

THE CURSE OF SAINT THOMAS

by

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IN 1479 Vasco da Gama sailed from Lisbon and, following the earlier path of Bartolomeu Dias, rounded the Cape and entered the Indian Ocean. With the help of a pilot-poet taken on at Malindi, he crossed to Calicut on the Malabar coast of India in 1498. One of the aims of this expedition, if not the main purpose, was to locate the Christians known to exist in the east in the mysterious lands of Prester John and to join together a divided Christian world. Great impetus was given to the search for these eastern Christians, so Rogers (1962) has suggested, by the meeting at Ferrara in 1438 between a Castilian gentleman, Pero Tafur, returning from a pilgrimage, and Pope Eugenius IV. At Ferrara were gathered the dignitaries of the Latin and Greek churches to discuss the union between them. Tafur had visited Mount Sinai. Whilst there he fell in with a caravan from the east in which was travelling a renegade Venetian called Nicolò de' Conti. Conti had spent several years in the east and, as the two travelled together, Tafur learnt of some of Conti's experiences (Letts, 1926):

He saw the church where lies the body of St. Thomas, who converted the Indians . . . The Indians have today such devotion for the Apostle, that they take earth from the place where he is buried, and make pellets, which they carry always in their breasts, saying that in the moment of death, if they cannot communicate, it suffices to eat one of these. Nicolo de Conti gave me five or six of them, which I believe I have to this day.

Tafur was also told of the miracle of St. Thomas where he moved a great tree from the shore that none could move or cut up, so converting the people, and from which he built his church. Conti returned to Venice in 1444 and as a penance, for the purpose of craving absolution from Pope Eugenius, he was instructed to relate his adventures to the Papal secretary, Poggio Bracciolini. Here, under oath, he gave the location of the body of St. Thomas as in a very large and beautiful church at a maritime city called Malepur where there were 1,000 heretical Nestorians. The Nestorians were scattered all over India and then, rather confusedly, he said that all the province was called Malabar (Major, 1857).

This information confirmed earlier reports about the presence somewhere in the east of the tomb of St. Thomas and of converts to his faith. Marco Polo located the body of St. Thomas in the province of Maabar (Arabic Ma'bar=Coramandel) at a certain little town having no great population, with few traders but many pilgrims there, both Christian and Saracen (Yule, 1871).

The Christians who go thither in pilgrimage take of the earth from the place where the Saint was killed, and give a potion thereof to any one who is sick of a quartan or a tertian fever; and by the power of God and of St Thomas the sick man is incontinently cured. The earth, I should tell you, is red.

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Marco Polo also related the legend of the death of St. Thomas in India, shot by an arrow from a low-caste hunter in mistake for a peacock, and told how the Saint appeared miraculously in 1288. Friar Odoric visited India some thirty years after Marco Polo and found Christians in Malabar and said that the body of St. Thomas was to be found in the kingdom of Mobar (Komroff, 1928), although he went on to say that the church was full of idols and surrounded by fifteen houses of the heretical Nestorians. The Franciscan John Marignola spent some time between 1348 and 1349, detained by acute dysentery, amongst the Christians at Quilon in Malabar. He also visited the church of St. Thomas in Maabar. He told of the miracle whereby St. Thomas moved a log from the harbour of Mirapolis and of how St. Thomas, surrounded by peacocks, died after being shot by an arrow. He also commented on the medicinal properties of the earth from the tomb (Yule, 1866).

The priests gathered up the earth with which his blood had mingled, and buried it with him . . . Moreover whatever quantity of that earth be removed from the grave one day, just as much is replaced spontaneously against the next. And when this earth is taken in a potion it cures diseases, and in this manner open miracles are wrought both among Christians and among Tartars and Pagans.

One problem here was the earlier tradition that St. Thomas was killed by a lance and buried at Edessa in Mesopotamia, now Urfa in Turkey, but the popular travel writer of the time, Sir John Mandeville, got around the problem by first locating the body at a city called Calamy, then saying that men of Assyria carried his body into Mesopotamia to Edessa, from whence it was brought back to Calamy. He also introduced another legend that the arm and hand lay outside the tomb and that the hand could distinguish between the rights and wrongs of dissenting parties (Wright, 1848).

