A HISTORY OF EARLY COCOA INTRODUCTIONS

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To write a history of cocoa introductions within the compass of an article for this journal one has to make clear just what this brief history is intended to cover: the starting point, and the depth of detail. In this article I propose to start at the time when cocoa was first moved from Latin America and the Caribbean and then to mention the initial and subsequent major introductions to the other tropical countries where it is now grown.

THE EIGHTEENTH CENTURY

Before describing these movements, it is appropriate to discuss the changes that took place in Trinidad because Trinidad became an important source of planting materials during the 19th century.

Cocoa is said to have been introduced to Trinidad in 1525. This would have been Criollo cocoa and this type was grown until the 18th century when plantings were decimated by a "blast" in 1727. At one time the "blast" was thought to be a hurricane but it is now considered to have been a disease. Later, in 1757, Forastero material was introduced from Venezuela and this hybridised with the remaining Criollo, creating the Trinitario population which has become so well known. Originally this was due to the interest and skill of the planters who made selections and corresponded with similar groups of planters in Ceylon and Java.

By 1700 cocoa was being grown throughout Central America, in many of the islands in the Caribbean and in areas adjacent to the Andes in South America. Prior to this, cocoa had been introduced to south-east Asia. According to van Hall (1914) and Nosti (1953) cocoa was transported from Caracas eastwards to the Celebes in 1560 and Nosti states that cocoa was moved westwards from Acapulco to the Philippines in 1614, although 1670 is quoted by Wright (1907) and on the map in Nosti's book (Figure 1). Unfortunately these authors have not given any sources for these dates and so it is not possible to confirm the information. Whatever the correct dates - and 1560 seems remarkably early for a successful introduction over such a great distance - the type of cocoa moved must have been Criollo, the only type grown in the Philippines until quite recently and the type grown initially in Java. It seems probable that Java obtained its planting material from the Celebes or the Philippines. There is evidence that cocoa was taken from Amboina in the Moluccas to India in 1798 where it was planted in Tirunelveli District of Madras State; this again was a Criollo type (Ratnam, 1961).

The most significant movement of cocoa in the 18th century was the introduction of an Amelonado type from the Amazon basin of Brazil to Bahia. It is said that a Frenchman, Frederick Warneau, brought cocoa seeds from Para in 1746 and gave them to one Antonio

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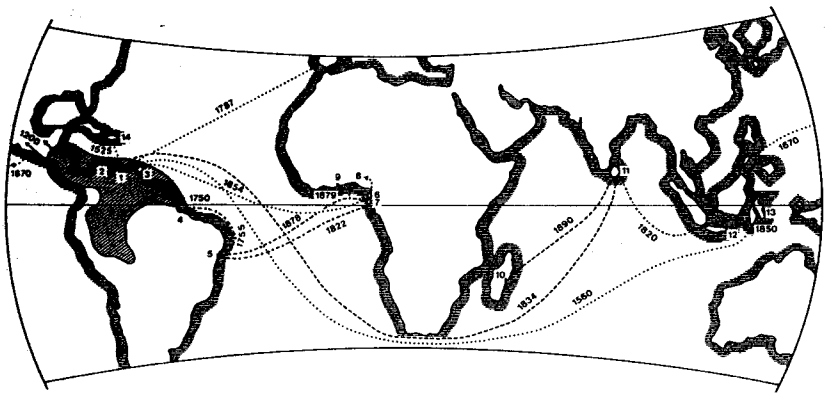
Dias Rubieso who planted them at Cubiculo de Almado on the banks of the Rio Pardo (Urquhart & Wood, 1954). However, many decades passed before Bahia became an important producing area.

FIGURE 1: ORIGIN AND DESTINATION OF PRINCIPAL MOVEMENTS OF COCOA 1200 TO 1879



Key:

Symbol	Nationality
.....	Spanish
-----	British
———	Mayas
.....	Portuguese
.....	Dutch

1	Caracas	8	Nigeria
2	Maracaibo	9	Cote d'Ivoire
3	Trinidad	10	Madegascar
4	State of Para, Brazil	11	Ceylon (now Sri Lanka)
5	State of Bahia, Brazil	12	Java, Indonesia
6	Fernando Po (now Bioko)	13	Celebes, Indonesia
7	Sao Tome	14	Dominican Republic

Source: after Nosti (1953)

Thus at the beginning of the 19th century cocoa production was confined to Central and South America and some of the Caribbean islands plus some plantings of local significance in the East Indies. The total world production in the first five years of the century averaged only 135,000 tonnes.

Great changes were soon to come due to much greater freedom of trade, reduction of taxes and hence increased demand for cocoa beans, followed by technical developments leading to a wider range of products being made from the cocoa bean.

THE SPREAD TO WEST AFRICA

There was considerable trade between Brazil and West Africa in the 19th century and not just between Brazil and Portuguese possessions in Africa - buildings in Lagos also bear witness to this traffic. Therefore the introduction of cocoa plants from Brazil to West Africa was bound to happen and 1822 is the date generally given for its introduction to Principe - a small volcanic island just off the coast of West Africa. From there cocoa moved to other islands in this chain - to San Thome in 1830 and to Fernando Po (now Bioko) in 1854 on the orders of Queen Isabel II of Spain (Nosti, 1953). A different origin is claimed by Cook (1982) who states that cocoa was introduced to Fernando Po by Spaniards in the 17th century from eastern Venezuela. He also states that the first introduction to Principe in 1822 was "probably from Fernando Po" and that the introduction from Brazil into Principe took place in 1830.

