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# TRAVELS IN INDIA

BY

## JEAN BAPTISTE TAVERNIER

BARON OF AUBONNE

TRANSLATED FROM THE ORIGINAL FRENCH EDITION OF 1676

WITH A

BIOGRAPHICAL SKETCH OF THE AUTHOR

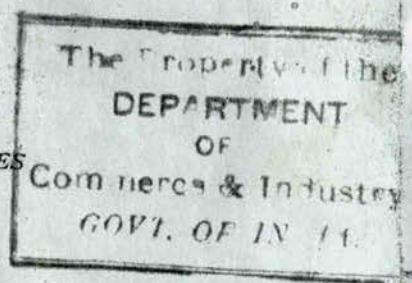
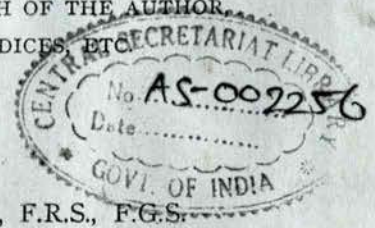
NOTES, APPENDICES, ETC.

BY

V. BALL, LL.D., F.R.S., F.G.S.

DIRECTOR OF THE SCIENCE AND ART MUSEUM, DUBLIN

AUTHOR OF 'JUNGLE LIFE IN INDIA,' 'THE ECONOMIC GEOLOGY OF INDIA,' ETC.



IN TWO VOLUMES

VOL. II

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1889

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JEAN BAPTISTE TAVERNIER

BARON OF AUBONNE

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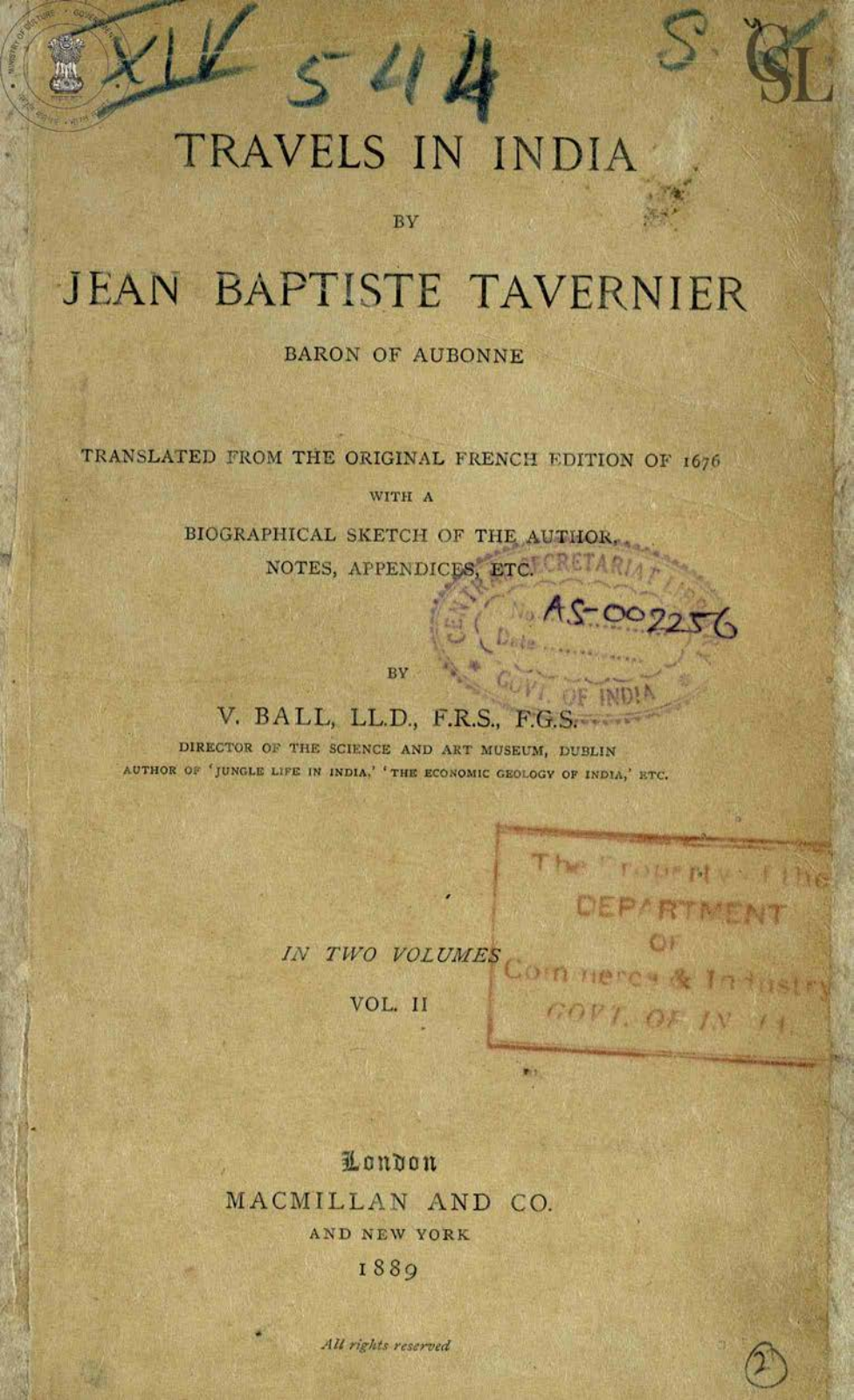


JEAN BAPTISTE TAVERNIER

BARON OF AUBONNE

Dressed in the Robes of Honour presented to him by the Shah of Persia





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## PREFACE

IN the course of the preparation of a work of so diversified and complex a character as this, it is almost certain to be the case that, even up to the last moment before publication, matter bearing upon the subject comes to hand. The present occasion, so far from forming an exception to the rule, exemplifies it in a very remarkable degree. The subjects upon which additional information has been acquired during the progress of the printing of these volumes are many; but there are some in particular which deserve special notice, to which it may therefore be well to call attention here.

Through the kindness of Prof. Joret I have received a pamphlet, written by himself, entitled *Le Voyageur Tavernier* (1670-1689), in which he has pursued his investigations as to the events of the last twenty years of Tavernier's life. As some of these confirm while others modify the conclusions set forth in the Introduction to vol. i, it is desirable to notice them briefly.

Prof. Joret describes his examination of the original manuscripts of Tavernier's *Memoirs*, which are in the possession of M. Schefer at his Chateau of St. Alban near Chambéry. Without entering into details, it





may be said that they completely confirm the view expressed in the Introduction, that the material made use of by Chappuzeau was largely documentary ; that it could have been communicated orally by dictation, the internal evidence, as it appeared to me, sufficiently disproved.

Chappuzeau's work consisted in giving a literary style, such as it was, to Tavernier's simple and rough notes ; but in this work Tavernier himself very possibly assisted. These MS. *Memoirs* contain some details not included in the *Travels*, such as personal expenses and other minor day-to-day notes. The death of M. Ardilliére, a subject of some confusion (see p. 159 *n*), is fixed by the original record as having taken place on the 12th December 1652. And Tavernier's arrival at Ispahan in 1654 was on the 9th of July, not in May as previously supposed.

It is hoped that this original text may be published, as it would seem, from the glimpse of it thus given by Prof. Joret, that it would to a great extent aid in co-ordinating various statements in the published *Travels* which are now contradictory.

The suggestion that J. B. Tavernier had been imprisoned in the Bastille on the 13th January 1686 is now shown<sup>1</sup> to be a mistake, and that it was a namesake of his, a Tavernier of Villiers-le-Bel, who was so incarcerated.

Passing the important additional information obtained as to Tavernier's relations with the Elector of Brandenburg, we find that Prof. Joret has reason for concluding that the discovery of the supposed

<sup>1</sup> M. Douen in *Bulletin de la Société du Protestantisme Français*, vol. xxxiv, 1887, p. 95.





tombstone of Tavernier at Moscow is of a somewhat mythical character ; but, be that as it may, an important letter from the Swedish Resident at Moscow, dated 8th March 1689, has been discovered, by which the Swedish Chancellor was informed that Tavernier had died three weeks previously, not at Moscow, but at Smolensk, when on his journey to Moscow.

In Book II, chap. xxi (vol. ii, p. 122) a table is given showing the ratio between carats and a weight called *chegos*, which was used by the Portuguese in the pearl trade. I was unable to explain this table ; but since it has been in type I have shown it to Mr. A. Rambaut, Assistant to the Astronomer Royal for Ireland, who has very kindly given me what appears to be a completely adequate explanation of its construction, as follows :—For the first six equivalents the equation  $y = 3 + 1\frac{3}{4}x + \frac{3}{8}x^2$ , represents the relation where  $y$  = the number of *chegos* and  $x$  the number of carats, subject, however, to the condition that wherever an uneven number of eighths of a carat occurs one is rejected. If this rule is followed the precise figures of Tavernier's table are obtained.

From seven carats onwards a very simple rule is followed in order to obtain the number of *chegos*. It is to multiply the number of carats by 10, divide by 12, and square the result—thus  $36 \times 10 \div 12 = 30$ , which squared = 900. There is one exception to this rule in the case of 25 carats, which in the table is given as equal to 430 *chegos*, whereas it ought to be, when calculated as above, 434.05 *chegos*. This discrepancy is probably due to a misprint, so that the table should be corrected accordingly.

When in the course of these pages reference was





made to the Grand Duke of Tuscany's diamond, it was supposed that the weight given by Schrauf for this diamond, which is now in the Imperial Treasury in Austria, was to be accepted as more correct than Tavernier's, but an examination of Schrauf's original papers shows that he really confirms Tavernier's weight for the stone in a very remarkable way. The present weight is  $133\frac{1}{2}$  Vienna carats, which are equal to  $139\frac{1}{2}$  of the lighter Florentine carats; and as Tavernier gives the weight at  $139\frac{1}{2}$  carats we are justified in concluding that in this case he used, and that in general he was probably in the habit of using, the Florentine carat = 0.1972 grams,<sup>1</sup> or 3.04 grs. troy, *i.e.* 4 per cent less than the English carat. The previous estimate of the value of the pearl *rati* given in Appendix, vol. i, having been calculated on the basis of  $\frac{7}{8}$ ths of a modern English or French carat, amounted to 2.77 grs. troy; but as  $\frac{7}{8}$ ths of a Florentine carat only amounts to 2.66 grs. troy, it seems probable that that would more closely approximate to the value of the pearl *rati* which was used in the weighment of jewels by Tavernier. From the discussion on the weight of Bábar's diamond given in Appendix I (p. 432) in this volume, it will be seen that there is independent testimony by Ferishta in favour of the view that 2.66 approximates more closely to the true value of the *rati* known to Tavernier and Ferishta. Other confirmatory evidence of this having been the value of the pearl *rati* will be found in the same Appendix.

A partial and preliminary notice of Tavernier's work has been referred to on p. 126 as having appeared

<sup>1</sup> Prof. Church, *Precious Stones*, p. 50, gives the value as 0.1965 grams.





in the *Philosophical Transactions*, to which it should be added that in the same journal abstracts of the contents of the first two volumes were subsequently published.<sup>1</sup>

The reader's attention is invited to the curious facts brought out in Appendix VI, from which it would appear that Chappuzeau obtained access to some of Tavernier's *Memoirs* while the latter was still absent on his last voyage. So far as I can ascertain it has never before been recognised that the *Histoire des Joyaux* and the English version of it, *The History of Jewels*, were founded on Tavernier's original *Memoirs*. This work serves to clear up several points commented on in the footnotes.

During a recent visit to Holland I ascertained that, as stated in the Bibliography (see vol. I, p. xlvi,) there is but one edition of Tavernier's Travels in the Dutch language. It was translated by J. H. Glazemaker, and published at Amsterdam in 1682. A copy of it which I obtained contains a number of engravings by Jan Luyken in addition to copies of the original plates in the French editions.

It is hoped that the present edition of Tavernier's Indian Travels, by drawing attention to the work, will hereafter lead to the further elucidation of many points of interest; and the Editor desires to intimate here, to those who may be willing to assist, that he will gratefully acknowledge all contributions on the subject which he may receive from readers of these volumes.

<sup>1</sup> No. 129, Nov. 20, 1676, p. 711; No. 130, Dec. 14, p. 751.