This in summary is what was known about St. Thomas in India before the Portuguese arrived by ship across the Indian Ocean. Much more complete accounts are given in Brown (1956), Tisserant (1957) and Rogers (1962) but, for our purpose, we may notice the presence of Christians in India, especially in Malabar on the southwest coast, with the tomb and church of St. Thomas located somewhere on the Maabar or Coramandel coast at Malepur, on the opposite side of the peninsula. There are the four legends: the moving of the large log or tree on the seashore, his death in mistake for a peacock, the presence of his arm outside his tomb, and the miraculous properties of the earth taken from his burial place. There is no mention of a curse. These legends are repeated by the Portuguese who came early in the sixteenth century. The more comprehensive account is given by Duarte Barbosa who returned to Europe before the full impact of the Portuguese had been felt, and who had lived in the east for several years between 1500 and 1518 (Stanley, 1866).

At this city, withdrawn a little from it, there is a promontory in the sea where stands a very great church which the apostle St. Thomas built miraculously before he departed this life. It must be known that on arriving at this city of Coulan [Quilon] where all were Gentiles, in a poor habit, and going along converting some poor people to our holy faith he brought with him a few companions natives of the country, although they were very few: and while he was in this city, one morning there was found in this port of Coulam a very large piece of timber which had been stranded on the sea-beach, and news of it was immediately brought to the king. He sent

many people and elephants to draw it out upon dry land, but they could never move it; and the king himself went in person to it later, and they were unable to draw it out. And as soon as St. Thomas saw them despair of the timber, he went to the king, and said to him: 'If I were to draw out this timber would you give me a piece of land upon which to build a church with it, to the praise of our Lord God, Who sent me here.' And the king laughed at him, and said to him: 'If you see that with all my power it cannot be dragged out, how do you hope to draw it out.' And Saint Thomas answered him: 'To draw it out by the power of God, which is greater.' The king immediately ordered all the land which he asked for this purpose to be given to him. And when it was granted to him, by the grace of the Lord, he went alone to the timber, and tied a cord to it, with which he began to draw it on shore without anyone assisting him. And the timber followed behind him as far as the place where he wished to build the church. The king seeing such a miracle commanded that they should let him do what he pleased with the timber and the land which had been given him; and that he should be shewn favour, because he held him to be a holy man . . . and so the said Apostle finished the church of Coulam. And when those people saw these miracles and many others which our Lord did by this glorious saint, many Indians turned to the Christian faith, through the whole kingdom of Coulam, which reaches to the frontier of Ceylon, so that there are more than two thousand houses of Christians scattered throughout the country among the Gentiles; and they have a few churches, but most of them are deficient in teaching and some of them wanting in baptism. And when the King of the Indians saw so great a change he feared that if he gave more opportunity for it, the said Christians would multiply so much that they would be able to rise and possess the country. And so he began to persecute the said St. Thomas, who withdrew himself to Cholmendel, and then to a city which was called Muylepur, where he received martyrdom, and there he is buried And one day as he wandered about in that manner, a gentile hunter, with a bow, saw many peacocks together upon the ground in that mountain, and in the midst of them one very large and very handsome standing upon a stone slab; this hunter shot at it, and sent an arrow through its body, and they rose up flying, and in the air it turned into the body of a man. And this hunter stood looking until he saw the body of the said apostle fall . . . and they say that on burying him they could never put his right arm in the tomb, and it always remained outside; and if they buried him entirely, next day they found the arm above the earth, and so they let it be. The Christians, his disciples and companions who built the said church, and the Gentiles already held him for a saint, and honoured him greatly. He remained thus with his arm outside of the grave for a long time, and they say that many people came there from many quarters in pilgrimage, and that some Chinese came also, who wished to cut off his arm and carry it away as a relic, and that when they were about to strike at it with a sword, he withdrew his arm inside, they say, and it was never seen again . . . The Christians of India still go there as pilgrims, and carry away thence as relics some little pellets of earth of the tomb of this blessed apostle.

