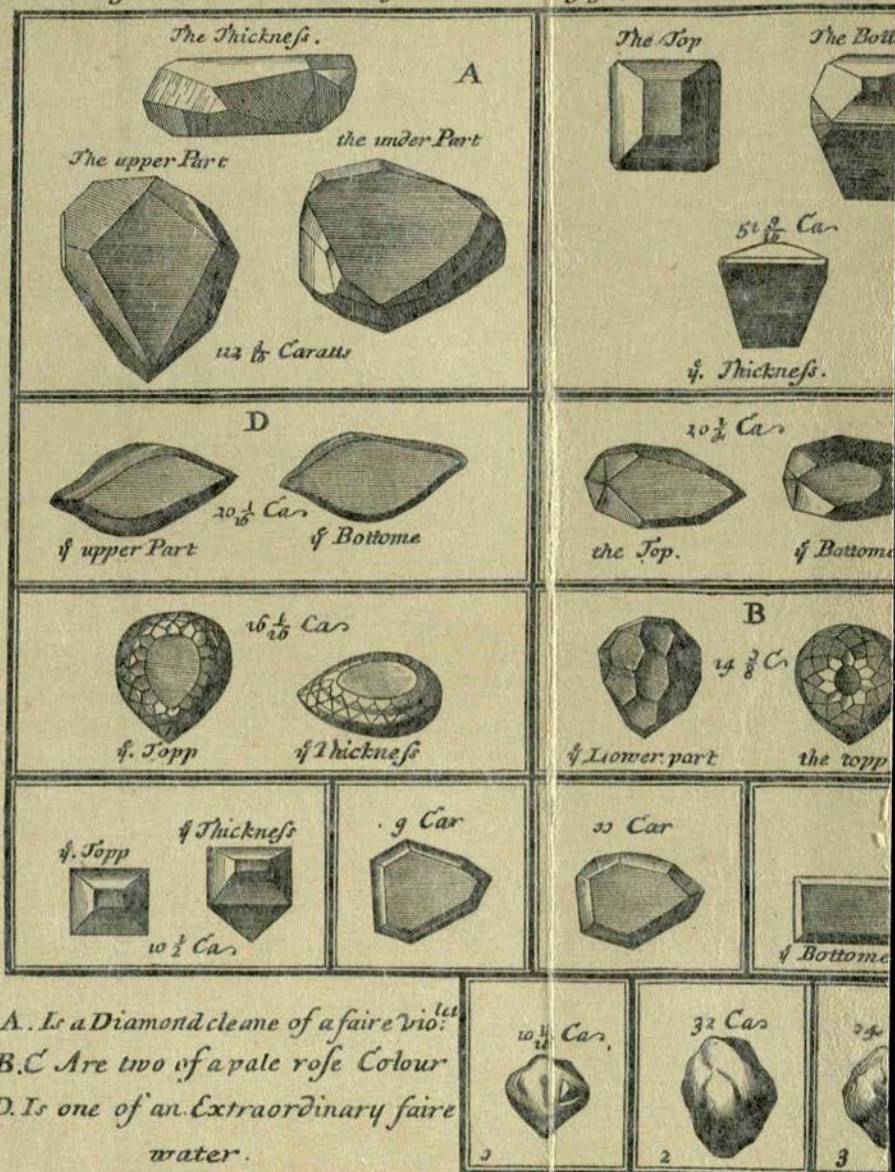
These are the figures of the most beautiful rubies in the world, and of the topaz of the GREAT MOGUL, in the order in which they are arranged here by numbers.

¹ This case has been quoted in connection with investigations into the nature and origin of the diamond. Mr. Streeter devotes a chapter to this diamond. (See *Great Diamonds*, chap. xxx, p. 218.)

² The violet-blue diamond A, and the two rose-coloured diamonds B and C, which are here figured, are referred to in "A Note about some unusual Diamonds," published in the *Phil. Trans.* for 27th April 1674, No. 102, p. 26, as being in a representation of a considerable number of diamonds, which were sold by Tavernier to the King of France. Hence it would seem that this plate reached the Royal Society in London before the publication of the travels in 1676. The adamantine hardness of the stones, in spite of their unusual colours, caused them to be admitted to be diamonds. The history of the blue diamond is well

PLATE III.

*A Representation of 24 of fairest Diamonds Chosen out among
Monsieur Tavernier sold to the King at his last return from the Indies
severall Services done the Kingdome His Majesty honored him with*



*A. Is a Diamond cleane of a faire vio:^{let}
B.C Are two of a pale rose Colour
D. Is one of an Extraordinary faire
water.*

N.B.—The scale is somewhat smaller than it is in the



No. 1. Figure of a ruby which belongs to the King of PERSIA. It is of the thickness and shape of an egg, is bored through and of very high colour, beautiful and clean, with the exception of a small flaw at the side. The custodians are unwilling to say what it cost, as is also the case with the pearl belonging to the same King, which is represented further on; they are likewise unwilling that any one should know what either of them weighs. Those who keep the registers of the King of PERSIA's jewels merely say that this ruby has been in the possession of the King for many years.