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## PLATES IN THE ORIGINAL NOT REPRODUCED

Figures of three Rubies belonging to His Majesty.

The animal which produces musk.

Cobra di capello.

Banyan tree and Fakirs.

A Fakir.

*Canjare* (*Khánjar*), or dagger.

Marks on Batavian *reales*.

*Note.*—The Dutch Edition (see *ante*, p. xiii) contains some additional Plates.





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## ERRATA ET CORRIGENDA.

Page 53, note 1, also page 78, for identification of the fourth mine,  
see p. 476.

- „ 94, line 18, for  $1\frac{3}{4}$  read  $1\frac{1}{2}$ .
- „ 97, note 2, for *Sol* 9d read *Sol* 0.9d.
- „ 98, note, line 3, for  $133\frac{1}{4}$  read  $133\frac{1}{2}$ .
- „ 144, note, line 2, for *of* read *in*.
- „ 159, note 1, line 11, for pp. 336 and 690 read 246 and 306.
- „ 206, note, for *Kulliani* read *Callian Bandar*.
- „ 260, note 3, for *Arduiel* read *Ardeuil*.
- „ 282, note 3, for *Asia* read *Assam*.



4  
TRAVELS IN INDIACHAPTER XII<sup>1</sup>

*Concerning the articles of merchandise yielded by the Empire of the GREAT MOGUL and the Kingdoms of GOLCONDA and BIJAPUR and other neighbouring territories.*

I CAN easily believe that those who have previously written on the condition of the Empire of the GREAT MOGUL did not feel themselves called upon to give a full list of all the articles of merchandise which it furnishes to foreigners. This I shall endeavour to do according to the information I have acquired during the long years I have passed in different journeys in these countries. The reader will, without doubt, cheerfully approve of this research which I have made with so much care, particularly if he is connected with commerce, and if he desires to know what art and nature produce that is curious, in different places, in order to subserve the human race.

It is necessary to remember here, what I have remarked at the commencement of the first book, touching the weights and measures which are used in

<sup>1</sup> In the English translation by John Phillips of 1684, this chapter is numbered x, the two preceding ones having been omitted.





India, where I have spoken of the *maund* and of the *seer*.<sup>1</sup> It is still necessary to say a word about the *cubit*.<sup>2</sup>

The *cubit* is a measure for all goods which can be measured by the ell, and there are different kinds, as we have different kinds of ells in EUROPE. It is divided into 24 *tassus*,<sup>3</sup> and as the greater part of the goods of INDIA are delivered at SURAT, there is represented on the margin a figure of the fourth part of a *cubit* of the town of SURAT, divided into six *tassus*.

I ought to commence this list of goods with the most precious of all, namely diamonds and coloured stones; but, as that subject is somewhat extensive, and is the most important of my accounts, I shall give it separate treatment, and only mention in this chapter silks, cloths, cottons, spices, and drugs, which are the five classes which include all the kinds of merchandise obtained from INDIA.

### *Concerning Silks.*

KÁSIMBÁZAR,<sup>4</sup> a village in the Kingdom of BENGAL, can furnish about twenty-two thousand (22,000) bales of silk annually, each bale weighing one hundred (100) *livres*. The 22,000 bales weigh 2,200,000 *livres* at 16 *onces* to the *livre*. The Dutch generally took, either for JAPAN or for HOLLAND, 6000 to 7000 bales of it, and they would have liked to get more, but the

<sup>1</sup> See Appendix, vol. i.

<sup>2</sup> *Cubit* in the original. According to the figure here given by Tavernier of a quarter of a cubit, its length must have been  $27\frac{1}{2}$  in. The ordinary *hath* of India, measured from the top of the middle finger to the elbow, is 18 in., but is sometimes increased by the width of the hand or of three fingers.

<sup>3</sup> *Tassots* in the original.

<sup>4</sup> Kasembazar in original, elsewhere Cosenbazar, for Kásimbázár.



merchants of TARTARY and of the whole MOGUL EMPIRE opposed their doing so, for these merchants took as much as the Dutch, and the balance remained with the people of the country for the manufacture of their own stuffs. All these silks are brought to the Kingdom of GUJARÁT, and the greater part come to AHMADÁBÁD and SURAT, where they are woven into fabrics.

Firstly, carpets of silk and gold, others of silk, gold, and silver, and others altogether of silk, are made in Surat. As for the woollen carpets, they are made at FATEHPUR,<sup>1</sup> 12 *cos*s from AGRA.

In the second place, satins with bands of gold and silver, and others with bands of different colours, and others all uniform are made there, and it is the same with the *taffetas*.

Thirdly, *patoles*,<sup>2</sup> which are stuffs of silk, very soft, decorated all over with flowers of different colours, are manufactured at AHMADÁBÁD. They vary in price from eight (8) to forty (40) rupees the piece. This is one of the profitable investments of the Dutch, who do not permit any member of their Company to engage in private trade in it. They are exported to the PHILIPPINES, BORNEO, JAVA, SUMATRA, and other neighbouring countries.

<sup>1</sup> Vettapour in the original, Fatehpur Sikri, which is 23 miles W.S.W. of Agra. See vol. i, p. 89. It was founded as the Metropolis of the Mogul Empire by Akbar in 1570. Previously it bore the name of Sikri. Its magnificence is testified by the ruins of palaces and mosques, which still attract many visitors. Its industries were numerous, including silk spinning, weaving, and stone-cutting. At present the carpets produced there are of an inferior and coarse kind.

<sup>2</sup> This is from the Kanarese *pattuda*, "a silk cloth" (Yule-Burnell, *Anglo-Indian Glossary*, Art. "Patola"). Terry calls them *pintadoes*, and extols the art displayed in stitching together "fresh coloured *taffata* and *pintadoes*, and *taffata* and satin, with cotton wool between, to make quilts." (*A Voyage to East India*, London 1777, p. 127.)





As for crude silks, it should be remarked that none of them are naturally white except that of PALESTINE, of which even the merchants of ALEPPO and TRIPOLI have difficulty in obtaining a small quantity. Thus the silk of KÁSIMBÁZAR is yellow, as are all the crude silks which come from PERSIA and SICILY. But the people of KÁSIMBÁZAR know how to whiten theirs with a lye made of the ashes of a tree which is called Adam's fig,<sup>1</sup> which makes it as white as the silk of PALESTINE. The Dutch carry their silks and the other goods which they obtain in BENGAL by the canal which goes from KÁSIMBÁZAR to the GANGES, and this canal is nearly 15 leagues long. There remains an equal distance to descend by the GANGES to HUGLY, where they ship their goods on board their vessels.

*Concerning Cotton Cloths, and first of the painted fabrics called Chites.<sup>2</sup>*

The *chites* or painted cotton cloths which are called *calmendar*,<sup>3</sup> that is to say, made with a brush, are made in the Kingdom of GOLCONDA, and especially in the neighbourhood of MASULIPATAM; but the quantity made is so small that when one places in requisition all the workers who make these cotton cloths it is with difficulty that he can obtain as much as three bales.

The *chites* which are made in the Empire of the

<sup>1</sup> Adam's fig is a translation of the Portuguese name for the plantain, *Musa paradisiaca*. The Muhammadans believe that its leaves were used by Adam and Eve to clothe themselves with in the Garden of Eden. Hence the name. The ash of the plantain resembles that of the potato, as it contains both potash and soda salts, and the percentage of phosphoric acid and magnesia is said to be about the same in both.

<sup>2</sup> Chintzes.

<sup>3</sup> Properly *kalamdar*, derived from *kalam*, Hin., a pen or brush.





GREAT MOGUL are printed, and are of different degrees of beauty, both on account of the printing and the fineness of the cotton cloth. Those made at LAHORE are the coarsest of all, and consequently the cheapest. They are sold by *corges*,<sup>1</sup> a *corge* consisting of 20 pieces, and costing from 16 to 30 rupees. The *chites* which are made at SIRONJ are sold at from 20 to 60 rupees the *corge* or thereabouts.

All the *chites* of which I am about to speak are printed cotton cloths, of which bedcovers are made, and also *sufrás* or tablecloths, according to the custom of the country, pillowcases, pocket-handkerchiefs, and especially waistcoats for the use of both men and women, principally in PERSIA.

The *chites* of bright colours are made at BURHÁN-PUR. They are made into handkerchiefs, which are at present much used by those who take snuff, and a sort of veil called *ornis*,<sup>2</sup> which the women throughout ASIA use to put on their heads and about their necks.

The *baftas*,<sup>3</sup> or cotton cloths to be dyed red, blue, or black, are taken uncoloured to AGRA and AH-MADÁBÁD, because these two towns are near the places where the Indigo is made, which is used in dyeing, and they cost from 2 rupees the piece up to 30 or 40 rupees, according to the fineness and the gold at both ends, and in some also on the sides. The Indians know how to pass some of these cloths through a certain water which causes them to appear like a waved camlet, and these pieces are the dearest.

These kinds of cotton cloth, which cost from 2 to

<sup>1</sup> Probably from *korí*, Hin., a score.

<sup>2</sup> Or *ornis* (see vol. i, p. 52).

<sup>3</sup> *Bastas* in the original, for *Baftas* (see vol. i, p. 66).





12 rupees the piece, are exported to the coast of MELINDE,<sup>1</sup> and they constitute the principal trade done by the Governor of MOZAMBIQUE, who sells them to the Cafres to carry into the country of the ABYSSINS and the Kingdom of SABA,<sup>2</sup> because these people, not using soap, need only simply rinse out these cloths.

Those which cost 12 rupees and upwards are exported to the PHILIPPINES, BORNEO, JAVA, SUMATRA, and other islands. The women of these islands have for their sole garment a piece of this cotton cloth, which, without cutting, one end serves as a petticoat, and the remainder is wound round the waist and head.

### *White Cotton Cloths.*

White cotton cloths come partly from AGRA and the vicinity of LAHORE, partly from BENGAL, and some from BARODA, BROACH, RENONSARI,<sup>3</sup> and other places. They come in a crude condition to RENONSARI and BROACH, where they have the means of bleaching them in large fields, and on account of the quantity of lemons growing in the neighbourhood, for cotton cloths can never be well bleached if they are not steeped in lemon juice.

The cotton cloths which come from AGRA, LAHORE,

<sup>1</sup> Or Melinda, more properly Malinda, an Arab town on the east coast of Africa in S. Lat. 3° 9'. (See for notice Yule-Burnell, *Anglo-Indian Glossary*.)

<sup>2</sup> Abyssinia and Saba which was probably the Sabœa of Strabo, occupying a large portion of Southern Arabia.

<sup>3</sup> With reference to this place, Col. Yule informs me that it is Nosári or Navasári, and that Van Twist, in his *General Description of India* (1638), says that it was 6 Dutch miles (24 English) to the south of Surat, and produced much coarse cloth.



and BENGAL are sold by *corges*, and they cost from 16 up to 300 or 400 rupees and more, according as the merchant directs them to be made.

The cotton cloths which come from RENONSARI and BROACH are 21 cubits long when crude, but only 20 cubits when bleached. Those of BARODA are 20 cubits when crude, and  $19\frac{1}{2}$  when bleached.

All the cotton cloths or *baftas* which come from these three towns are of two kinds; for there are both broad and narrow kinds, and it is the narrow of which I have just spoken, and which are sold at from 2 to 6 *mahmûdis* each.

The broad *baftas* are  $1\frac{1}{3}$  cubit wide, and the piece is 20 cubits long. They are commonly sold at from 5 to 12 *mahmûdis*, but the merchant on the spot is able to have them made much wider and finer, and up to the value of 500 *mahmûdis* the piece. In my time I have seen two pieces of them sold, for each of which 1000 *mahmûdis* were paid. The English bought one and the Dutch the other, and they were each of twenty-eight (28) cubits. MUHAMMAD ALI BEG, when returning to PERSIA from his embassy to INDIA, presented CHA SEFI II<sup>1</sup> with a cocoa-nut of the size of an ostrich's egg, enriched with precious stones; and when it was opened a turban was drawn from it 60 cubits in length, and of a muslin so fine that you would scarcely know what it was that you had in your hand.<sup>2</sup> On returning from one of my voyages, I had the curiosity to take with me an ounce of thread, of which

<sup>1</sup> Shâh Safi or Safvi II. Tavernier describes him in the *Persian Travels*, Paris Ed., 1676, p. 524.

