



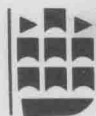
Coffee

Gordon Wrigley

Tropical Agriculture Series

Coffee

Gordon Wrigley AICTA



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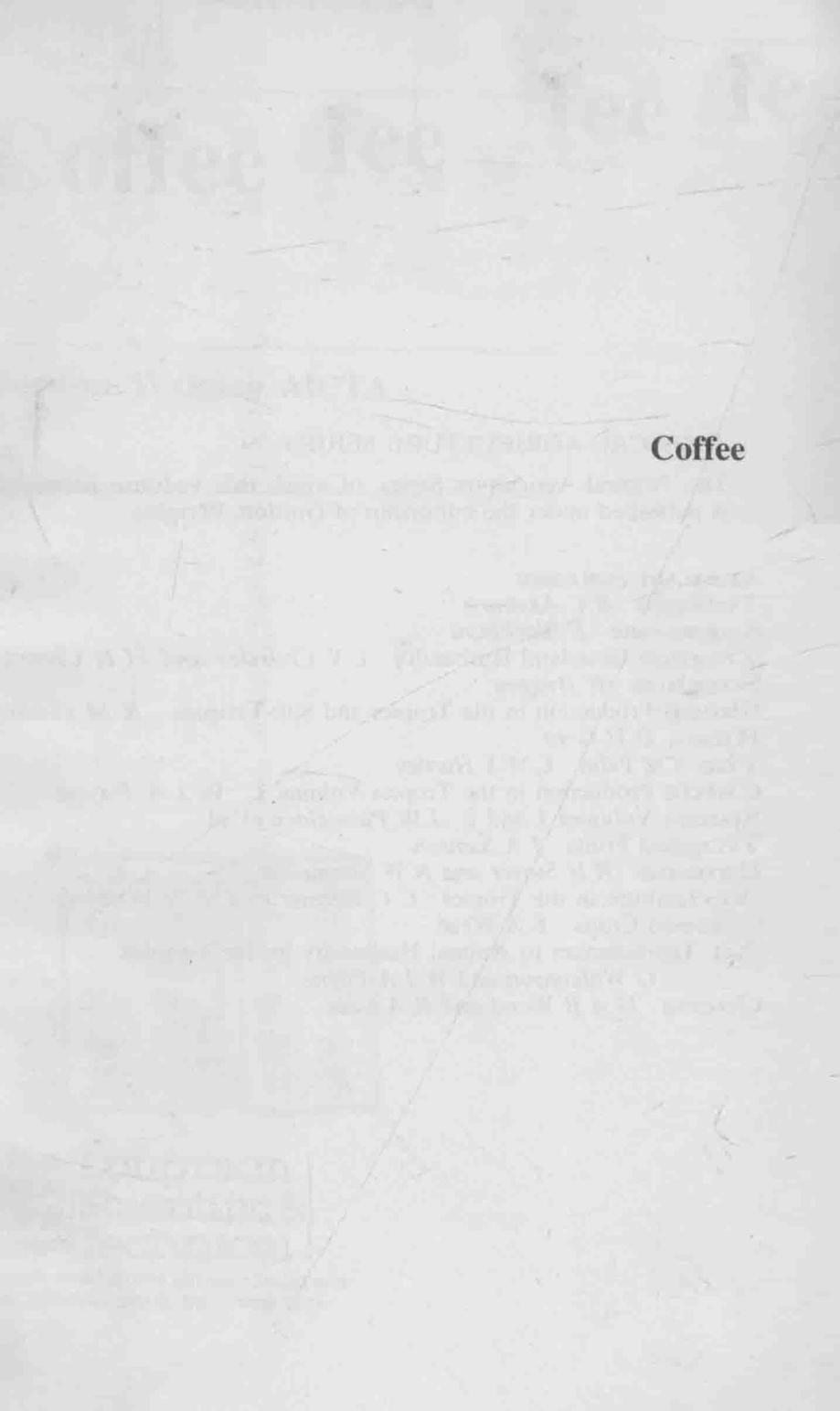
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Coffee