Barbosa gives a very comprehensive narrative of the legends, parts are omitted here for brevity, showing the settlement of Christians in Malabar and accounting for the tomb at Maylepur by the sea. He does not mention a curse. The chief products of Malabar (=Kerala) were, as they are today, pepper and coconuts. It was, perhaps, no coincidence that Marco Polo found Indian Nut trees around the church of St. Thomas in Maabar. The production of coir fibre from coconut husks to make ropes for sailing ships was an important product of Malabar but the chief export of interest to the Portuguese was pepper. The St. Thomas Christians occupied a special place in the caste system and the economy. They were masters of the public weighing office and John Marignola had received revenue from this in his capacity as papal legate during his stay in Malabar in the fourteenth century. The relationship between the Christians of Malabar and the shrine of St. Thomas on the Coramandel coast is not clear. According to Barbosa, in the early part of the sixteenth century the shrine at Maylepur was much decayed and a contemporary account by Ludovico di Varthema suggested that the Christians at the tomb were being persecuted in retaliation for the behaviour of the Portuguese (Penzer, 1928). Between 1507 and 1524 the Portuguese began to take a renewed interest in the shrine at Mylapore (Love, 1913, Rogers, 1962)

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which ended with the discovery, during excavations, of burials and of a broken lance at the two mounts or hills near present day Madras that now carry St. Thomas's name.

Tomé Pires resided in Cannanore or Cochin between 1511 and 1516, although spending much time in Malacca, before he was sent on to China as the first ambassador of the Portuguese king. Formerly the apothecary of Prince Afonso, son of King John II, he had been sent to the east as factor of drugs. The manuscript he composed was written between 1512 and 1515 but his account of the east was not generally available until 1944 when it was translated and edited by its discoverer, Armando Cortesão (Cortesão, 1944). The St. Thomas miracles are not discussed but this may be due to the absence from the published manuscript of the promised description of 'the land where St. Thomas the Apostle lies'. Pires did, however, describe life in Malabar and he estimated that there were 15,000 Christians in the province but none outside this area. Pires also described the inhabitants, some with elephantiasis.

Many people in Malabar, Nayars as well as Brahmans and their wives—in fact about a quarter or a fifth of the total population, including the people of the lowest castes—have very large legs, swollen to a great size; and they die of this, and it is an ugly thing to see. They say that this is due to the water through which they go, because the country is marshy. This is called *pericaes* in the native language, and all the swelling is the same from the knees downward, and they have no pain, nor do they take any notice of this infirmity.

Ralph Fitch, an Englishman in India during the reign of Queen Elizabeth I, found the same symptoms and cause at Cochin later in the sixteenth century (Locke, 1930). 'This bad water causeth many of the people to be like lepers, and many of them have their legs swollen as big as a man in the waste, & many of them are scant able to go.'

India was now opening to other Europeans and the Portuguese power was beginning to wane. The St. Thomas Christians of Malabar received many visitors from the Latin Church during the sixteenth century and this culminated at the Synod of Diamper in 1599 when the heretical books were amended or burnt and doubtless many valuable manuscripts lost. Two views of the uneasy liaison between the Christians in Malabar are given by Brown (1956) and Tisserant (1957). It was at about this period that a legend of the curse of St. Thomas was introduced to Europe. John Hughen van Linschoten had travelled to India in 1583 as part of the suite of the newly-appointed Archbishop of Goa. The inadvertent death of the archbishop in Portugal in 1588 hastened the return of the Dutchman to Europe in 1592 where his *Itinerario* was published in Holland between 1595 and 1596. Translations in English, German and Latin followed rapidly before the turn of the century and a later French translation appeared in 1610. Linschoten gave an account of the miracle of St. Thomas moving the log, locating the miracle at Meliapor and, following a more orthodox line, described the death of St. Thomas by a lance thrust whilst the Saint was praying in church (Burnell, 1885).

and they say that the progeny of those that slew him, are accursed by God, which is that they are all borne with one of their legges and one foote from the knee downewardest as thick as an Elephant's legge, the other legge and all their members without any deformitie, being well proportioned, like to other men, whereof I have seen many, both men and women, for that

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thereabouts there are whole villages and kyndreds of them that are borne in the said land of S. Thomas, where as yet they dwell in great numbers. Whether this be the cause of their disease or not, God knoweth: I have asked them the cause, but they say they know it not, onely that men tell them it is for the cause aforesaid, and they have no let nor trouble in their going, but only the unsightlines and evil favoured fashion, whose forme and counterfeit you shal find in the Pictures of the Indians. . . .