<sup>2</sup> This must have been like the famous Dacca muslins, upon which such names as *âb rawân*, flowing water, were conferred.





a *livre's* weight cost 600 *mahmūdīs*,<sup>1</sup> and the late Queen-Dowager, with many of the ladies of the Court, was surprised at seeing a thread so delicate, which almost escaped the view.

### *Concerning Spun Cotton.*

Both spun and unspun cotton come from the Provinces of BURHĀNPUR and GUJARĀT. The unspun cottons do not go to EUROPE, being too bulky and of too small value, and they are only exported to the RED SEA, HORMUZ, BASSORA, and sometimes to the islands of SONDE<sup>2</sup> and to the PHILIPPINES. As for the spun cottons, the English and Dutch Companies export large quantities to EUROPE, but they are not of the finest qualities; of the kinds which they send the *maund* weight is worth from 15 to 50 *mahmūdīs*.<sup>3</sup> These are the kinds which are used to make the wicks of candles, and stockings, and to mingle with the web of silken stuffs. As for the finest qualities, they are of no use in EUROPE.

### *Concerning Indigo.*

Indigo comes from different localities of the Empire of the GREAT MOGUL, and in these different localities it is of various qualities, which increase or diminish its price.

In the first place some comes from the country of

<sup>1</sup> *I.e.* about £22 : 10s.

<sup>2</sup> Sunda archipelago, in the Sunda straits, where the volcano of Krakatoa is situated. (See vol. i, p. 191.)

<sup>3</sup> *I.e.* the *maund* of 34 *livres* is worth 11s. 3d. to £1 : 17 : 6, with the *mahmūdī* at 9d.



BIÁNÁ, from INDOUA,<sup>1</sup> and from CORSA,<sup>2</sup> one or two days' march from AGRA; and this is considered to be the best of all. It is made also at eight days' march from SURAT, and at two leagues from AHMADÁBÁD, in a village called SHARKEJ.<sup>3</sup> It is from thence indigo cake comes, and some of the same kind and nearly the same price comes also from the country of the King of GOLCONDA. The *maund* of SURAT, which is 42 *seers*, or  $34\frac{1}{2}$  of our *livres*, is sold for from 15 to 20 rupees. There is also made at BROACH some of the same quality as this last. As for that from the neighbourhood of AGRA, it is made in small pieces like hemispheres, and it is, as I have said, the best in INDIA. It is sold by the *maund*, and the *maund* in these regions is 60 *seers*, which are equal to  $51\frac{3}{4}$  of our *livres*. One pays generally for it from 36 to 40 rupees. Indigo is also produced at 36 leagues from BURHÁNPUR on the road to SURAT at a large village called RAOUT,<sup>4</sup> and other small villages in its neighbourhood; and the people of the place generally sell more than 100,000 rupees worth of it every year.

There comes lastly the indigo of BENGAL, which the Dutch Company conveys to MASULIPATAM; but you can buy this indigo and that of BURHÁNPUR and AHMADÁBÁD cheaper by 30 per cent than that of AGRA.

Indigo is made from a plant<sup>5</sup> which is sown every year after the rains, and which, before preparation, much

<sup>1</sup> Indore?

<sup>2</sup> Corsa I have not been able to identify with certainty. There are villages both to the south and north of Agra with somewhat similar names. Perhaps it is Khurjá in the Bulandshahr District.

<sup>3</sup> Sarquesse in the original. (See vol. i, p. 69 n.)

<sup>4</sup> Raout. This place has not been identified. It was probably not far from Sindkeir.

<sup>5</sup> The indigo plant, *Indigofera tinctoria*, Linn.





resembles hemp. It is cut three times in the year, and the first cutting takes place when it is about 2 or 3 feet high; and it is cut to within 6 inches of the ground. The first leaf is without doubt better than those which follow, the second yielding less by 10 or 12 per cent than the first, and the third 20 per cent less than the second. It is classified by the colour, as seen when a morsel of the paste is broken. The colour of the indigo made from the first crop is of a violet-blue, which is more brilliant and more lively than the others, and that of the second is more lively than that of the third. But besides this difference, which causes a considerable effect on the price, the Indians manipulate the weight and quality, as I shall elsewhere explain.

After the Indians have cut the plant they throw it into tanks made of lime,<sup>1</sup> which becomes so hard that one would say that they were made of a single piece of marble. The tanks are generally from 80 to 100 paces in circuit, and when half-full with water, or a little more, they are filled up with the cut plant. The Indians mix it and stir it up with the water every day until the leaf (for the stem is of no account) becomes reduced into slime or greasy earth. This done they allow it to rest for some days, and when they see that all has sunk to the bottom and that the water is clear above, they open the holes made round the tank to allow the water to escape. Next, the water having been drawn off, they fill baskets with the slime, after which, in a level field, each man is to be seen near his basket taking this paste in his fingers, and moulding it into pieces of the shape and size of a hen's egg cut in

<sup>1</sup> The indigo vats are faced with "*chunam*" (lime), which, especially when made from shells, produces a marble-like surface.



two—that is to say, flat below and pointed above. But as for the indigo of AHMADÁBÁD, it is flattened and made into the shape of a small cake. This is to be particularly remarked, that the merchants, in order to escape paying custom on useless weight, before sending the indigo from ASIA to EUROPE are careful to sift it, in order to remove the dust attached to it, which they afterwards sell to the people of the country, who make use of it in their dyes. Those who are employed to sift the indigo observe great precautions, for while so occupied they hold a cloth in front of the face, and take care that all their orifices are well closed, only leaving two small holes in the cloth for the eyes, to see what they are doing. Moreover, both those who sift the indigo and the writers or sub-merchants of the Company who watch them sifting, have to drink milk every hour, this being a preservative against the subtlety of the indigo. All these precautions do not prevent those who are occupied for eight or ten days, sifting indigo, from having all that they expectorate coloured blue for some time. I have indeed on more than one occasion observed that if an egg is placed in the morning near one of these sifters, in the evening, when one breaks it, it is altogether blue inside, so penetrating is the dust of indigo.

According as the men take paste from the baskets with their fingers steeped in oil, and mould it in pieces, they expose them to the sun to dry. And when the merchants buy the indigo they always burn some pieces in order to see if there is any sand mixed with it. For the peasants who take the paste out of the baskets to separate it into pieces, after they have dipped their hands in oil, place it in the sand, which mingles with





the paste and makes it heavier; and when burnt the indigo becomes a cinder and the sand remains entire. The Governors do all they can to stop this fraud, but there are always some who practise it.

### *Concerning Saltpetre.*

Saltpetre comes in abundance from AGRA and from PATNA, a town of BENGAL; and that which is refined costs three times as much as that which is not. The Dutch have established a depôt at CHAPRA,<sup>1</sup> which is 14 leagues above PATNA; and the saltpetre being refined there, they send it by river to HUGLY. They imported boilers from HOLLAND, and employed refiners to refine the saltpetre for themselves; but have not succeeded, because the people of the country, seeing that the Dutch wished to deprive them of the profits of refining, would not supply them any longer with whey, without the aid of which the saltpetre cannot be bleached, for it is worth nothing at all if it is not very white and very transparent. A *maund* of saltpetre costs 7 *mahmûdis*.<sup>2</sup>

### *Concerning Spices.*

Cardamom, ginger, pepper, nutmegs, mace, cloves, and cinnamon are the several kinds of spices which

<sup>1</sup> Choupar in the original (see vol. i, p. 122). The crude saltpetre is obtained in India by lixiviation of the soil on deserted and even occupied village sites. It consists of the potash nitrate, and a simple explanation may be given of the chemical reaction which produces it. The nitrogenous waste of the village being brought into contact with potash derived from wood-ash, the ammonia is converted into nitric acid, which combines with the potash, and the salt so formed permeates the soil. A century ago most of the saltpetre of the world which was used for gunpowder came from India. Now there are other sources of supply.

<sup>2</sup> *I.e.* 5s. 3d. for 34 *livres*.





are known to us. I place cardamom and ginger as the two first, because cardamom grows in the Kingdom of BIJAPUR and ginger in that of the GREAT MOGUL, and the other kinds of spices are imported from abroad to SURAT, where they constitute an important article of commerce.

Cardamom is the best kind of spice, but is very scarce, and as but a small quantity is grown in the place I have indicated, it is only used in ASIA at the tables of the nobles. 500 *livres* of cardamom are sold at from 100 to 110 *reals*.<sup>1</sup>

Ginger comes in large quantities from AHMADÁBÁD, where it grows in greater abundance than in any other part of ASIA, and it is difficult to realise the quantity which is exported in a candied condition to foreign countries.

Pepper is of two kinds, one of small size, and the other much larger; these are respectively called small and large pepper. The large kind is chiefly from MALABAR, and TUTICORIN and CALICUT are the towns where it is purchased. Some of it also comes from the Kingdom of BIJAPUR, and is sold at RÁJAPUR,<sup>2</sup> a small town of that kingdom. The Dutch who purchase it from the *Malabaris* do not pay in cash for it, but exchange for it many kinds of merchandise, as cotton, opium, vermilion, and quicksilver, and it is this large pepper which is exported to EUROPE. As for the small pepper which comes from BANTAM, ACHIN, and

<sup>1</sup> I.e. with the *real* at 4s. 6d., £22:10s. to £24:15s.

<sup>2</sup> *Regapour* in the original is Rájápur in the Ratnágiri District. As a port its importance has much diminished, it being now inaccessible for large vessels by the creek which connects it with the sea, 15 miles distant. In 1660-61 and 1670 it and the English factory were sacked by Sivaji. (See *Imperial Gazetteer*, vol. xi, p. 385.)





other places eastwards, it is not sent out of ASIA, where much is consumed, especially by the Muhammadans. For in a pound of small pepper there are double the number of seeds that there are in a pound of the large; and the more grains in the *pillaus*, into which they are thrown by the handful, the more are seen, besides which the large pepper is too hot for the mouth.<sup>1</sup>

This small pepper, delivered at SURAT, has been in some years sold at the rate of 13 or 14 *mahmūdīs* the *maund*,<sup>2</sup> and I have seen it bought at this price by the English, who export it to HORMUZ, BASSORÁ, and the RED SEA. As for the large pepper which the Hollanders fetch from the coast of MALABAR, 500 *livres*<sup>3</sup> of it brings them only 38 *reals*, but on the merchandise which they give in exchange they gain 100 per cent.

One can get it for the equivalent in money of 28 or 30 *reals* cash, but to purchase it in that way would be much more costly than the Dutch method. As for large pepper, without going beyond the territories of the GREAT MOGUL there is enough to be obtained in the Kingdom of GUJARÁT, and it is generally sold at the rate of from 12 to 15 *mahmūdīs* the *maund*.<sup>4</sup> The wood of long pepper costs but four *mahmūdīs*.

Nutmeg, mace, clove, and cinnamon are the only spices which the Dutch have in their own hands. The three first come from the MOLUCCA Islands, and the fourth, *i.e.* cinnamon, comes from the island of CEYLON.

<sup>1</sup> It may be remarked that the whole-pepper obtained in the Bazaars, and commonly used in cookery in India, is a much smaller, less pungent, and generally inferior seed to that which comes to Europe.

<sup>2</sup> 9s. 8d. to 10s. 6d. per 34 *livres*, with the *mahmūdi* at 9d.

<sup>3</sup> *I.e.* £6:6s. to £6:15s.

<sup>4</sup> 9s. to 10s. 6d. for 34 *livres*.