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D A Burdekin loaned me many publications from the late L M Fernie. A S Thomas expressed some of his radical views on robusta,

sent me some of his publications and offered me further help, but died soon after our contact. Brian Robinson helped considerably with a complete set of his many papers on coffee, a copy of his manual for Papua New Guinea and numerous publications on coffee nutrition, now out of print. With considerable patience, during many long telephone conversations, he cleared up a number of uncertainties and guided me to some important papers. Heino Heine of the Laboratoire de Phanerogamie in Paris sent me a copy of the Jussieu's original paper which cleared up the date of arrival in Paris of the famous tree, a matter about which Dr A Kanis wrote to me at length from Australia, as did Wilson Mayne on Coffee Leaf Rust. From Ted Weiss, also in Australia, I received useful historical material I had previously missed. Dr Van der Graaff of FAO sent me the latest information on the Ethiopian coffee breeding project, and Deanna Sivaram the coffee manual for Malaysia.

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Chapter 1 History: Dr Hasenkamp, Direktor of the Jacobs

Suchard Museum, commented on all this chapter and besides making a number of corrections drew my attention to omissions. Dr Heniger of the Biohistorisch Instituut in Utrecht checked the information on the Dutch East India Company (VOC) and explained how they operated and the contribution of the Dutch to the early extension of coffee growing and trading. Jill Butterworth checked the relevant old Arabic texts. Robin Bidwell of the Middle East Centre drew my attention to information on Yemen and Mocha, clearing up certain points in this section. The first part of this chapter proved difficult to follow in its original form and Gillian Dickenson made many suggestions to improve this.

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Chapter 10 Breeding: Norman Simmonds went through this chapter in great detail and drew my attention to work he had visited in Ethiopia. Ian Mackenzie of PA Technology contributed to the section on tissue culture.

Chapter 11: John Gordon of the machinery manufacturers of the same name, not only explained the workings of coffee machinery

and checked this long section, but also checked it with old correspondence from two previous generations of Gordons who knew the personalities who developed coffee machinery at the end of the nineteenth century. Bill Fox and others at Sortex commented on colour grading.

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As all these people are the specialists, their comments have all been incorporated, but they did not have the opportunity to recheck and are in no way responsible for errors that occur or opinions that are expressed.

I also wish to thank the following for permission to use their drawings and photographs:

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I have been unable to contact the copyright holders of other material, and would appreciate any information which would assist me to do this. The origins of all material I have tried to acknowledge.

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Only three 'organizations' did not allow me to use their material, the reasons for which I am still trying to understand but I do not think that the book has lost anything through this.

All of the many books on coffee which I have consulted contain errors, mainly of a minor nature, and I am certain that despite all the assistance and checking this book is no exception. I would be grateful if readers would draw my attention to these so that they can be eliminated from any future edition.