You shall also see the Christians that are called S. Thomas, whereof many dwell among the Malabares, with one great legge, as they are borne, as in the description of the coast I have shewed. . . .

The pictures of the Indians mentioned in the text are reproduced here from the Latin translation of 1614 in the Library of the Wellcome Institute of the History of Medicine. The plate in the original Dutch edition is entitled 'Peneiquas van S. Thomas', in the index to this work, and 'Penequais familiae, a Divo Thoma execrate, intotam (ut Indi referunt) pro-geniem. Van penekay's geslachten van S. Thomas als die Indianen leggen gantselicken vervloect' in the 1614 edition.

Linschoten's account of the curse of St. Thomas created interest but also confusion. Although he appeared to be referring to the St. Thomas Christians of Malabar, it was not entirely clear that the land of S. Thomas did not refer to the town given this name by the Portuguese near the site of the tomb at Mylapore. Welsch (1674) referred directly to Linschoten's description of the St. Thomas miracle at Meliaporae giving the same details. 'Diversus quoque tumor ille tibiaram familiis quibusdam in India seu regione S. Thomae peculiaris, quas *Penequais*, i.e. *exsecratas*, propterea appellant . . .'. Most writers of the seventeenth century, however, who visited India and commented on elephantiasis referred to Malabar. Gautier Schouten visited India between 1658 and 1665 and had this to say of the people of Malabar (Schouten, 1725).

Il y a un grand nombre de Malabres, hommes & femmes, qui dès leur jeunesse, ou comme d'autres disent, dès leur naissance, sont sujets à avoir de loups aux jambes. L'enflure commence ordinairement sous le genou, & finit au pié, on tout proche. Cette incommodité leur rend toute pesante cette partie de la jambe & de travers. Mon sentiment est que cela est causé par la nature du pais qui est humide, par la froidure des nuits, & par un trop grand usage qu'on fait de fruits rafraichissans qui croissent sur cette côte. Les Chrétiens de Saint Thomas disent que ce mal leur a été envoie pour punition du martire qu'on a fait souffrir à ce Saint & que tous ceux qui en sont affligés, sont déçendus de ses persecuteurs.

The Christians appeared now to have accepted the sin on their own shoulders, as Linschoten also suggested, in contrast to the account by Pires over a century earlier where Hindus of all castes were said to have been suffering from the disease. There is also a passing reference to elephantiasis in Malabar in the journal of Jean de Thevenot who was in India in 1666 (Sen, 1949). 'There are People in that Countrey who have Legs like an Elephant, and I saw a Man at *Cochin* with such a leg.'

Sir John Fryer travelled in India between 1672 and 1681 and spent some time in the Cochin-Tanore-Calicut area of Malabar. His account of elephantiasis in Malabar begins with the curse but, rather firmly, he rejects the miracle, doubtless himself an 'unbiased Enquirer'; he was also able to relate the disease in Malabar to the world outside (Fryer, 1698).

Of Christians here are not an inconsiderable number. Here are also those Elephant-Legged St. *Thomeans*, which the unbiased Enquirers will tell you chances to them in two ways: By the



Indians with elephantiasis

From the 1614 edition of J. H. Linschoten's travels published in Amsterdam "Navigatio ac itinerarium Iohannis Hugonis Linscotani in Orientalem . . ." reproduced here from the original in the Wellcome Library by courtesy of the Wellcome Trustees.

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Venom of a certain Snake: for which the *Jangies* or Pilgrims furnish them with a Factitious Stone (which we call a Snake-stone) and is a Counterpoison to all deadly Bites; if it stick, it attracts the Poison; and put it into Milk, it recovers it self again, leaving its virulency therein, discovered by its Greenness: As also by drinking bad Water (to which, as we to the Air, they attribute all Diseases) when they travel over the Sands, and then lying down when they are hot, till the Earth at Night is in a cold sweat, which penetrating the rarified Cuticle, fixes the Humours by intercepting their free concourse on that side, not to be remedied by any *Panacea* of their *Esculapian Sectors*; it is not much unlike the *Elephantiasis Arabum*.