There is one thing remarkable about the nutmeg, namely, that the tree is never planted. This has been confirmed to me by many persons who have dwelt for many years in the country. They have assured me that when the nuts are ripe certain birds which arrive from the islands to the south swallow them whole, and reject them afterwards without having digested them, and that these nuts, being then covered by a viscous and sticky substance, fall to the ground, take root, and produce trees, which would not happen if they were planted in the ordinary way.<sup>1</sup> I have here a remark to make upon the subject of the Bird of Paradise. These birds, which are very fond of the nutmeg, assemble in numbers in the season to gorge themselves with it, and they arrive in flocks as flights of field-fares do during the vintage. As this nut is strong it intoxicates these birds and causes them to fall dead upon the spot, and immediately the ants which abound in the country eat off their feet. It is on this account that it is commonly said that a Bird of Paradise with feet<sup>2</sup> has never been seen. This is, however, not

<sup>1</sup> This is so far true as regards the fact that the great fruit-eating pigeons are able to swallow large fruits, the stones of which they afterwards reject. These pigeons belong to the genera *Carpophaga* and *Myristicivora*, and I have often been amazed at the wide gape and the mobility of the articulation of the jaws of these birds. When wounded I have seen them disgorge very large fruits. Several species occur in the Andaman and Nicobar Islands, and other allied species in the Malayan Archipelago. That these birds aid in propagating plants in remote islands by conveying the seeds cannot be doubted.

<sup>2</sup> As is well known, the true origin of this fable about the *apodas* is, that the natives who prepare the plumes of the birds of paradise for decorative purposes remove the feet from the skins, and as the birds were in early times only known by these dried and stitched-up skins, the idea spread that they had no feet. Tavernier's explanation shows the tenacity of the myth.





precisely true, for I have seen three or four with their feet intact, upon which the ants had not had time to operate.

A French merchant, named CONTOUR, sent one which had feet, from ALEPPO, to King LOUIS XIII, who prized it much as it was so beautiful.

But notwithstanding all the Dutch can do to prevent it, you can obtain cloves at MACASSAR, in the Isle of CELEBES, without the spice passing through their hands, because the islanders buy in secret from the captains and soldiers of the forts belonging to the Dutch at the places where the cloves grow, taking them in exchange rice and other necessities of life, without which they would be unable to subsist, being miserably supported. Whilst commerce was vigorously pushed by the English, they acted as though their object was to destroy that of the Dutch. After having bought a parcel of cloves at MACASSAR they sent them to all the places where the Dutch were accustomed to sell them, and giving them at a cheap price, and sometimes even at a loss, by this means they ruined the clove trade of the Dutch. For it is an established custom in INDIA that the first who fixes the price of any article of merchandise constrains all others, by his example, to sell at the same rate during the year. It is for this reason that the Dutch have established a factory at MACASSAR, where their officers raise the price of cloves as much as they can when the King of the Island opens the sale. They make considerable presents to the King in order to induce him to uphold the price, which neither the English nor the Portuguese, in the miserable state in which their affairs are to-day, are able to prevent.





Whenever the people of MACASSAR have cloves they pay for the goods brought to them with that spice; payment is also made with tortoiseshell, which is in great demand in all the Empire of the MOGUL and in EUROPE: it is also made with gold dust, by which there is 6 or 7 per cent to be gained instead of its being lost on the money of the island, although it be gold, because the King adulterates it too much. The four places where cloves grow in abundance are the land of AMBOINE, the land of ELLIAS, the land of SERAM, and the land of BOURO.<sup>1</sup>

The Islands of BANDA, which are six in number, known as NERO, LONTOUR, POULEAY, ROSEGUIN, POLLERON, and GRENAPUIS,<sup>2</sup> bear nutmegs in great abundance. The Island of GRENAPUIS is about 6 leagues in circuit, and culminates in a peak from whence much fire issues. The Island of DAMNE,<sup>3</sup> where the nutmeg also grows in great abundance and of large size, was discovered in the year 1647 by ABEL TASMAN, a Dutch commander.

The prices of cloves and nutmegs, as I have seen them sold to the Dutch in SURAT in certain years, were as follows:—The *maund* of SURAT is equal to 40 *seers*, which make 34 of our *livres* at 16 *onces* to the *livre*.

A *maund* of cloves was sold for 103½ *mahmūdīs*.

<sup>1</sup> Amboyna, Gilolo? Ceram, and Boeroe (or Buru), islands in the Molucca Sea.

<sup>2</sup> Pulo Nera (*i.e.* island of palm wine); Lontar (the name of a palm); Pulo Ai or Pulo Wai (*i.e.* water-island); Rosingen (Rosolanguim of De Barros); Pulo Run (or Rung, *i.e.* chamber island); and Gunung-api (fire-mountain or volcano). These, with four others, constitute the Banda group. (Crawford, *Dict.*)

<sup>3</sup> I cannot identify this. Tasman discovered Van Diemen's Land, but nutmegs can hardly grow there; possibly Tavernier has made some mistake.





*A maund of mace was sold for 157½ mahmūdīs*  
„ nutmegs „ 56½ „<sup>1</sup>

All the cinnamon comes at present from the Island of CEYLON. The tree which produces it closely resembles our willows and has three barks. The first and second only are removed, and the latter is considered to be much the best. As for the third, it is not touched, for if the knife cuts it it causes the tree to die. This is an art which the natives learn from their youth. The cinnamon costs the Dutch more than is generally believed. For the King of the Island of CEYLON, who is otherwise called King of KANDY,<sup>2</sup> from the name of the capital town, being a sworn enemy of the Dutch because they did not keep their promise with him, as I have elsewhere related, sends troops every year with the intention of surprising them when they go to collect the cinnamon. It is for this reason that the Dutch are obliged to have 1500 or 1600 armed men to defend an equal number of men while engaged in removing the bark of the cinnamon, and they are obliged to feed these labourers for all the remainder of the year in addition to the expenditure on the garrisons in several parts of the island. These great outlays enhance the price of the cinnamon; it was not so in the time of the Portuguese, who had not all this expenditure, but placed all to profit. The cinnamon tree bears a fruit like an olive, but it is not eaten. The Portuguese used to gather quantities of it, which they placed in chaldrons with water together with the small points of the ends of the branches, and they

<sup>1</sup> Equal respectively to £3:17:6, £5:18:1½, and £2:2:4 per 34 *livres*.

<sup>2</sup> Or Candy, as in the original.



boiled the whole till the water was evaporated when cooled, the upper portion of what remained was like a paste of white wax, and at the bottom of the chaldron there was camphor. Of this paste they made tapers, which they used in the churches during the service at the annual festivals, and as soon as the tapers were lighted all the church was perfumed with an odour of cinnamon. They have often sent them to LISBON for the King's chapel. Formerly the Portuguese procured cinnamon from the countries belonging to *Rajas* in the neighbourhood of COCHIN.<sup>1</sup> But since the Dutch have taken this town, and have become masters of the coast of CEYLON, where the cinnamon grows, seeing that that of the neighbourhood of COCHIN injured the trade, because, not being so good as that of CEYLON, it was sold at a low price, they destroyed all the places where it grew, and thus there is no cinnamon now but that of CEYLON, which is altogether in their hands. When the Portuguese held this coast the English bought cinnamon from them and ordinarily paid 50 *mahmūdīs* for a *maund*.<sup>2</sup>

*Concerning the drugs obtainable at SURAT, and those imported from foreign countries, with the price of each, per maund.*

Sal Ammoniac costs per <i>maund</i> according to the ordinary price . . . . .	20 <i>mahmūdīs</i> .
Borax, like the preceding, is brought from AHMAD- ĀBĀD <sup>3</sup> without being refined, and costs per <i>maund</i>	35     „

<sup>1</sup> Bastard cinnamon. (See vol. i, p. 234.)

<sup>2</sup> £1 : 17 : 6.

<sup>3</sup> Probably brought to Ahmadābād from Thibet, but I have seen a statement as to its occurrence in Kathiāwār, which, however, requires confirmation. (*Vide Economic Geology of India*, p. 498.)





Gum-lac, <sup>1</sup> of which I shall speak below . . .	7½ mahmūdīs.
„ „ washed . . .	10 „
„ „ in sticks of sealing-wax. . .	40 „
Some kinds cost 50 and 60 mahmūdīs per maund, and even more when musk is added to it.	
Saffron <sup>2</sup> of SURAT, which is only used for colours . . .	4½ „
White Cumin <sup>3</sup> . . .	8 „
Black Cumin . . .	3 „
Arlet, <sup>4</sup> small . . .	3 „
Incense, <sup>5</sup> from the Arabian coast. . .	3 „
Mirrha, <sup>6</sup> The good quality called <i>Mirrha-gilet</i> . . .	30 „
<i>Mirrha-bolte</i> , from Arabia . . .	15 „
Cassia <sup>7</sup> . . .	2 „
Sugar-Candy . . .	18 „
Asutinat, <sup>8</sup> a kind of grain which is very hot . . .	1 „
Fenouil <sup>9</sup> (Fr.), large . . .	3½ „
„ small and very hot . . .	1½ „
Oupelote, <sup>10</sup> root . . .	14 „
Cointre, <sup>11</sup> . . .	5 „
Auzerout, <sup>12</sup> from Persia . . .	120 „

<sup>1</sup> Shellac, produced on certain trees by the *Coccus lacca*.

<sup>2</sup> Saffron consists of the stigmas of *Crocus sativus*, L., which was an article of trade at the time the "*Periplus*" was written, and has been cultivated in the East ever since.

<sup>3</sup> The fruit of *Cuminum cyminum*, L., a small annual indigenous to the Upper Nile regions, spread by cultivation to Arabia, India, China, etc. (Fluckiger and Hanbury, *Pharmacographia*, p. 295.)

<sup>4</sup> Not identified.

<sup>5</sup> The gum resin (*olibanum*) of *Boswellia floribunda*, Endl.

<sup>6</sup> The precise nature of the trees yielding myrrh is somewhat doubtful. Two varieties from Africa are called *Heera Bol* (true myrrh) and *Bissa Bol* (an inferior variety). Arabian myrrh is obtained to the east of Aden (see Fluckiger and Hanbury, *Pharmacographia*).

<sup>7</sup> The fruit of *Cassia fistula*, L. <sup>8</sup> Not identified.

<sup>9</sup> The fruit of *Pimpinella anisum*, L., cultivated in India.

<sup>10</sup> *Costus* or *kostus*, the root of *Aucklandia costus*.

<sup>11</sup> Possibly *kundur*, i.e. frankincense, obtained from *Boswellia floribunda*, but that has already been enumerated.

<sup>12</sup> For *Anzarūt*, a gum-resin once known to Europeans as a drug under the name *sarcocolla*. According to Ainslie (*Materia Medica*, vol. i, p. 381) it is derived from *Penæa mucronata*, Lin., which yields it by spontaneous exudation; it is a native of Africa. It was used by the





Aloes <i>Sucotrin</i> , <sup>1</sup> from Arabia . . . . .	28	<i>mahmûdis</i> .
<i>Reglisse</i> <sup>2</sup> (Fr.) . . . . .	4	"
<i>Vez Cabouli</i> , <sup>3</sup> a kind of root . . . . .	12	"
Aloe-wood, <sup>4</sup> in large pieces . . . . .	200	"
„ in small pieces . . . . .	400	"
There is a sort of aloe-wood which, if very oily, costs per <i>maund</i> . . . . .	4000	"

I shall now make some special remarks about gum-lac, sugar, opium, tobacco, and coffee.

Gum-lac<sup>5</sup> for the most part comes from PEGU, but it also comes from the Kingdom of BENGAL; and it is dearer in the latter places because the inhabitants of the country extract from it that beautiful scarlet colour<sup>6</sup> which they use to dye and paint their cotton

Arabs for healing wounds, and by Mesue it was believed to have cathartic properties. According to Dymock's *Vegetable Materia Medica*, 2d Ed., Bombay 1885, it is still largely used by the natives of Western India. I am indebted to Colonel Yule for the two last identifications.

<sup>1</sup> Socotrine aloes, prepared from the juice of *Aloe Socotrina*, Linn.

<sup>2</sup> Liquorice.

<sup>3</sup> Possibly for *bish*, Sanskrit *visha*, i.e. poison, Aconite root.

<sup>4</sup> *Bois d'aloës*. This is the *Lign Aloës* of Latin writers and the *Lignum Aloës* of the Bible, it is quite distinct from the modern aloës, being the inside of the trunk of *Aquilaria ovata* and *A. Agallochum*, which contain a fragrant resinous substance of dark colour. It was formerly generally used both for incense and for medicinal purposes, but is now only esteemed in the East. From the Portuguese term *agila* or *aguila* has come the popular name "eagle-wood." There is an account of it in Royle's *Illustrations*, etc., and Garcias de Orta devotes his 30th *Colloquy* to it under the title *Linaloës*. It is described very concisely in the *Anglo-Indian Glossary*, Art. "Eagle-wood." It is used in the manufacture of the incense-sticks from Burmah, which are now well known in Europe.