GORDON WRIGLEY

Linton

Cambridge

October 1986

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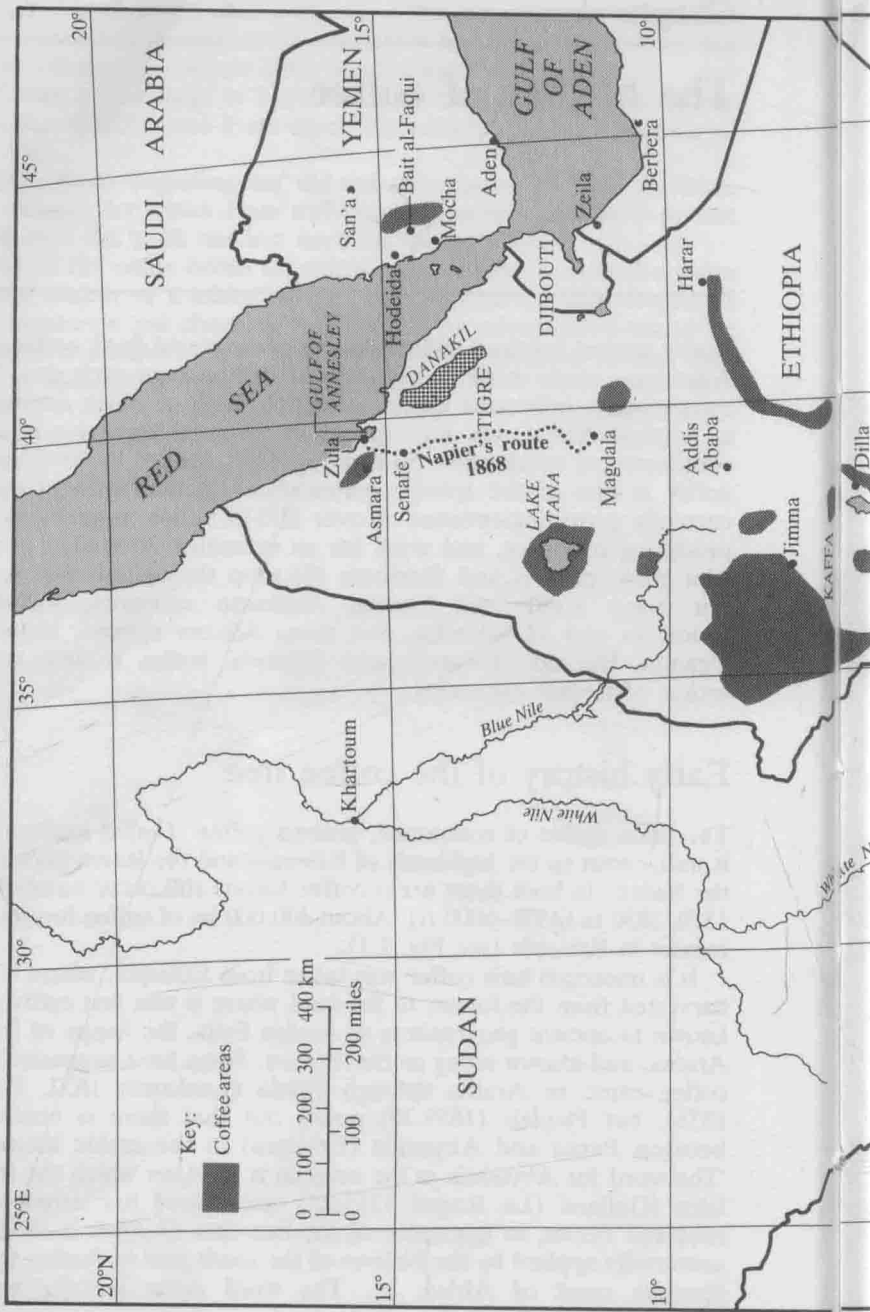
The history of coffee

Today several hundred million people in the world drink coffee, the Americans alone drinking around 430 million cups each day. The commercially important species of coffee, both of which originated in tropical Africa, are now grown in some 80 countries in four continents, of which some 50 export coffee. Judged by total value, coffee is one of the leading commodities in international trade, currently providing revenue of over \$US10 billion annually to the producing countries, and work for an estimated 20 million people who grow, process and distribute the crop throughout the world. For many South and Central American countries, including Colombia and El Salvador, and many African nations, including Uganda, Burundi, Rwanda, and Ethiopia, coffee is their major source of foreign exchange.

Early history of the coffee tree

The main coffee of commerce, arabica coffee (*Coffea arabica* L.), is indigenous to the highlands of Ethiopia and the Boma plateau in the Sudan. In both these areas coffee forests still occur naturally at 1370–1830 m (4500–6000 ft). About 400,000 ha of coffee forests still remain in Ethiopia (see Fig. 1.1).