He also found elephantiasis on the opposite side of the Indian Peninsula around the site of St. Thomas's tomb but, strangely, other accounts of St. Thomas's Mount in the seventeenth century do not mention the caste of people mentioned by Fryer. Friar Domingo Navarrete sheltered at St. Thomas's Mount in 1670 but, other than being 'engag'd with the Knats which never ceas'd tormenting of us' and commenting on the scandalous behaviour of the Portuguese, he does not mention the curse of St. Thomas (Cummins, 1962). Neither does Bowry who visited the Mount between 1669 and 1679, although he commented somewhat sarcastically on the 'faire tales' told to strangers here (Temple, 1905). Jean-Baptiste Tavernier, Baron of Aubonne, also visited the Churches of the Augustan and the Jesuit Fathers at St. Thomas's Mount in 1652 and saw the head of the lance with which St. Thomas was supposed to be martyred. He does not mention elephantiasis, although he referred to the disease later in his travels—as being found in Africa (Ball, 1925). It is possible that Fryer visited St. Thomas's Mount at a time when the tomb attracted sufferers from the disease, although his account is a little circumstantial. 'About this Mount live a Cast of People, one of whose Legs are as big as an Elephant's; which gives occasion for the divulging it to be a Judgement on them, as the Generation of the Assassins and Murderers of the Blessed Apostle St. *Thomas*, one of which I saw at *Fort St. George*.'

The suggestion that there was elephantiasis on the east coast of India at this time is directly contradicted by Alexander Hamilton, Scots sea captain, who apparently knew Fort St. George, the town of St. Thomas and the Mount very well. This was a time of great change. The English had settled at Fort St. George, and, in the west, the Dutch in 1663 had taken Cochin in Malabar from the Portuguese. Hamilton travelled widely over the Indian Ocean between the years 1688 and 1725. St. Thomas's Mount was now a place for recreation; the East India Company maintained a garden at the foot of the Mount and so also did the 'Gentlemen of Figure' at Fort St. George. Hamilton however learnt about the death of St. Thomas at the Mount (in a modernised version) and how the Portuguese first built a church there. He was also shown the lance that killed the Apostle 'but how the *Portugueze* came by that Lance is a Question not yet well resolved'. He also took his natural scepticism to Malabar where he saw elephantiasis now also affecting the Dutch (Foster, 1930).

The Water of this Country, near the Sea-coast, from *Cranganore* to St. *Andreas*, which is about 12 Leagues, has a bad Quality of making the constant Drinkers of it have swell'd Legs. Some it affects in one Leg, and some in both. I have seen Legs above a Yard about at the Ankle. It causes no Pain, but itching; nor does the thick Leg seem heavier than the small one to those who have them: But the *Dutch* at *Couchin*, to prevent that Malady, send Boats daily to *Verapoli*, to lade with small portable Casks of 10 or 12 *English* Gallons, to serve the City. The Company's Servants have their Water free of Charges, but private Persons pay Sixpence per Cask, if it is

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brought to their Houses; and yet, for all that Precaution, I have seen both *Dutch Men* and *Women* troubled with that Malady. And no Cure has been yet found to heal or prevent it. The old *Romish* Legendaries impute the Cause of those great swell'd Legs to a Curse *St. Thomas* laid upon his Murderers and their Posterity, and that was the odious Mark they should be distinguished by; but *St. Thomas* was killed by the *Tillnigue* Priests at *Mallapore* on *Chormandel*, about 400 Miles distant from this Coast, and the Natives there know none of that Malady.

Preventive measures against elephantiasis are also mentioned by *Jacobus Canter Visscher*, who was Chaplain at *Cochin* from 1717 to 1723. By now, so it would appear, the age of reason had taken over. There is just the barest mention of the curse of *St. Thomas* so that *Visscher* can then refute the legend; the clinical symptoms of the onset of the disease are also described. The following copy of *Visscher's* letters from *Malabar* is taken from *Padmanabha Menon* (1924).

Similar swellings are often seen on persons in this country; but here the disorder generally attacks the legs, and other parts of the body besides. The disorder always begins with a fever, which they here call the raging fever, which sometimes causes delirium, and, as the strength of the malady increases, great pain is felt in the legs or in the other parts attacked: the fever then settling in the suffering part, causes it to swell in a frightful manner. In the commencement of the disorder, the swellings subside again, but, as the fever returns, at intervals of one or two months, or a longer period, they reappear and become permanent; so men have been found with legs as thick as my waist and with other frightful swellings.