<sup>5</sup> I have elsewhere identified the "Ἡλεκτρον of Ktesias with shellac. (See "On the Identification of the Animals and Plants of India, which were known to Early Greek Authors," *Proc. Royal Irish Academy*, 2d series, vol. ii, No. 6, p. 331; and for an account of the production and manufacture of shellac in Bengal, see *Jungle Life in India*, p. 308.)

<sup>6</sup> The dye consists of the bodies of the female *coccus* which alone secretes the lac.





cloths. Nevertheless the Dutch buy it to export to PERSIA, where it is used to produce the same colour which the Persians employ in their dyes. That which remains after the colour is extracted is only used to embellish toys<sup>1</sup> made in the lathe, of which the people are very fond, and to make sealing-wax; and be it for the one or the other purpose, they mix whatever colour they desire with it. That which comes from PEGU is the cheapest, though it is as good as that of other countries; what causes it to be sold cheaper is that the ants, making it there on the ground in heaps, which are sometimes of the size of a cask,<sup>2</sup> mix with it a quantity of dirt. On the other hand, in BENGAL, the district from whence they bring the lac being a kind of heath full of shrubs, the ants secrete it round the ends of branches, which makes it fair and clean, and it is consequently dearer. The inhabitants of PEGU do not employ it as a dye because they receive their cotton cloths ready dyed from BENGAL and MASULIPATAM; and, moreover, they are so uncivilised that they do not engage in any art.<sup>3</sup> There are many women at SURAT who gain their livelihood by preparing lac after the colour has been extracted. They give it whatever colour they wish, and make it into sticks like Spanish wax. The English and Dutch Companies export about 150 chests annually. Lac in sticks does not

<sup>1</sup> Such as the Benares toys, nests of boxes, etc., of the present. The coloured lac is applied in sticks to the wood surfaces as they revolve in the lathe, after which they require only to be burnished.

<sup>2</sup> This description may be due to some confusion about white ants' nests. I have failed to find any peculiarity ascribed to the Burmah lac which would explain the passage.

<sup>3</sup> Tavernier probably knew very little of Pegu, which he never visited. Had he done so he would have found certain arts flourishing there.



cost more than 10 *sols* the *livre*, and it is worth 10 *sols* the *once* in FRANCE, though it be half mixed with resin.

Moist sugar is exported in quantity from the Kingdom of BENGAL, and there is great traffic in it at HUGLY, PATNA, DACCA, and in other places. On the occasion of my last visit to INDIA I went very far into BENGAL even up to the frontiers of the neighbouring states. I heard a thing from many old people of the country which should be recorded. It is that sugar kept for thirty years becomes poison, and that there is nothing more dangerous or prompter in producing effect.<sup>1</sup> Loaf-sugar is made at AHMADÁBAD, where the people understand how to refine it; and it is called on this account royal sugar. These loaves of sugar generally weigh from 8 to 10 *livres*.

Opium comes from BURHÁNPUR, a good mercantile town between SURAT and AGRA. The Dutch go there for it, and exchange their pepper for it.

Tobacco<sup>2</sup> also grows abundantly in the neighbourhood of BURHÁNPUR; and in certain years I have known the people to neglect saving it because they had too much, and they allowed half [the crop] to decay.

Coffee grows neither in PERSIA nor in INDIA.<sup>3</sup>

<sup>1</sup> It is not unlikely that there may be still a belief to this effect in India. I think I have heard something of the same kind about rice when kept beyond a certain time. Possibly they both originate in some proverbial saying having reference to storing up articles of food too long.

<sup>2</sup> The practice of smoking tobacco, which was first learnt by the Spaniards from the Cuban Indians in the year 1492, was introduced into Turkey, Egypt, and India about the end of the 16th century; and it spread steadily, though opposed by the severest enactments of both Christian and Muhammadan governments. (See Fluckiger and Hanbury, *Pharmacographia*.)

<sup>3</sup> It is perhaps needless to point out that this was written two centuries before the cultivation of coffee became an important industry in Ceylon and Southern India.





Nevertheless, since some Indian vessels load up with it on their return from MECCA, I give it place here amongst the drugs. The principal trade in it is at HORMUZ and BASSORA, where the Dutch, when returning empty from MOCHA, load up as much as they can, it being an article which they sell well. From HORMUZ it is exported to PERSIA, and even to GREAT TARTARY; and from BASSORA it is distributed in CHALDEE, in ARABIA along the course of the EUPHRATES, in MESOPOTAMIA, and other Turkish provinces,—for as for INDIA, it is but little used there. Coffee, which means wine in the Arabian tongue, is a kind of bean which grows at eight days' journey from MOCHA, on the road to MECCA. Its use was first discovered by a hermit named *Sheikh* SHIADELI (*i.e.* SAYID ALI), some 120 years ago or thereabouts; for before him there is no author, ancient or modern, who has mentioned it.<sup>1</sup>

All goods in coming from AGRA to SURAT, for despatch of bills of exchange at 5 per cent, for packing,

<sup>1</sup> Coffee was first mentioned in European literature in 1573 by Ruwolf. Seventy years later a sample of it was brought from Constantinople to Marseilles by Thevenot. It was first brought to Aden by *Sheikh* Shihábuddin Dhabháni, who died in 1470, hence it is concluded that its introduction was about the middle of the fifteenth century. Niebuhr states that it was first brought from Kaffa in Abyssinia to Yemen by Arabs. It appears to have been cultivated principally at Jabal, whence it was conveyed to Mocha. The Arabic name is *kahwa*, pronounced *kahveh* by the Turks. The plant itself is called *bun*. As Tavernier says, the name *kahwa* was originally applied to wine. (*Vide* Yule-Burnell, *Anglo-Indian Glossary*.) Terry's account of the use of coffee in India in his time is of sufficient interest to be quoted in full:—"Many of the people there who are strict in their religion drink no wine at all; but they use a liquor, more wholesome than pleasant, they call coffee, made by a black seed boiled in water, which turns it almost into the same colour, but doth very little alter the taste of the water. Notwithstanding, it is very good to help digestion, to quicken the spirits, and to cleanse the blood." (*A Voyage to India*, London Ed., 1777, pp. 100-101.)





carriage, and customs, according to their classes, are charged from 15 to 20 per cent.

All the gold and silver, whether in ingots or coin, pays 2 per cent on entering SURAT.<sup>1</sup> The merchant does what he can to avoid this charge; nevertheless, when caught, he is let off with paying double and nothing more. The Princes would like to confiscate the whole sum, but the judges are opposed, and maintain that MUHAMMAD forbade all custom dues and interest on money. I have spoken fully in the second chapter of the first book of the custom dues, the money, both gold and silver, and the weights and measures of India, to which I refer the reader.

<sup>1</sup> See vol. i, p. 8.





## CHAPTER XIII

*Concerning the frauds which can be practised in manufactures, whether by the roguery of the workers or the knavery of the brokers and buyers.*

I SHALL follow in this chapter the same order as I have observed in the preceding, with the object of making plain, for the benefit of the merchant, all the frauds which can be effected in silk, cotton cloths, cotton, and indigo, for there are none in the case of spices and drugs.

*Frauds in Silken Stuffs.*

Silken stuffs can vary in breadth, length, and quality. The length and breadth are ascertainable by measurement, the quality depends upon whether they are uniformly woven, whether the weight is equal, and whether there is no cotton introduced into the web, as the Indians very often introduce it.

The Indians, not knowing the art of gilding silver, put into their striped stuffs threads of pure gold; on this account it is necessary to count the number of threads to see if the stuff contains the requisite quantity, and the same should be done in the case of stuffs striped with silver. As for *taffetas*, it is only necessary to see whether they have a uniform fineness, and next





to unfold some of them to see if they contain any foreign substance to increase the weight, after which, each piece should be weighed separately, in order to ascertain whether it is of proper weight.

It is in AHMADÁBÁD where, as I have said, an abundance of these stuffs is made of gold and silk, silver and silk, and of silk alone, and carpets<sup>1</sup> of gold and silver and silk, but the colours of these carpets do not last so long as those of the carpets which are made in PERSIA. As for the workmanship, it is equally beautiful. It is for the eye of the broker to observe the size, beauty, and fineness of the work in the carpets worked with gold and silver, and he ought to judge if it is good and rich. Finally, in the case of carpets, and in other stuffs worked with gold and silver, it is necessary to withdraw some threads to prove them, and in order to see if they are of the standard which they ought to be.

*Frauds in Cotton Cloths, and, firstly, in White Cloths.*

All the cotton cloths, both fine and coarse, which the Dutch company order to be made in the Provinces of the Empire of the GREAT MOGUL, are brought in bales to the storehouse at SURAT, and delivered to the broker about the months of October and November.

The frauds commonly perpetrated are in respect of the fineness, the length, and the breadth. Each bale may contain about 200 pieces, among which five or six and up to ten pieces can be inserted of less fine

<sup>1</sup> The word in the original here is *tapis*, which should perhaps be translated otherwise than carpet, though that is the ordinary signification of the word. Perhaps table-covers are meant.





quality, thinner, shorter, or narrower than the sample of the bale ; this cannot be ascertained without examination piece by piece. The fineness is judged by the eye, the length and breadth by measurement. But they practise in India a still greater refinement, which is to count the number of the threads which ought to be in the breadth according to the fineness of the sample. When the number is lacking it is thinner or narrower or coarser. The difference is sometimes so imperceptible to the eye that it is difficult to discern it without counting the threads,<sup>1</sup> nevertheless this difference amounts to a considerable sum in the price of a large quantity, for it requires but little to abate an *écu* or even two *écus* on a piece when the price is from 15 to 20 *écus* the piece. Those who bleach these cloths, in order to save something for their profit on the quantity of lemons which are required, beat the cloths on stones, and when they are fine the beating does them much injury and diminishes their price.

But it should be remarked that the Indians, when making their cloths, if the piece is worth more than 2 *écus*, insert at either end threads of gold and silver, and the finer the cost, the more of these threads do they insert, the price of which mounts to nearly as high a figure as that of the cloth itself. It is for this reason that it is necessary to forbid the workers to insert these threads of gold in cloths ordered to be made for export to FRANCE—this gold and silver, which the Indians insert as an ornament in their cloths and garments, being of no use to the French. But

<sup>1</sup> The Manchester goods of the present day are subjected to the same examination in India. It is a matter of some notoriety that fraud in connection with them is not unknown.





for the cloths which are ordered for POLAND and MUSCOVIE, it is necessary to have this gold and silver in the Indian style, because the Poles and Russians will have nothing to do with the cloths if they have not got the threads of gold and silver. It is necessary also to take care that they do not become black, because these peoples are unwilling to buy cloths when the gold and silver are black.

As for the cloths dyed with indigo, either violet or black, it is necessary to take care that the workers do not blacken the threads of gold at the ends of the pieces, and that they do not beat the pieces too much after being folded, because they sometimes beat them so much, in order to make them smooth, that when one comes to unfold them he finds them broken at each fold.

It should also be remarked that upon the fag end of the pieces of cloth the Indians print with a seal and gold leaf an Arabesque flower, which extends the whole width of the piece. But if these pieces are destined for FRANCE, it is necessary to forbid the workers to impress this flower, which costs a half *piastre*, and to save this sum on the price of the piece. But if it is for exportation to the Indian islands, anywhere in ASIA, or even to a certain part of AMERICA, it is necessary that this flower should be on the fag end of the pieces, and that it should be preserved entire, because otherwise one is unable to sell them.

As for coloured and printed cloths, they are coloured and printed while crude, and it is requisite to take care that the work is accomplished before the end of the rains, because the more the waters where they are washed are disturbed, so much the more do





the colours applied with a brush or printing block remain vivid.<sup>1</sup>

It is easy to distinguish the cloths which are printed from those done with a brush, and if the broker is intelligent he will distinguish the difference in the beauty of one painted cloth from another by the cleanliness of the work. But for the fineness and other qualities of the stuff, they are more difficult to distinguish in them than in the white cloths, and consequently it is necessary to observe more precaution.