It is uncertain how coffee was taken from Ethiopia, where it was harvested from the forest, to the land where it was first cultivated, known to ancient geographers as Arabia Felix, the happy or fertile Arabia, and known today as the Yemen. Some have suggested that coffee came to Arabia through Persia (Lankester 1832, Porter 1833), but Playfair (1859:20) points out that there is confusion between Persia and Abyssinia (Ethiopia) in the arabic language: 'The word for Abyssinia in the original is *El-Ajem* which the translator [Galland (La Roque 1715:25) see below] has erroneously rendered *Persia*, in ignorance of the fact that *El-Ajem* is the term universally applied by the Natives of the south part of Arabia to the opposite coast of Africa. . . . The word *Ajem* literally means "foreign".'



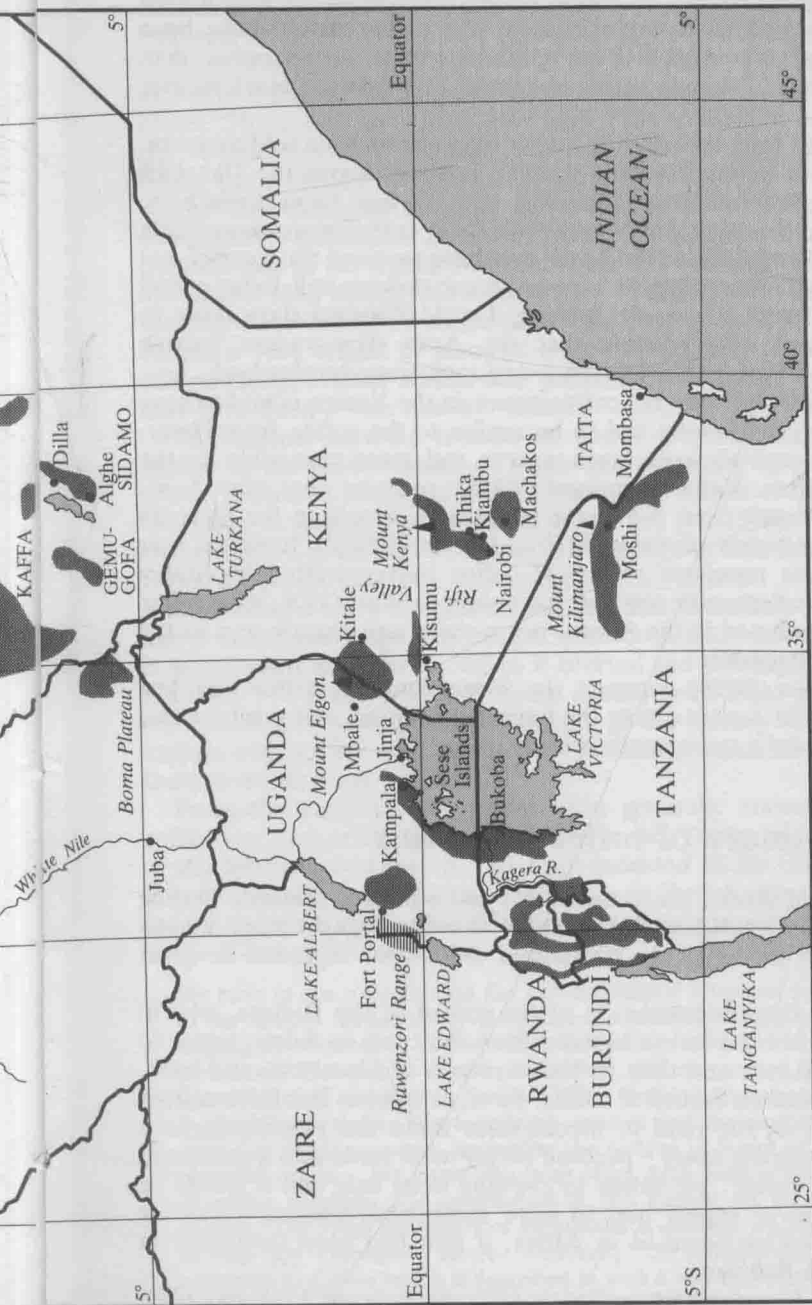


Fig. 1.1 Ethiopia, Yemen and East Africa showing the route of Napier's expedition

There is no record of coffee having been grown or widely used in Persia, and no apparent reason why coffee should have been introduced into Arabia Felix indirectly from Persia rather than directly from Ethiopia across the Strait of Yemen, a much shorter journey.