No. 2 represents a large stone believed to be a ruby, and sold as such to ZAFAR KHÂN, the GREAT MOGUL's uncle, who bought it for the sum of 95,000 rupees, which amount to 1,425,000 *livres*.¹ He presented it to the GREAT MOGUL, with many other precious things, on the King's festival, that is to say, the day whereon he is weighed, as I have elsewhere said. This stone having been priced at a little less than it cost, there happened to be present at that time an old Indian who had previously been chief jeweller to the King, but had been dismissed from his charge through jealousy. Having taken this stone in

told in Mr. Streeter's work on *The Great Diamonds*. The blue diamond which belonged to Mr. Hope, weighing $44\frac{1}{4}$ carats, is believed to be a fragment of this stone, which was stolen from the Garde Meuble in 1792.

¹ There is here a mistake on one side or the other; a cipher should either be added to the rupees or subtracted from the *livres*. See vol. i, p. 389, where the total value of a present made by Zafar Khân is put at 1,050,000, hence perhaps it may be concluded that the figure here should be 142,500 *livres*, but it is not certain that the occasions referred to were identical.



his hands, he maintained that it was not a *balass*¹ ruby, that ZAFAR KHÁN had been cheated, and that the stone was not worth more than 500 rupees. The King having been informed of the discussion, summoned the old Indian, with all the other jewellers, who maintained on their side that the stone was a *balass* ruby. As in the whole Empire of the GREAT MOGUL there was no one more proficient in the knowledge of stones than SHÁH JAHÁN, who was kept as a prisoner at AGRA by AURANGZEB, his son, the latter sent the stone to the King, his father, asking for his opinion. After full consideration he confirmed the verdict of the old jeweller, and said that it was not a *balass* ruby, and that its value did not exceed 500 rupees. The stone having been returned to AURANGZEB, he compelled the merchant who had sold it to take it back and return the money he had received.

Nos. 3 and 4 are figures of a ruby which belongs to the King of BIJAPUR. No. 4 shows the height of the stone above the ring, and No. 3 the circuit of the *chaton*.² It weighs 14 *mangelins*, which equal $17\frac{1}{2}$ of our carats, the *mangelin* at BIJAPUR being 5 grains.³ It is hollowed from beneath (*i.e.* cut *en cabuchon*), clean, and of the first quality. The King of BIJAPUR bought it in the year 1653 for the sum of 14,200 new *pagodas*, the *pagoda* being then worth $3\frac{1}{2}$ rupees, this, in our money, would be equal to 74,550 *livres*.⁴

¹ *Ballet* in the original, for *balass*. (See vol. i, p. 382 n.)

² The *chaton* is the bezel of a ring which holds a jewel in position.

³ On p. 124 the Bijapur *mangelin* is said to be equal to $1\frac{3}{8}$ carats (*i.e.* $5\frac{1}{2}$ diamond grains), and 14 *mangelins* should therefore be equal to $19\frac{1}{4}$ carats.

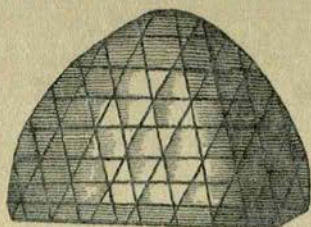
⁴ £5591: 5s.



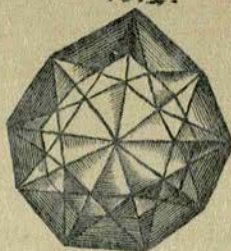
PLATE II.

DIAMONDS.

N. 2.



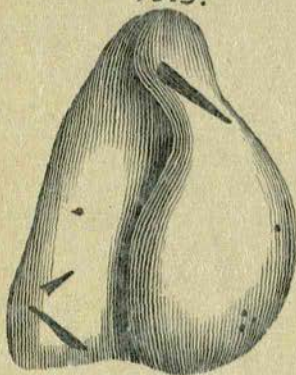
N. 2.



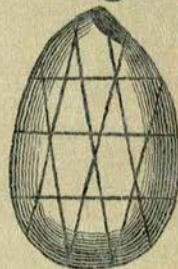
N. 3.



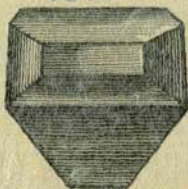
N. 4.



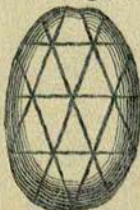
N. 5.