*Frauds practised in Cottons.*

Cottons are the goods which are always first made and the earliest delivered in the stores of SURAT, because they are all spun in the Province of GUJARAT. The frauds possible with them are in the weight and quality. The fraud in the weight can be effected in two ways, the first by putting it in a damp place, and by inserting in the middle of each skein some substance which increases the weight, the second in not weighing it truly when the broker receives it from the worker or from the merchant who delivers it.

The fraud in the quality is accomplished in but one way, which is by inserting in every *maund* three or four skeins of worse quality than that which is at the top, and in a large quantity that may amount to something considerable, for there is a variety of cotton thread which costs up to 100 *écus* the *maund*. As these two frauds are practised very often on the Dutch Company, this is the precaution they are obliged to adopt.

<sup>1</sup> In Book I, chap. iv, p. 56, this is differently stated, but apparently it is so through an error in the mode of expression.



It is to weigh, in the presence of the Commander and his counsel, and to examine carefully, each *maund*, skein by skein, to see if there is any fraud in the weight or quality. When that is done the Vice-Commander and those who are appointed under him to make this examination are obliged to attach to each bale a statement of the weight and quality; and when the bale is opened in HOLLAND, if there is anything wanting in either of these respects, those who have affixed the statement are obliged to pay the deficit.

*Frauds practised in Indigo.*

I have said<sup>1</sup> that the natives withdraw the paste from the baskets containing the indigo, and mould it, with the fingers steeped in oil, into pieces, which are then exposed in the sun to dry. The Indians who wish to cheat the merchants place the pieces on the sand to dry, so that the sand attaches itself and the indigo then weighs more. They also sometimes place the paste in damp ground, which makes it moist and consequently heavier. But when the Governor of the place discovers these frauds, he inflicts a heavy fine. Such frauds are easily discovered by a Broker and Commander experienced in the trade in this kind of merchandise by burning some morsels of indigo, after which the sand which remains becomes visible.

I have still to make a somewhat curious remark touching the brokers of INDIA. These brokers are commonly, as it were, chiefs of their families, for whom they hold all the property in trust to turn it to

<sup>1</sup> See p. 11.





account. For that reason those who have both the most years and experience are selected, so that they may be able to obtain benefits for all the kinsmen, being both the depositaries and the guardians of their goods. Every evening, after they have returned from their business, and, according to the custom of the Indians, who do not sup, have eaten some sweetmeats and drunk a cup of water, the oldest of the kinsmen assemble at the house of the broker, who renders an account of what he has done during the day, and they hold counsel together as to what should be done in the future. He is especially exhorted to take care of their business, and if possible to defraud rather than be defrauded.





## CHAPTER XIV

*Concerning the Methods to be observed for establishing  
a new Commercial Company in the EAST INDIES.*<sup>1</sup>

SHOULD any nation desire to establish a Commercial Company in the EAST INDIES, before all things it ought to secure a good station in the country in order to be in a position to refit its ships, and to lay them by during the seasons when one is unable to go to sea. This want of a good harbour is the reason why the English Company has not progressed so well as it might have done, because it is impossible that a vessel can last for two years without being refitted, being subject to be eaten by worms.

But since the journey from EUROPE to the EAST INDIES is long, it is desirable that the Company should have some place at the CAPE OF GOOD HOPE for watering and obtaining supplies of food, both when going and returning from the INDIES, but especially when returning, because, as the vessels are then loaded, they are unable to carry a supply of water sufficient for a long time. In the meantime the Dutch have removed this advantage from the [reach of] other nations, by means of the fort which they have built at the CAPE, and the English have done the same thing at St.

<sup>1</sup> This chapter is also introduced into the supplementary volume Tavernier's travels entitled *Recueil de plusieurs relations et de singularités et curieuses*, etc., where it is somewhat modified in detail.





HELENA, although, by the law of nations and the general consent of the people of EUROPE, liberty to use these two places of refreshment has been for many years equally free to the whole world. Nevertheless, there may still be some mouth of a river near the CAPE where another fort might be constructed, and this position would be worth more than all that can be made in the island of DAUFINE,<sup>1</sup> where there is no trade except in the purchase of cattle for the sake of their hides. But this trade is so insignificant that it would quickly ruin any company, and the French have hitherto engaged in it without any advantage to themselves.

The conjecture which causes me to make the above suggestion is founded on the fact that in the year 1648 two Portuguese vessels coming from LISBON to INDIA, desiring to touch at the CAPE to take in water, and not taking their observations correctly, the sea being very high, entered a bay 18 or 20 leagues from the CAPE on the western side. They found in this bay a river, the water of which is very good, and the negroes of the country brought them supplies of all kinds of river-birds, fish, and beef. They remained there about fifteen days, and before leaving took two of the inhabitants to convey them to GOA, in order to teach them Portuguese, and endeavour to draw from them some information as to the trade which could be carried on there.<sup>2</sup> The Dutch Com-

<sup>1</sup> The island of Daufine of the original stands doubtless for the Fort of Dauphin, on the south-east coast of Madagascar. It was held by the French for some years, but was afterwards abandoned.

<sup>2</sup> The details in vol. i, p. 216, differ from those here given. The distance is there stated to be 30 leagues from the Cape; the only conclusion which can be drawn is that this bay was a part of, or in the vicinity of, Table Bay.





mander at SURAT asked me to go to GOA, in order to ascertain what the Portuguese had learnt from these two negroes ; but a French engineer named SAINT AMAND,<sup>1</sup> who had the supervision of the forts at GOA, told me that they had not been able to teach them a single word of the language, and had only guessed from their signs that they knew ambergris and elephant's tusks. The Portuguese, nevertheless, did not doubt that they would find gold if they were able to trade with the interior. The revolution in PORTUGAL and the wars with SPAIN have prevented them from examining this coast more particularly, and it is to be desired that the Company should examine it carefully without giving offence to the Dutch, or allowing them to suspect its object.

It is, moreover, necessary that the Company should have a port near SURAT to withdraw and refit its vessels, in case they are delayed by the rainy season. The reason is, that during this bad weather, when it is almost impossible to withstand (the violence of) the sea, the MOGUL, for fear of danger to his fortress at SURAT, does not allow any foreign vessel into the river, where otherwise, when unladen, they might remain protected from the destructive storms which last for nearly five months.

The only place suitable for the withdrawal of the vessels of the Company is the town of DIU,<sup>2</sup> which belongs to the Portuguese. The advantages of its position are considerable for many reasons. The area of the town includes nearly 400 houses, and is capable of affording dwellings sufficiently numerous, and where

<sup>1</sup> Called St. Amant in vol. i, p. 204, and elsewhere.

<sup>2</sup> Diu, see vol. i, p. 6.





the (crews of the) vessels would find all they required during their sojourn. It is situated on the coast of GUJARÁT, at the point of the GULF OF CAMBAY, and faces towards the south-east. Its shape is nearly circular, and more than half the circle is surrounded by the sea. It is not commanded by any elevation, and the Portuguese have built some fortifications on the land side which might be easily completed. It has numerous wells of good water, and also a river which falls into the sea near the town, the water of which is better than that of SURAT and of SUWÁLI,<sup>1</sup> and the shelter is very commodious for vessels.

The Portuguese, on their first establishment in INDIA, kept a fleet at DIU composed of galleys, brigantines, and smaller vessels, with which they made themselves, for a very long time, masters of all the commerce of the places which are about to be enumerated, so that no one was able to trade without taking out a passport from the Governor of DIU, who franked it in the name of the Viceroy of PORTUGAL at GOA. The revenue which he obtained from these passports sufficed to support the fleet and garrison, and the Governor, who was only appointed for three years, did not omit to accumulate wealth for himself during that time.

Thus, according to the forces that one might establish in this place, one would derive great benefit. The Portuguese, feeble as they are at present, do not fail to profit from not having to pay duty for the money which they carry into the Kingdoms of the GREAT MOGUL and the King of BIJAPUR, nor for the goods which they take there.

<sup>1</sup> Suwali or Swally, see vol. i, p. 6.



When the rainy season is over, the wind being nearly always north or north-east, you can go from DIU to SURAT in light boats in three or four tides, but if large vessels are laden, it is necessary for them to coast all round.

A man on foot going by land to a small village named the GAUGES,<sup>1</sup> and from thence crossing the end of the Gulf, can go from DIU to SURAT in four or five days, but if the season prevents him from making this passage, he cannot go from DIU to SURAT in less than seven to eight days, because he must then make the circuit of the Gulf.

The town does not possess any territory outside the boundaries, but it would not be difficult to arrange with the *Raja*, or Governor of the Province, and obtain from him as much as may be required for the convenience of the inhabitants. The soil of the neighbourhood is not fertile, and the population around is the poorest in all the Empire of the MOGUL. Nevertheless, there is an abundance of cattle in the jungles, with which the country is covered, so that a buffalo or a cow does not cost more than 2 *piastres*.<sup>2</sup> The English and the Dutch use these cattle to feed their people, and to save the provision of their vessels during their sojourn at SUWÁLI.

It is well to remark that experience has shown that the flesh of buffaloes<sup>3</sup> often causes dysentery, which is

<sup>1</sup> Probably Gogo or Goga on the western side of the Gulf of Cambay. There is another locality of somewhat similar name too, namely Gajna, near the point where the Narbadá joins the Máhi Ságar, about 20 miles west of Baroda (A.S. 22 S.E.)

<sup>2</sup> *I.e.* about 9s.

<sup>3</sup> I believe it to be the case that both the flesh and milk of buffaloes are at times, if not always, unwholesome. In most parts of India there is a strong dislike among Europeans against using either.



calculated to be most injurious to crews, but the flesh of cows never gives rise to it.

The *Raja* who rules the country bears the title of Governor for life; and this is the case with nearly all the *Rajas* in the Empire of the MOGUL, who were the nobles of the Provinces where their descendants only have the title of Governors. He treats the Portuguese well, because their position as neighbours brings him in money by the sale of his corn, rice, and vegetables, and for the same reason he treats the French still better.

After the establishment of such a position, which should be the principal basis of the trade of the Company, there is nothing more important than to select two men, marked by their wisdom, rectitude, and intelligence in trade, and there should be no regard for economy in their appointments. These two men are for the service of the Company, one in the position of Commandant or Commander, as the Dutch entitle them, with a council of a certain number of persons to be given him for his assistance; the other for the office of broker or merchant, who should be a native of the country, an idolater and not a Muhammadan, because all the workmen with whom he will have to do are idolaters. Good manners and probity are above all things necessary in order to acquire confidence at first among these people. It is necessary to seek to obtain the same qualities in the private brokers, who are under the direction of the Broker-general, in the provinces where the offices of correspondents are established.

Intelligence is not less necessary for these two men, in order that they may detect any adulteration in the manufacture of the goods. It arises, as I have said,





either from the wickedness of the workmen and merchants or from the connivance of the sub-brokers with them. This adulteration may cause so much injury to the Company that private brokers profit by it sometimes from 10 to 12 per cent. If the Commander and the Broker-general connive together it is very difficult for the Company to guard against this fraud, but if they are both faithful and wise it will be easy to remedy it by changing the private brokers.

The unfaithfulness which these officers are able to commit against the Company is this. When a vessel arrives in port, the letters of the Company and the bills of lading are handed to him who commands on shore for the particular nation. This Commander assembles his Council, and sends for the broker and gives him a copy of the bill of lading.

The broker communicates it to two or three of the merchants who are in the habit of buying wholesale. If the broker and the Commander connive together to profit, the broker, instead of expediting the sale as he ought, tells these merchants privately that they have only to keep firm and offer such a price.

Then the Commander sends for the broker and these two or three merchants. He asks them in the presence of his Council what they offer for the goods mentioned in the bills of lading which have been communicated to them. If the merchants persist in saying that they will only give so much, the Commander postpones the sale for fifteen days, more or less, according as he has reason for being pressed to sell. He causes these merchants to come many times, merely for the look of the thing, and he then takes the advice of the Council in order to save appearances, and for his





own protection ; after which he orders the goods to be sold at the merchant's prices.