Negroes from the south of Sudan have always been sold as slaves, and moved to Saudi Arabia through Ethiopia across the Danakilis desert in eastern Ethiopia (see Fig. 1.1). To help them through the desert the slaves probably took with them coffee beans from Kaffa Province, and some of the beans may have survived the journey and germinated. According to a game-ranger there is still today a trail of coffee trees (*C. excelsa*?) along the old Zambesi slave route to Beira. It is also possible that the Arab slave-traders became acquainted with coffee in Africa and took some berries back.

However, the 'Mocha' coffee grown in the Yemen is said to have a narrow genetic base and to be similar to the coffee from Harar, a coffee growing area much nearer and more accessible to the Yemen than Kaffa. Southard (1918) suggests that the Arabs obtained seeds from the Harar region of Ethiopia in the eleventh century and grew plants in Arabia. Haarer (1962:2), however, says there is no reputable record of coffee having existed in Arabia during the thirteenth century. According to Watt (1908:364) 'coffee is not mentioned in the *Koran*, nor is there any allusion to it in the Hebrew Scriptures'.

Chevalier (1929) supports the suggestion that coffee was first cultivated in Arabia during the fourteenth century and nowhere else until the early seventeenth century.

Early history of coffee as a drink

In parts of Africa the beans were, and still are, chewed. Vesling (Veslingius) (1640) says that coffee cherries brought from Yemen were sold in Egypt as crystallized fruits and regarded as great luxuries.

In the English translation of the record of Ibn Battuta, who in AD 1325-54 travelled to Mecca, down the coast to Aden, across to Zaila in Africa and then to Kulwa, south of Mombasa, and back, I have found no record of coffee, *bunn*, or *qahwa*. Ibn Battuta does note that on the road to Mecca from Badr 'the pilgrims make a point of supping *sawig* - parched barley meal made into a gruel with water or butter'. He refers to chewing betel nut, and it would be reasonable to expect him to have mentioned drinking coffee or chewing coffee beans as in Africa, if that had been customary in Arabia at that time.

James Bruce, who travelled in Ethiopia between 1768 and 1773,

described a concoction of ground, roast coffee beans mixed into a ball with oil or fat, which was carried as food into the desert.

There appears to be no record of the first roasting of the beans, or where it started. Originally the leaves were stewed and the liquor drunk. The coffee hulls have long been used to make a drink, and the ripe berries were fermented to make a wine. The use of the beans was recorded by Alpinus in Egypt in 1592.

The Encyclopaedia of Islam (1978 edn: 450) states that 'coffee was probably not known as a beverage in South Arabia much earlier than the turn of the eighth/fourteenth century. Whether the tree was introduced long before this is doubtful.' Dufour (1685) considered that the Arabs knew of coffee as far back as the year 800, but La Roque is very critical of many of Dufour's statements. In his later edition (1693) Dufour admits that 'bunchum' referred to by Rhazes, may have been a root and not coffee.

The earliest separate treatise on coffee is believed to be *The Nature of the drink Kauhi, or Coffe and the Berry of which it is Made, Described by an Arabian Phisitian*. The author of the original two pages in Arabic died in Mecca in AH 1008 (AD 1599). The translation printed in Oxford by Henry Hall in 1659 is believed to be by Edward Pococke. It starts: '*Bun* is a plant in *Yaman*. . . . It flowres white leaving a berry like a small nut, but that sometimes it is broad like a bean; and when it is peeled; parteth in two.' It explains: 'It is now known as *Kohwah*. When it is dried and thoroughly boyled, it allayes . . . [many ills]. . . . Some drink it with milk, but it is an error, and such as may bring in danger of the leprosy.' It does not explain whether the husk or the bean is used to make the drink and there is no mention of roasting.