N. 6.



N. 7.



N. 8.

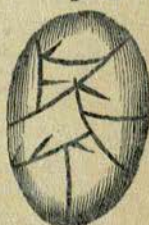
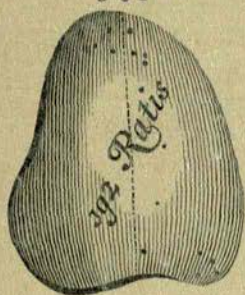


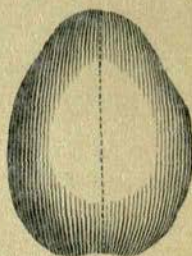
PLATE IV.

RUBIES AND TOPAZ.

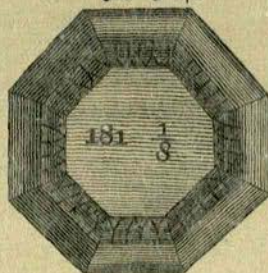
N 1 *



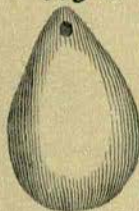
N 2 *



N 6 *



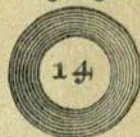
N 5 *



N 4



N 3 *



No. 5 is the figure of a ruby which a *Banian* merchant showed me at BENARES on the occasion of my last visit to INDIA. It weighs 58 *ratis*, or $50\frac{3}{4}$ ¹ carats, and is of the second quality. Its form is of an almond *cabuchon* somewhat hollowed beneath, and bored near the point. I was willing to give 40,000 rupees for it, which make 60,000 *livres*,² but the merchant to whom it belonged asked 55,000 rupees. I believe I could have got it for 50,000 rupees.³

No. 6 is the figure of the large topaz of the GREAT MOGUL. I did not see him wear any other jewel during the time I remained at his Court on my last visit to INDIA. This topaz weighs $181\frac{1}{8}$ *ratis*, or $157\frac{1}{4}$ carats.⁴ It was bought at GOA for the GREAT MOGUL, for the sum of 181,000 rupees, or 271,500 *livres* of our money.⁵

No. 7. These grand monarchs of ASIA are not the only ones in the world who are in possession of beautiful stones. I have not seen as large rubies in any of the thrones of the GREAT MOGUL as are those represented in the plate Nos. 7, 8, and 9, which belong to our great King, the most powerful and magnificent, in all respects, among the Monarchs of the earth!

¹ At the rate of one *rati* = $\frac{7}{8}$ th of a carat.

² £4500.

³ £5750.

⁴ $181\frac{1}{8}$ *ratis* = $158\frac{1}{2}$ carats nearly. In vol. i, p. 400, it was said to weigh 6 *melscais* = 1 Fr. *once*. It was probably the stone referred to in vol. i, p. 372. Bernier, already quoted, alludes to it as "a beautiful oriental topaz of matchless size and splendour, shining like a little sun." (*Travels in the Mogul Empire*, p. 179, Calcutta, 1826.)

⁵ £20,412 : 10s.



Here again are figures of the largest pearls of which we have knowledge, in the order of their numbers.

No. 1 is the figure of a pearl which the King of PERSIA bought in the year 1633 from an Arab who had just received it from the fisheries at EL KATIF. It cost him 32,000 *tomans*, or 1,400,000 *livres* of our money, at the rate of 46 *livres* and 6 *deniers* per *tooman*.¹ It is the largest and most perfect pearl ever discovered, and it has not the least defect.

No. 2 is the figure of the largest pearl which I saw at the Court of the GREAT MOGUL. It is suspended from the neck of a peacock made of precious stones, and rests on the breast, and this peacock surmounts the throne.

No. 3 is the figure of a pearl which I sold, on my last journey, to SHÁISTÁ KHÁN,² uncle of the GREAT MOGUL and Governor of BENGAL. It weighs 55 carats, but the water is somewhat dead; it is the largest pearl which has ever been taken from EUROPE to ASIA.

¹ $32,000 \times 46l. 6d. = 1,472,800 \text{ livres} = \text{£}110,460$, and 32,000 *tomans* at $\text{£}3:9s. = \text{£}110,400$. Ainslie, referring to this in his chapter on pearls as a drug, erroneously states that Tavernier himself paid the enormous sum of $\text{£}110,000$ for this pearl. (*Materia Medica*, vol. i, p. 294.) A value of $\text{£}64,000$ for this pearl is mentioned by Streeter (*Precious Stones and Gems*, 3d Edition, part iii, p. 14), but that sum appears to have been derived from an under-estimate of the equivalent values of the *livre* and *tooman*, as known to Tavernier.

² See for the incidents connected with the sale of this pearl Book I, chap. viii. It was the cause of serious disagreement between Tavernier and Sháístá Khán. On p. 112 Tavernier states that it came from the American pearl fishery.