This malady cannot be ascribed to any particular nation or race of men. I remember to have read that it attacks only the *St. Thomas' Christians*, and that they may be known by this mark; but nothing can be more absurd than such a notion, for we see every day people of all kinds, men and women, *Mahometans*, *Heathens*, and *Christians*, and even *Europeans* who reside here, attacked by it. . . .

I believe that the cause of the disorder is in the water and the soil, and partly also in the air, which is filled with vapour drawn up from the water. It appears that in the low parts of *Malabar* in the neighbourhood of *Cochin*, the earth is full of saltpetre or some other substances, which mingle with the water of the pools or rivers near the sea coast; and the people who constantly drink this water acquire a disorder and fever which causes at first shivering, and then drives the particles which occasion the fever into a certain part of the system. These particles being sharp and pungent, cause great pain, and at last distend the small vessels in the afflicted region, which after the first access of the complaint, subside again, but after fresh particles have been driven in by fresh fevers, the enlargements not only remain fixed but increase in size. On the legs thus deformed, the flesh becomes loose and spongy, but this makes them light also, so that, however enlarged they may be in size, the patients can walk with ease.

These remarks of mine seem to be strengthened not only by the taste of the water of these lowlands, which is brackish and unpleasant, but by actual experience; for the people who are in better circumstances, and can afford to bring their water from a distance, from the river *Mangatti*, are seldom visited by the disease, while on the other hand, those who drink the water of the neighbourhood suffer therefrom. On this account, the *East India Company* has wisely ordered that this water should no longer be given out to the garrison, but water from the *Mangatti* instead; and it has been observed that the malady has been much less prevalent among the troops since that time. I must add that the juice of the young cocoanuts is also very deleterious; and my neighbour said that he himself had caught the disorder from that cause. The reason is plain: we know that the vessels of the cocoanut palm are of great width, so that it imbibes water from the earth just as it is, without detaching it from the particles of saltpetre; and in this state the fluid enters the young nut, the interior of which contains nothing but a sort of water, rather sweet in taste, and consequently it gives rise to the same disorder as the water of the wells.

I am fortunate as never to have suffered this disease. . . .

By now the legend of the curse of *St. Thomas* appears to have almost died away. Two books from the late eighteenth century, those of *Clark* (1773) and *Ives* (1773), described elephantiasis in *Malabar* but do not mention its miraculous origin. The

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name of 'St. Thomas leg' given to elephantiasis in the previous century (Heeres, 1898) now gave way to the term Cochin or Cocheen leg; in much the same way elephantiasis in the West Indies was called Barbadoes leg, following the description of this condition in 1726 by Towne. Clark visited St. Thomas's Mount 'where the residents are continually making parties of pleasure, which greatly contributes to their health' and described Cochin.

Cocheen, belonging to the Dutch, stands low, and is situated on the banks of a river. In the wet season, as torrents of rain descend from the mountains, all the water is thick and muddy. It is supposed that the monstrous swelled legs, to which the natives are subject, so well known over all India by the name of Cocheen legs, are occasioned by the impurities of these waters. However this may be, from the longest residence, no European becomes liable to the same disease. It cannot, indeed, be properly termed a disease; for the natives of Cocheen are extremely healthy, neither is the bulk of their legs the least inconvenience to them. No praeternatural weight is to be observed; they are strong-bodied, and enjoy as much agility, as if they were totally exempt from this unseemly deformity.

Surgeon Ives, who sailed to India in 1754, with Admiral Watson and later with Colonel Clive, also adopted a slightly paternalistic note.