From the early records it has been generally considered that coffee was first drunk by the dervishes in the Yemen in the middle of the fifteenth century AD, but I am indebted to Dr Hasenkamp, Direktor of the Jacobs Suchard Museum in Zurich, quoted below, for the evidence that coffee drinking was already popular in Yemen in the fourteenth century AD.

We have in our collection [in the Jacobs Suchard Museum] a manuscript of the famous dictionary of al-Firuzabadi (AD 1329–1415) containing a lengthy description of coffee which is possibly its first known literary treatment. The author lived in Jerusalem, Mecca, and in the Yemen, where he died as judge in Sabid. Coffee drinking was already popular in the Yemen during the fourteenth century and the custom gradually spread to other countries, becoming the fashion in Egypt as late as the sixteenth century. We know also from other Arab authors that the habit of coffee drinking was established in the Yemen by the fourteenth century. The Arab dictionary of Firuzabadi is entitled '*al-Qamus*' which literally [by extension] means 'dictionary'. It contains an allegorical reference to *Cahwe* which is described in such a way that Arabic scholars have agreed that it most certainly means coffee. 'Coffee, brown and

most satisfying, refreshing as soured milk in a pouch; and the old he-goat with giant horns [an allegory on virility] shows great mental powers by the constant drinking of coffee.' Although this work is mentioned in the coffee bibliography of the Encyclopaedia of Islam, its real significance as the earliest known coffee reference was not understood, as the bibliographer did not realize that the work was composed in the fourteenth century.

Jill Butterworth of the Cambridge University Library, who kindly studied both the original Arabic and the Turkish translation of Asim Efendi, explains that this interpretation depends on the usage of the word *qahwa(h)*. The root according to Ibn Manzur (died 1311) denotes 'To be satisfied from hunger' or 'The satisfaction from hunger' and was originally applied to wine or intoxicants: 'whoever drinks it is satisfied for food and his appetite goes'. The modern usage of *qahwa* is 'coffee' and it is a matter for scholars whether this was the meaning as used by Firuzabadi in the fourteenth century. In addition Mrs Butterworth drew attention to volume 8 of the printed edition of *Shadharat al-dhahab* by Ibn al-^cImad (AH 1032–89, AD 1622–79), published in Arabic in Cairo in 1932. Page 39 for the year AH 909 (AD 1503–04): 'In it [AH 909] died the shaykh . . . Abu Bakr ibn Abd Allah al-Shadhili, known as al-^cAydarus who introduced coffee [al-qahwah] taken from *al-bunn* brought from Yemen and the origin of his taking it was that in his travels he passed by *bunn* trees.'

According to Hattox (1985:11) coffee came into general use in the lands of Islam at some time in the mid-fifteenth century. He quotes from what he describes as by far the most ambitious and extensive, in both scope and size, of the extant sixteenth century treatises on coffee, the work of Zayn al-Din 'Abd al-Qadir ibn Muhammad al-Ansari al-Jaziri al-Hanbali entitled *Umdat al-safwa fi hill al-qahwa*, which translates as 'The maintenance of purity as regards the legitimacy of coffee', and is a justification for drinking coffee (Hattox 1985: appendix). This tenth/sixteenth century manuscript is also regarded by the Encyclopaedia of Islam (IV: 449) as the earliest mention of coffee so far found. De Nointel, Louis XIV's ambassador to the Ottoman Porte, brought back a copy of this manuscript from Constantinople which is referred to by Galland as No. 944 in the King's Library, and which is now in the Bibliothèque Nationale in Paris (No. 4590). Other copies are in the Escorial in Madrid (No. 1170), Gotha (Pertsch No. 2106) and another in Alexandria (Hattox 1985:132).

Two partial translations have been made from the Paris manuscript, which runs to 68 folios. The first is by Antoine Galland, Arabic Professor in the Royal College 'who had travelled widely in the Levant and was well versed in oriental languages'. Much of this is in his *De l'origine et progrès du café* published in 1699. Galland's