But although the temptation is great for these two officers, on account of their power, the frequent opportunities, and the absence of their superiors from whom it is easy to conceal the truth, the Company is able, besides, by making a careful selection of these two persons, to remedy this disorder by removing the pretext which the Dutch Commanders and brokers urge, which is that they are constrained to sell quickly to the merchants, wholesale, to avoid the costs of delay.

The fault which the Dutch make is, that their officers order to be made on credit from year to year all the goods which they wish to export from the MOGUL Empire, according to the instructions they have received from BATAVIA. The credit for this advance costs them sometimes 12, sometimes 15 per cent, so that as soon as their vessels, laden with merchandise, have arrived at the port where they are due, they are obliged to sell promptly at the price which the wholesale merchants offer to the brokers in order to obtain immediate funds to repay the advances which have been made for the preparation of the goods which their vessels carry away, and to obtain credit for the manufacture of the following year.

It is this which gives opportunity for the understanding between the Commanders and their brokers with the merchants, who profit by the necessity which forces the sales, and besides, this private profit diminishes that of the Company, and a part of the clearest gain is expended in paying the interest of this loan of which we are about to speak. For this interest mounts, from time to time, more or less, according as the Commander





and the broker agree to make it increase. In the event of French vessels carrying the same goods as the Dutch, they should carry in addition money for the advances to the artisans who work in the provinces, and for a part of the price of the goods which are being made for the following year.

The Company by making this advance will not pay the high interest on the loan, namely 12 to 15 per cent, which the Dutch pay; it will have the very best goods and at the best price. All the artisans will work more willingly for it on account of this ready money.

The cargo of the vessels will be in readiness before they arrive in port. Being quickly laden they will be able to seize the good season for their return. The Company will not be compelled by necessity to sell at a bad price to three or four local wholesale merchants who have made themselves masters of the trade, whereas its brokers will be enabled to await the arrival of foreign merchants who will come to carry away its goods, or rather, because they will have the means to have them exported to the places where they will themselves be able to dispose of them.

It should be remarked, besides, that it is profitable to carry gold and silver to INDIA in bullion rather than in coin, because gold and silver are not valued in INDIA except by their standard, and because there is always a deduction on coined money on account of the cost of minting.<sup>1</sup>

Should the broker be unfaithful, he is, moreover, able to come to an understanding with the master of the MOGUL'S mint, established in every port in the Empire, and to value the gold or silver, coined or in

<sup>1</sup> See Book I, chap. ii.





bars, at a lower standard than it really is, by telling the Commander and his Council that in the assay which has been made at the mint it is found to be only of such a standard.

But it is easy to prevent this fraud, provided that the Commander is upright and intelligent, if he sends for one of the native refiners of gold and silver, who can easily be found, and who understand how to assay metals perfectly, and if he has it done in his own presence.<sup>1</sup>

This is what the Sieur Waikenton did for the Dutch Company, in whose name he held a factory at KASIMBÁZAR, where he received each year from 6000 to 7000 bales of silk. He ascertained by this test that his broker, having an understanding with the master of the mint, cheated him of  $1\frac{1}{2}$  or 2 per cent on the quality of the gold and silver which was brought to him from Japan, whether it was in bar or in coin, and that the Company had been defrauded of considerable sums.

The broker is able to defraud also by having an understanding with the master of the mint, or with him who weighs the gold and silver in bars, coin, or

<sup>1</sup> I am indebted to Mr. J. Twigg of the N. W. P. Civil Service, for the following account of the operations of one of these native assayers, as witnessed by himself. The object assayed was an ornament consisting of an alloy of gold and silver, which was first hammered out thin; it was then heated in nitric acid, the vessel used being a broken glazed English tea-cup; after some time, the silver being then dissolved out, the thin plate of gold was removed and fused with borax, the furnace being an old clay potsherd, and the fuel charcoal burnt under a mouth blow-pipe. The resulting gold button was then weighed, and the silver was precipitated by means of a piece of copper thrown into the solution. The nitric acid had been prepared by distillation of a mixture of salpêtre and iron sulphide (Pyrites).





dust, by employing too heavy weights, or scales which are not true.

It is easy to prevent this fraud if the Commander, assisted by his Council, has them weighed in his presence with a scale and weights proved and stamped, which he keeps by him for the purpose.

One of the most important observations that is to be made on the commerce of the proposed Company and the discipline of its factors is this :—

It should forbid the merchants, sub-merchants, the scribes, and sub-scribes, who serve under the Commanders, and the brokers, and also these superior officers, from doing any trade on their own private accounts, because having communication with all the artisans, and obtaining by the correspondence from the other factories information as to the articles of merchandise which will be good for sale in the following year, they do not fail to purchase them on their own account, and ship them on the vessels of the Company to the address of their correspondents, who share the gain therefrom.

The Commander being himself interested, either by closing his eyes, or by a too great laxity, permits them to make this profit on account of their poor salaries.<sup>1</sup> The captain of the vessel is in league with them, because he secretly derives some advantage for allowing them to load and unload. And inasmuch as these officers have but little capital, and desire to receive the price on the return of the vessel, they direct their correspondents to sell at from 8 to 10 per cent below market price, which they can easily do, because, as I shall say further on, they do not pay custom dues

<sup>1</sup> See p. 48.





either at SURAT or at GOMBROON, and because they gain by this means about 26 per cent; and so this causes a considerable injury to the Company, and particularly to foreign merchants.

To remedy this disorder it is requisite to profit by the mistake of the Dutch, and to do that which they now practise, having realised the extent of this injury after an experience of many years. For, in fine, the Commander is not ignorant of the profit which there is for officials of the house when they load the goods of foreigners on the vessels of the Company, be it for HORMUZ, for BASSORA, for MOCHA, or other places. With respect to MOCHA on the RED SEA, the merchants who trade there are allowed one bale free of customs; it is for this reason that among their bales they have always one five or six times larger than the others, which ten or twelve men have difficulty in carrying.

The freight of some vessels amounts to 60,000 rupees, and when the Commander and broker are in league, they sometimes make a third, and even as much as a half, as their profits, over and above which a vessel never leaves without the Commander and his wife presenting some rewards to their most faithful servants and slaves of both sexes. To one they give permission to ship six bales, to another eight, and to another ten, more or less, and as the bales in these countries pay freight according to the value of the goods, when a merchant has any bale of great value, amounting sometimes to 20,000 rupees, he agrees for the freight at the best price he is able, and abates one half, at least, with one of these servants or slaves who has received this free permission from his master or mistress.





The pursers also take part in it, but as for the merchants and sub-merchants, they disdain for the most part these small profits, and content themselves with their own shipments. Otherwise, by another artifice, when a merchant has some bales of rich goods, as of those DECCAN caps, which are sometimes worth as much as 400 *écus*, or of these *ornis*<sup>1</sup> of BURHĀNPUR, of which I have spoken above, which serve to make veils for the ladies of PERSIA, CONSTANTINOPLE, and other places in ASIA and EUROPE—when, I say, a merchant has some bales of valuable goods which should pay high duty to the Prince of the place where they are to be loaded, as soon as they are on board, the purser and captain, who are in league with the merchant, place on each the Company's mark, and after reaching the store of the place where they have been landed with the goods of the Company, they are removed at night in secret to the house of the merchant.

These people are able, moreover, to make use of still another artifice. If the merchant is a friend of the Commander he settles with him, and pretending to have bought the bales of merchandise from the Company, which is free from all custom, he is released by paying the 2 per cent, the same as all those who have bought goods from the Company.<sup>2</sup>

The following is the remedy which can be brought to bear on this irregularity. It is necessary to establish in the principal factory a fiscal counsellor to act in the name of the King and by his authority. He should be

<sup>1</sup> Ornis (see vol. i, p. 52).

<sup>2</sup> The preceding four paragraphs are omitted in the reprint in the *Recueil*.





independent of the General of the Company, in order that he may have the right to keep an eye upon his actions as upon those of the least of the officers.

A man of position is required for this post, who will be resolute and watchful, and who has under him a representative at each factory. Each of these representatives, in the exercise of his duties, should observe what is indicated in the following articles :—

As soon as he sees a vessel belonging to the Company in the offing, he should go at once, or sometimes, according to the season, he should await till it has cast anchor.

Then the captain of the vessel should deliver no letter to any other person, but should place all in the hands of the representative, who will deliver those of the Company to the Commander.

He should take two or three persons with him, who will remain on the vessel until it is unloaded, to see that all that is landed belongs to the Company. It is especially necessary that he should take care that the people whom he takes with him do not get drunk, for it often happens on these occasions that the officers of the vessel purposely intoxicate them when they have some contraband goods to send off the vessel, which they cleverly give to the fishing boats which bring them fish and other supplies ; this is done generally at night.

If it is a place where there are neighbouring islands, as the time is approximately known when the vessels ought to arrive, the representative of the Fiscal Counsellor should send beforehand, as far off as he can, two or three small boats, to be on the look-out round these islands, and as soon as they have dis-





covered the vessel, they should join her, to prevent any contraband goods being landed in the islands, to which the bribed persons might come to carry them secretly to whomsoever they are addressed.

He should confiscate all that he discovers in the vessel not bearing the mark of the Company, or which does not belong to foreign merchants.

He should be able to dismiss from his post the officer to whom the goods belong, if a subaltern; but if it is one of the superiors he should give notice of it to the Chief of the Factory, who, with his Council, will be able to degrade him from his office and confiscate his salary.

He may order all letters of private persons to be opened to detect this contraband trade and the parties to it. This is why the captain of the vessel is obliged to hand them over to him; but he may not open the Company's letters.

The (proceeds of this) confiscation of goods should be applied, one third to the poor of the nation, another third to the Company, and the remainder to the Fiscal and his officers, and this it is which the Dutch do.

He will also represent the King in all criminal and civil processes which come before the Commander and his Council, and he will be able to requisition and take part in the name of his Majesty in all kinds of actions.

Provided always that this officer is vigilant and a man of integrity, he will be able to render considerable service to the Company.

If the English had established such an one in their factories, they would have had greater profit; but the officers of that nation pretend that there is no superior





power capable of withdrawing the privilege from them after they have once completed their apprenticeship in LONDON, and hold the certificate of their master of having served him well for seven years.<sup>1</sup>

This injunction against private trade cannot be too strictly imposed. It is observed to-day with so much strictness amongst the Dutch that when a vessel of that Company is ready to leave AMSTERDAM, a Burgo-master administers to the captain and all on board a solemn oath that they will content themselves with their wages, two months' of which are given in advance, and that they will not trade on their own account; but the conduct of the Company in respect to their wages compels them, in spite of their oaths, to aid themselves by secret traffic to subsist while in their employment.

This is the artifice which they make use of to satisfy their consciences. When they have arrived in INDIA, and see themselves in the way of obtaining some good employment, they marry as quickly as possible, and trade secretly in their wives' names; this is not always permitted. And they imagine that in this way their conscience is relieved. But they are sometimes caught, and I shall give a somewhat amusing example of it, from among many others which I could recount.

<sup>1</sup> The salaries of the English Company's officials at this period, as stated by Dr. John Fryer, were so small that one would suppose that they could have hardly subsisted without having some private opportunities for trade. The writers had to serve five years for £10 per annum, factors had £20 for three years, merchants £40 during their stay in the service, besides free food and lodging. The President received £500 a year, of which half was reserved at home to be confiscated in case of misdemeanour, in addition to his bond of £5000. (*New Account*, Calcutta Ed., p. 70.)





The captain of a vessel,<sup>1</sup> a rich man, who troubled himself little about making court to the wives of the Chiefs of the Company, became a butt for their attacks, and was one day stung by some remarks made by Madame la Générale, who was talking to him at BATAVIA in the presence of many ladies, for which, without saying a word then, and well knowing all their intrigues, he resolved to avenge himself on the first occasion, which offered itself in this manner.

When this captain was about to return from PULICAT to BATAVIA, the wife of the Governor of the former place, who was in league with Madame la Générale in some private trade, believing that the captain was one of her friends, begged him to ship secretly eight bales of very valuable goods, and to have particular care that they were not wetted, in order to take them to BATAVIA; this the captain promised to do, and he placed the bales in a separate place.