We could not but take notice at this place, of a great number of the *Cochin* or *Elephant Legs*. This is a disorder peculiar to the inhabitants of the *Malabar* coast, and especially to those of *Cochin*. It seems to be merely an oedematous swelling, arising from an impoverished state of the blood; and in many persons the leg is of so enormous a size, as to occasion it's being called the *Elephant-leg*, having greatly the appearance both in shape and bigness of the *Elephant's*. I could not learn that any remedy for this disorder had been discovered by the natives, and as they seldom or never apply to *Europeans* for assistance, I believe they are seldom if ever cured: but were they to do so, probably it would be but little avail, since an alteration from the poorest to the most cordial and nutritious diet would certainly be recommended to them, and we well know, that every *Cast of Indians* are so much wedded to their own particular customs, they would sooner choose to die, than materially to alter their usual course of living, even if their circumstances permit it. The generality of those who labour under this disorder, seldom are able indeed to call in any assistance, being composed of the very poorest of the people, who feed chiefly on *Sardinias*, and cannot purchase even the smallest quantity of rice to boil with the fish for their daily subsistence. I was informed, that these poor wretches are supported for whole weeks together, perhaps months, with no other aliment than what this species of fish affords; and their drink is water only, unless by way of regale they now and then procure a draught of the simple unfermented juice of the cocoa-nut-tree, called *Toddy*.

We have now entered an age of scientific miracles, not religious ones.

In this series of extracts related to elephantiasis in Malabar, from the opening of the sixteenth to the close of the eighteenth centuries, I have tried to show the changing attitudes of the Europeans to the disfiguring tropical disease that they found here on the west coast of India. The Portuguese came full of hope to find the Christians converted by St. Thomas. They found an established society but few miracles, until they discovered for themselves the burials and the lance head at St. Thomas's Mount in Madras. They found, according to Pires, the elephantiasis called *pericaes*=perunkal (Tamil for big leg) which affected all castes of the Hindu population of Malabar. They also discovered that the Christians of Malabar were not orthodox; in fact, by the end of the sixteenth century, they were heretical. At this time, a member of the Archbishop of Goa's retinue produced an account that elephantiasis was the result of a curse by St. Thomas on those that martyred him and their progeny, inferring that

the disease, called *penekajys* or *penequais*, was also a disease of the heretical St. Thomas Christians. There may be even earlier reports of this legend although Temple (1905) states categorically that: 'In the seventeenth century the martyrdom of St. Thomas was made responsible for elephantiasis'. It is also possible that during the sixteenth century the St. Thomas Christians had moved nearer the coast into the endemic area of filariasis around Cochin so as to be there under the protection of the Portuguese. Whatever the origins of the curse of St. Thomas, the legend and the name given to elephantiasis, as St. Thomas' leg, became common knowledge in the seventeenth century. Abel Tasman used this name to describe the condition of a Pacific islander who came aboard his ship during the voyage of discovery to Australia; Tasman had spent some years earlier in India (Heeres, 1898; Laurence, 1968). The legend fell into disrepute during the seventeenth century as the more sceptical attitudes of Fryer and Hamilton show, and the curse of St. Thomas is lost in the later accounts of elephantiasis in Malabar in the next century. Menon however mentioned that the curious tradition continued in Malabar in 1924 but more recent education about mosquito transmission has probably extinguished the legend completely (Iyengar, 1938; Trivandrum, 1961). The traditional association with bad water, however, continues. Menon mentioned an association between elephantiasis and water into which the roots of the screw pine entered, popular in Malabar early in the present century, and I had great difficulty in persuading a schoolmaster that the immediate cause of elephantiasis was not bad water in Andhra Pradesh in 1961 (see also Singh, Raghavan and Krishnaswami, 1956).

The disease also continues and is still endemic in Malabar. If Visscher, in the early eighteenth century, had equated the mosquitoes in the air with his water in the coconut plantations, and his small particles with the infective filarial larvae to be found in the mosquitoes, he would have been the first person to describe the epidemiology of the disease. The production of coir fibre from coconuts is still an important industry in Malabar, as it was when the Portuguese first arrived there. To produce coir, the coconuts are first soaked in pits dug amongst the coconut plantations. These soak pits are the breeding places of *Mansonia* mosquitoes which are the vectors of human filariasis due to the parasite *Brugia malayi*. *Mansonia* mosquitoes have a peculiar life history: the eggs are laid on the floating leaves of water plants and both the larvae and pupae pierce the submerged parts of the plants to obtain their oxygen. The adult mosquitoes also require a high humidity for survival (Laurence, 1960). All these conditions are found in present-day Malabar, as they must have been in earlier times. Schouten in the seventeenth century was impressed by the dampness, which is one of the essentials for the growth of coconuts, and coir fibre for sailing ships on the Indian Ocean was in demand from the earliest times. The disease may be much more ancient. One of the two earliest Sanskrit works on medicine in India, the *Samhita* of Susruta, described elephantiasis, or *slipada*, as peculiar to those countries in which large quantities of old rainwater remain stagnant in all seasons, making them damp and humid (Kaviraj Bishagratna, 1911). This brings to mind the lagoon landscape of Malabar and the transmission there of filariasis by *Mansonia* mosquitoes. It is no coincidence that water and the coconut palm appear in the early accounts of elephantiasis in Malabar.