The subsequent history is fairly well known although the details may be vague and disputed. Cocoa cultivation in San Thome and Fernando Po depended on imported labour, workers being recruited in Angola for San Thome and in Nigeria for Fernando Po. Angola is generally unsuitable for cocoa, but Nigeria obviously is suitable and in 1874 Chief Squiss Ibaningo brought cocoa from Fernando Po to Bonny in the Niger delta (Ayorinde, 1966). Ayorinde states that the chief visited Madeira in 1871 and "there became interested in cocoa planting". However, cocoa has never been a commercial crop in Madera, although it may have been grown in a botanical garden.

Better known is the introduction of cocoa from Fernando Po to the Gold Coast (now Ghana) by Tetteh Quashie in 1879. His was not the first introduction but it was certainly the most successful, partly because he had seen how cocoa could be grown while working in Fernando Po.

Earlier introductions had been made by various missionaries of the Basel Mission which had a station at Akropong (Wanner, 1962). The first of these efforts was in 1857 when some seeds were imported from Surinam. This failed as did subsequent introductions, possibly because the recalcitrant nature of cocoa seeds was not understood. Ill-health dogged these efforts in common with many other enterprises in West Africa in that era. However the Basel Mission can take credit for the fact that they played a part in the education and training of Tetteh Quashie.

Some of the seeds Tetteh Quashie introduced in 1879 were planted at Mampong-Akwapim in Ghana on the edge of the hills inland from Accra which proved to be the south-eastern limit of the cocoa area. His farm at Mampong succeeded and Akwapim farmers were

quick to take up this new crop. The Governor, Sir Brandford Griffith, was also quick to realise the potential of the crop in the hands of local farmers and made further introductions of seed.

The type of cocoa was, of course, Amelonado and it was the basis of cocoa production throughout West Africa with the exception of Cameroon. When this country was a German colony a collection of planting material from South America and the West Indies was established in the botanic garden at Victoria. The result was a Trinitario population with many red-podded trees in West Cameroon, while in East Cameroon these Trinitario trees were mixed with Amelonado from Fernando Po. The different origin of this planting material may well account for the different physical characteristics (higher fat content and red coloured powder) of Cameroon cocoa as opposed to that of Ghana and Nigeria.

In Fernando Po a few plants of a Criollo variety were introduced in 1920 by one estate (Swarbrick, 1965) and this gave rise to a localised Trinitario population.

The major fresh introduction to West Africa was that of Amazon types. Over 100 pods were sent from Trinidad to Ghana in 1945 by Posnette (Toxopeus, 1985). This introduction covered a wide range of material arising from the work of the Imperial College of Tropical Agriculture and the Department of Agriculture in Trinidad, the latter having made numerous introductions from the Amazon basin in a search for trees resistant to witches' broom disease. Much of the cocoa planted in West Africa during the past 30 years arose from this introduction and in addition it provided the genetic material for breeding programmes. This is not the place to describe the Amazon material and its subsequent use but its importance cannot be over-emphasised. There have, of course, been subsequent introductions from Trinidad and the Cocoa Research Unit there continues to be the major centre for the study and evaluation of genetic material, most of it collected in the Amazon basin.

INTRODUCTIONS TO COUNTRIES IN ASIA AND THE PACIFIC

The early introductions to Celebes (Sulawesi, Indonesia) and the Philippines have been mentioned, as well as the movement from the Moluccas to India in 1798. While there is no firm record of the first introduction to Ceylon it seems probable that it was made at the same time, if not earlier, than the recorded introduction to Madras.

In the early part of the 19th century the plantation industry developed and botanic gardens were established; there arose a greater interest in introducing new crops and different, hopefully better, varieties of existing crops. Ceylon was one of the centres of such interest and there were several movements of cocoa in both directions between Ceylon and Trinidad during the 19th century. The first introduction from Trinidad took place in 1834-5 and the second in 1880. During the following 10-15 years Ceylon despatched cocoa plants to various countries. According to Wright (1907) cocoa plants were sent to Singapore and Fiji in 1880, to Samoa in 1883, to Queensland in 1886, to Bombay and Zanzibar in 1887 and to British Central Africa, presumably Tanzania, in 1893. Ceylon was also the source of material planted in Madagascar.

There is a record (Thong et al., in press) of cocoa in the garden of a Portuguese lady in Malacca in Peninsular Malaysia in 1778. It seems possible that the Dutch could have brought cocoa there earlier than this. A few experimental trees were reported to be thriving in Penang in 1802 (Thong et al., in press). The origin of the material in Malacca or Penang is unfortunately not known. Raffles encouraged efforts to plant cocoa in Singapore in 1823 which survived at least until 1866 despite the poor soil (Thong et al., in press).

MEANS OF TRANSPORT

While the type of cocoa involved in these introductions is often obscure and can only be inferred from recent knowledge of the types grown initially in the country concerned, the means of transport is even more obscure. We know that pods can be in transit for about two weeks without loss of viability; no doubt this has been known for a long time but many of the journeys mentioned would have taken at least as many months. During the later part of the 19th century Wardian cases were widely used for transporting plants. The Wardian case was invented by Dr Nathaniel Ward, an amateur botanist and medical doctor who practiced in the east end of London. The smoky atmosphere there was lethal to the ferns he wished to grow and the glass case was the answer. This formed the basis for the Victorian fern craze in England. Dr Ward saw its use for transporting plants overseas and sent plants from London to Sydney successfully in 1833 (Etter, 1971-3). Hinchley Hart (1911) describes in detail the Wardian case and how it was used for cocoa. These cases - a sort of mini-greenhouse - were typically 90 cm by 60 cm and at this size could hold 1200-1500 seeds or 100-150 year-old plants. Similar containers may have been in use in earlier times but there is no firm information about this.

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