Having arrived at BATAVIA, he went first, according to custom, to salute the General and to hand him the letters belonging to the Company. The General is in the habit of keeping the captains to dinner or to supper, according to the hour of their arrival. There are always present on these occasions some Councillors of INDIA, to hear the news, who remain to dine with the General.

At the close of the repast the General asked the captain what news he had from PULICAT, and if the Governor and his wife had not asked for anything to be done for them. "Nothing," replied the captain coldly, "except that Madame, the Governor's wife,

<sup>1</sup> This story is also told in the *Histoire de la Conduite des Hollandois en Asie*, chap. vi, where the General is called Matsuker and the captain Lucifer!





specially charged me with eight bales of goods, and to keep a good eye on them, so that they should not get damp, being articles of great value, and to deliver them on my arrival into the hands of Madame la Générale." This little-expected reply much surprised the General and those of the Council who were dining with him, and still more Madame la Générale, to whom the husband, turning, asked somewhat rudely if she carried on trade with the wife of the Governor of PULICAT, which, according to the laws of the Company, would have been criminal. Madame la Générale having stoutly defended herself, protesting that she knew nothing of what the captain had said, the General then told the latter that he must be mistaken, and there and then ordered the Fiscal to go and seize the bales, and expose them on the quay to see if they would be claimed by any merchant. After they had remained there for some days without any one presenting himself to ask for them, they were confiscated; and thus, without great noise, the captain had his revenge for the displeasure he had received at the hands of Madame la Générale.<sup>1</sup>

All the subaltern officers of the Factories should be promoted by steps, from that of the post of sub-writer to that of Commander, so that the expectation of this promotion should encourage them to live well, and acquire all the niceties and details of the Indian trade in order to qualify for the highest posts.

It is of the greatest importance not to show any favour in this, and that interest should not give advancement to any one without his having passed through all the steps; for one of the things which does most injury

<sup>1</sup> The previous four paragraphs are omitted in the *Recueil*.





to the Dutch trade is that for some years back the higher classes in HOLLAND have sent their sons to INDIA to seek for the posts which secret trade makes so profitable. The access which they obtain, be it to the principal officers or to their wives, whose power is great in this country, causes them to be preferred, when any post becomes vacant, to those who have no other recommendation than that of their long services.

It is true that some years ago the General at BATAVIA and his Council, seeing the injury this did to the Company, wrote to the Directors that they may send people to INDIA of whatever quality they please, but that they should not send any more with recommendations; that in the future they would be of no avail, but would rather injure the advancement of their friends, it not being fair that favour should precede merit; that the General and his Council had sufficiently good eyes to recognise the fitness of those sent, and would employ them according as they were worthy and as it was considered proper.

These are all the remarks which I have been able to make in reference to the discipline of the Factories and the methods that a new Company ought to observe for its establishment in the EAST INDIES.

But I was forgetting one thing, which is of importance for a commercial Company, and to which it should pay attention. Up to this hour the Dutch observe this precaution, that they send to INDIA neither captain nor pilot who has not passed through all degrees, from a simple ship's boy up to the most important charge, and does not know how to take observations, and is not thoroughly acquainted with the coasts. Moreover these captains are not of delicate constitutions, and





content themselves for food with a piece of cheese or a slice of beef which has been in pickle for two or three years. And truly they are to be imitated in that respect. It is altogether different with some other nations, who often place on vessels captains who have never seen the sea, and whom favour alone immediately elevates to this post. In addition to which, when they embark they generally require elaborate cuisine appliances, plenty of sheep, calves, fowl, and turkeys, which consume much water, and soil the vessel with their droppings. Economy is the great support of commercial Companies, and it is an article to which those who are Directors should give their particular attention.





## CHAPTER XV

*Concerning diamonds, and the mines and rivers where they are found; and especially of the Author's Journey to the Mine of RAMULKOTA.*<sup>1</sup>

THE diamond is the most precious of all stones, and it is the article of trade to which I am most devoted. In order to acquire a thorough knowledge of it I resolved to visit all the mines, and one of the two rivers where it is found; and as the fear of dangers has never restrained me in any of my journeys, the terrible picture that was drawn of these mines, as being in barbarous countries to which one could not travel except by the most dangerous routes, served neither to terrify me nor to turn me from my intention. I have accordingly been at *four* mines,<sup>2</sup> of which I am

<sup>1</sup> This is Raolconda in the original; for its identification with the modern Ramulkota, properly Rámallakota, see Book II, chap. xviii, p. 94.

<sup>2</sup> The four mines appear to have been—1, Ramulkota (Raolconda); 2, Kollur (*Coulour* or *Gani*); 3, *Soumelpour*; and 4, the locality on the Kistna between Ramulkota and Kollur, which, as pointed out in chap. xvi, p. 78, may have been a deserted mine near Damárapád and Malawaram. The point is not quite clear, as in chap. xviii *two* mines near Ramulkota are mentioned, but there cannot be said to be descriptions of more than three mines in the text. There is ample reason for believing that the diamond mines existing in India in Tavernier's time were far more numerous than he had any conception of (see *Economic Geology of India*, pp. 1-50, and *Appendix* to this volume). The two rivers he mentions seem to be—1, the Pennair River, below Gandikot, probably in the neighbourhood of Chenur (see vol. i, p. 288); and 2, the river he did not visit, which was in Borneo (see chap. xvii).





about to give descriptions, and at one of the two rivers whence diamonds are obtained, and I have encountered there neither the difficulties nor the barbarities with which those imperfectly acquainted with the country had sought to terrify me. Thus I am able to claim that I have cleared the way for others, and that I am the first European who has opened the route for the *Franks*<sup>1</sup> to these mines, which are

<sup>1</sup> Tavernier was not aware that he had been preceded by other European visitors to the mines, *e.g.* Cæsar Frederick and Methold (see p. 72 *n.*), and, as stated in the previous note, he was probably mistaken as to these being the only mines in India which were known in his time; besides many in Southern India, those at Panna in Bundelkhand, Sambalpur on the Mahānadi, and Wairāgarh—the Beiragarh of the *Ain-i-Akbari*—were almost certainly open then. We have, too, evidence of the working of a mine by a European at an earlier date. A paper presented by the Earl Marshal of England to the Royal Society (*Phil. Trans.*, vol. xii, 1677, p. 907) states that about the commencement of the seventeenth century (say 1610) a Portuguese gentleman went to Currure, *i.e.* Wajra Karur in the Bellary District, and expended a large sum of money, namely 100,000 *pagodas*, in searching for diamonds without success. He then sold everything he had with him, even to his clothes, and on the last day upon which he could pay the wages of the workmen he had prepared a cup of poison which he intended to take that night if no diamonds were found. In the evening a fine stone of 26 *pagodas* weight was brought to him by the workmen. The figures given in the paper indicate a value of 53 troy grains for the *pagoda*; at that rate 26 *pagodas* would be equal to 1378 troy grains, or 434.7 carats. The recognised equivalent of the *pagoda* is something less, namely 52.56 troy grains (Kelly, *Universal Cambist*). In the same mine, we are told, diamonds of a *seize* (? *Seer*) weight, namely 9 ounces troy, or 81½ *pagodas*, *i.e.* 1362.6 carats, had been found; and as Mir Jumla took possession of this mine, together with the Carnatic, one cannot help suggesting that it may have been here that the Great Mogul's diamond was found, although Kollur is particularly mentioned by Tavernier as the mine which produced it. To return to the above-mentioned Portuguese, he took the stone with him to Goa, and to commemorate its discovery put up a stone tablet, on which the following lines were engraved in the Telegu language:—

“ Your wife and children sell, sell what you have,  
Spare not your clothes, nay, make yourself a slave,  
But money get, then to CURRURE make haste,  
There search the mines, a prize you'll find at last.”





the only places in the world where the diamond is found.<sup>1</sup>

The first of the mines which I visited is situated in the territory of the King of BIJAPUR in the Province of CARNATIC, and the locality is called RAMULKOTA,<sup>2</sup> situated five days' journey from GOLCONDA,<sup>3</sup> and eight or nine from BIJAPUR. The fact that the two Kings of GOLCONDA and BIJAPUR were formerly subject to the MOGUL, and were then only Governors of the Provinces which they acquired by their revolt, caused it to be said, and makes it said still by some people, that the diamonds come from the Kingdom of the GREAT MOGUL. It is only about 200 years since this mine of RAMULKOTA was discovered, at least so far as I have been able to ascertain from the people of the country.<sup>4</sup>

All round the place where the diamonds are found the soil is sandy, and full of rocks and jungle, somewhat comparable to the neighbourhood of FONTAINEBLEAU. There are in these rocks many veins, some of half a finger in width and some of a whole finger; and the

<sup>1</sup> He here forgets Borneo (see chap. xvii).

<sup>2</sup> Raolconda in the original. By means of the route given on p. 94 this locality has been identified with Ramulkota, about 20 miles south of Karnul (Kurnool), where excavations are to be seen to this day (*vide Economic Geology of India*, p. 15). The position is fairly indicated on the small map of India which accompanies the Revised French Edition of *Tavernier's Travels*, published at Rouen in 1713. The identification both of it and Coulour have foiled many investigators both in this and the last century. But it is needless to refer here to the various suggestions as to their identification, as the question is now fully set at rest by the identification of the stages on the routes to these mines.

<sup>3</sup> On p. 94 the distance is given as being 17 *gos* or 68 French leagues. The true distance by the direct route is about 120 English miles.

<sup>4</sup> This evidence for the antiquity of the mine is of but little value, and cannot be relied on.





miners have small irons, crooked at the ends, which they thrust into the veins in order to draw from them the sand or earth,<sup>1</sup> which they place in vessels ; and it is in this earth that they afterwards find the diamonds. But as the veins do not always run straight, and some ascend, while others descend, they are obliged to break the rocks, always following the direction of the veins. After they have opened them out, and have removed the earth or sand which may be there, they then commence to wash it two or three times, and search in it for whatever diamonds it may contain. It is in this mine that the cleanest and whitest watered diamonds are found ; but the evil is that in order to extract the sand more easily from the rocks they strike such blows with a heavy iron crowbar that it fractures the diamonds, and gives rise to flaws. It is for this reason that so many thin stones come from this mine, for when the miners see a stone in which the flaw is of some size, they immediately cleave it, that is to say split it, at which they are much more accomplished than we are. These are the stones which we call thin ("*foible*"), which make a great show. If the stone is clean they do not do more than just touch it with the wheel above and below, and do not venture to give it any form, for fear of reducing the weight. But if it has a small flaw, or any spots, or small black or red grit, they cover the whole of the stone with facettes in order that its defects may not be seen, and if it has a very small flaw they conceal it by the edge of one of the facettes. But it

<sup>1</sup> This description and what follows indicate that the mining was carried on in the rock, not in detrital beds. It is, indeed, now known that the matrix at Ramulkota is an old pebble conglomerate belonging to the "Karnul" series.

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should be remarked that the merchant prefers a black point in a stone to a red one. When there is a red one the stone is roasted, and the point becomes black. This trick was at length so well understood by me that when I examined a parcel of stones which came from this mine, and saw that there were facettes on any of them, especially small facettes, I was certain that there was some speck or flaw in the stone.

There are at this mine numerous diamond-cutters, and each has only a steel wheel of about the size of our plates. They place but one stone on each wheel, and pour water incessantly on the wheel until they have found the "grain" of the stone.<sup>1</sup> The "grain" being found, they pour on oil and do not spare diamond dust, although it is expensive, in order to make the stone run faster, and they weight it much more heavily than we do.

I have known them to weight a stone with 150 *livres* of lead. It is true that it was a large stone, which still weighed 103 carats after it had been cut, and that the mill was like ours, the large wheel of which was turned by four blacks. The Indians are not of the same opinion as we are, in that they do not believe that weighting them causes flaws in the stones. If theirs do not receive any it is because they always have a small boy who, holding in his hand a very thin wooden spoon, anoints the wheel incessantly with oil and diamond powder. Added to which their wheel does not go so fast as ours, because the wooden wheel which causes the steel one to revolve is seldom more than 3 feet in diameter.

<sup>1</sup> The word in the original is *chemin*, or "way" of the stone. It refers to the discovery of the position of the lines of cleavage, which determines the method to be adopted in the treatment of the stone.