The Curse of Saint Thomas

Today the largest area of *Brugia malayi* infection in India is found along the coast of Malabar. It extends south to Quilon and for about the same distance to the north, on either side of Cochin or Ernakulam (Raghavan, 1957; Trivandrum, 1961). One of the more notorious places for elephantiasis is the Shertallai Taluk south of Cochin, which is a coir-producing area, and here, until very recently, the only filarial infection was by *Brugia malayi* (Iyengar, 1938; Singh, Krishnaswami and Raghavan, 1958). The survey carried out in 1955 showed that out of the 8,463 persons examined, 2,011 showed external signs of filarial disease; of these 1,298 showed elephantiasis of the legs and 142 showed elephantiasis of the legs and the hands. There had been little change in the incidence of the disease between the surveys of 1938 and 1955. The estimate of Tomé Pires, apothecary, in the early sixteenth century of one-quarter or one-fifth of the population affected may not have been entirely an exaggeration. The later writers—Fitch, Thevenot, Hamilton, Visscher, Clark and Ives—all refer to the elephantiasis they saw in the neighbourhood of Cochin.

The curse of St. Thomas would, then, appear to have been due to infection by the filarial worm *Brugia malayi*, which is transmitted by *Mansonia* mosquitoes in the coconut plantations of Malabar. Could it have been some other disease? One alternative is that the elephantiasis could have been due to another filarial disease of man caused by infection with the worm *Wuchereria bancrofti*. This is less likely. Bancroftian filariasis in India is largely a disease of the towns, where it is carried by a mosquito that thrives in polluted waters, *Culex pipiens fatigans*. Today in Kerala, Bancroftian filariasis is found in isolated, if expanding, foci in the towns lying inside the coastal belt of *Brugia malayi* infection (Trivandrum, 1956). Both forms of filariasis are known today in Cochin and Ernakulam towns (Singh, Raghavan and Krishnaswami, 1956) and the examination of the microfilarial carriers has shown that, of the two, Bancroftian filariasis today is the more active disease. Unfortunately, because people with elephantiasis in India do not usually show microfilariae, we do not know if the cases of elephantiasis in the towns are due to infections originally of *Wuchereria bancrofti* or of *Brugia malayi*. Of 12,358 persons examined in the two towns, 474 showed elephantiasis of the legs and 33 of the legs and arms. In at least one major town in south-east Asia during the present century, increasing urbanization has resulted in the *Mansonia* mosquitoes moving out and *Culex pipiens fatigans* and Bancroftian filariasis moving in. This may also be happening in the towns of Malabar. In Shertallai, no cases of this disease were found in 1938, compared with 16 cases from Shertallai town in 1955, and this is attributed by the authors of the 1955 report to the increasing urbanization of the town (Singh, Krishnaswami and Raghavan, 1956).

Pires and Linschoten referred to a disease that was widespread in Malabar, and Linschoten said that certain *villages* were totally affected by it. Both Linschoten and Schouten suggested an early age incidence of the disease. This would fit the pattern of incidence of elephantiasis of *Brugia malayi* infection today in Malabar. In India, infection by *Wuchereria bancrofti* is known as urban filariasis in contrast to rural filariasis where the parasite is *Brugia malayi*. Elephantiasis has been found on the south-west coast of India commonly for more than 450 years. This endemicity of the disease suggests the epidemiology of the filarial worm *Brugia malayi* which is

associated with the very ancient coir industry on this coast, rather than the infection by *Wuchereria bancrofti* found today in the towns.

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