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INCREASE IN TEFF CONSUMPTION IN NORTHERN ETHIOPIA BETWEEN THE 16TH AND 18TH CENTURIES AND THE BIRTH OF INJERA⁽¹⁾

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ABSTRACT Injera, a round and spongy pancake-like flatbread with a sour taste, is one of the most representative foods of Ethiopia. Injera is a traditional food of Semitic-speaking peoples in northern Ethiopia, but the custom of eating injera was adopted by other ethnic groups in Ethiopia in the 20th century. Although studies on the kingdom of Aksum, likely founded in the first century in northern Ethiopia, revealed that teff was cultivated and the clay tray, resembling the griddle used for the preparation of injera, appeared around the sixth century, no scholars stated that injera was the staple food in the kingdom. Inadequate attention has been paid to the time period wherein injera became the staple food in northern Ethiopia. This study reveals that the custom of consuming teff spread over a period of 250 years from the 1520s; round teff flatbreads became the staple food of northern Ethiopia by the early 1750s. The prototype of the present-day injera might have been born during these times of change, and famines caused by wars and climate change was one of the reasons for teff flatbread becoming the staple food between the 16th and 18th centuries.

KEYWORDS: Ethiopia; Food Culture; History; Injera; Teff.

INTRODUCTION

Injera (*ənǧära*),⁽²⁾ a round and spongy pancake-like flatbread with a sour taste, is one of the most characteristic foods of Ethiopia. Injera is usually made of teff (*Eragrostis tef*) that belongs to the family of *Poaceae*. Teff can be cultivated up to an altitude of 3,000 m. However, it is best cultivated at altitudes between 1,800 to 2,100 m, with an annual rainfall of 750 to 850 mm and daily temperatures ranging from 15 to 27°C. Teff grains are extremely small in size, 0.9–1.7 mm in length, 0.7–1.0 mm in diameter, and a thousand grains weigh 0.3–0.4 grams. Compared to other cereals grown in northern Ethiopia, teff has a smaller yield, but it is more resilient against dryness and damage caused by diseases and insects (Bultosa & Taylor 2004: 282; Jones 1988: 37, 2010: 886).

To make injera, teff flour is mixed with water to form batter. Leaven (*aršo*) is added to it. It is allowed to ferment for 1–5 days, giving it a sour taste. To bake

injera, the batter is poured, in a circular motion, onto a heated griddle. Subsequently, the batter is covered and baked only on one side. Injera has a spongy texture and is circular in shape, usually 55 to 60 cm in diameter (Selinus 1971: 3–6; Steinkraus 1983: 162).

Two Semitic-speaking ethnicities, the Amharas (whose language is Amharic) and the Tigrayans (whose language is Tigrinya), live in northern Ethiopia. The Amharas live in the Amhara Region and the Tigrayans live in the Tigray Region (Figure 1). Injera is a traditional food of both the Amharas and the Tigrayans and teff has the social and cultural importance in these societies (Gedef 2018).

Emperor Menelik II (r. 1889–1913) founded the Ethiopian empire towards the end of the 19th century that succeeded in remaining independent during the ‘Scramble for Africa’. As the empire was dominated by the Amhara and Tigrayan nobles, their culture and customs were introduced to other ethnic groups. Eating injera was one of these customs. The Ethiopian empire collapsed following the

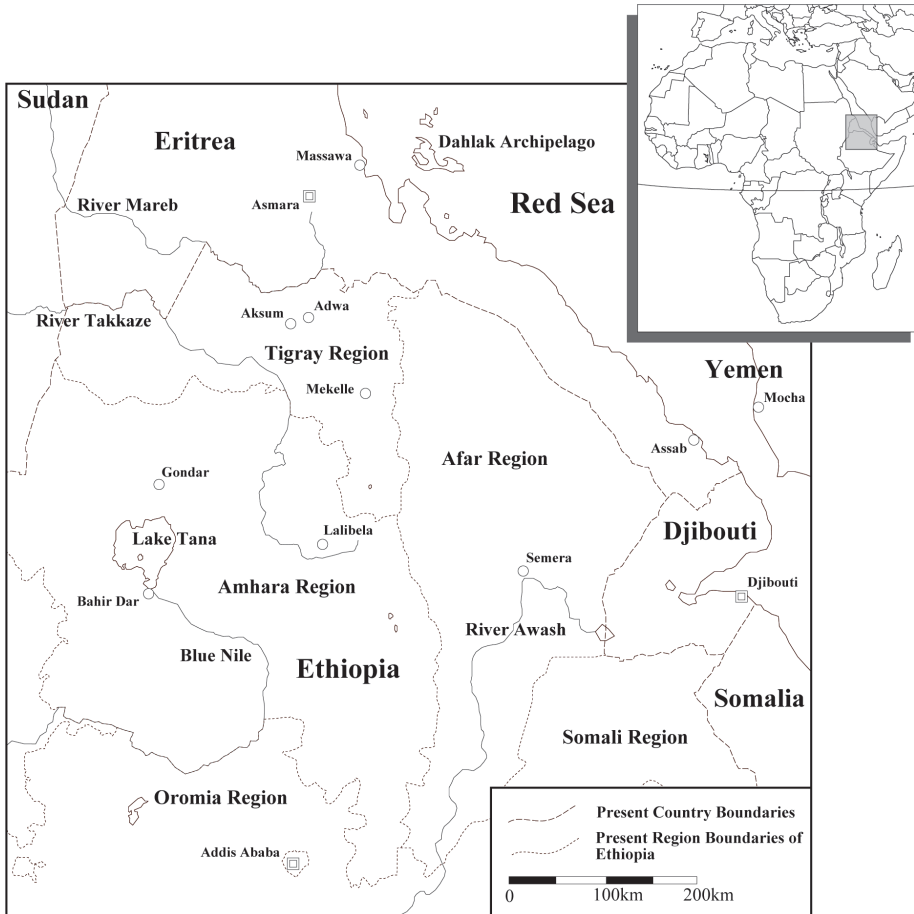


Figure 1 Present-day northern Ethiopia and neighbouring regions. Prepared by the author using Google Maps.

Ethiopian Revolution of 1974 and the Amhara and Tigrayan nobles ceased to exert dominance. However, the consumption of teff kept increasing after the revolution in Ethiopia. Teff became the most important crop, in terms of the area cultivated, and second-most important cash crop, after coffee, in Ethiopia (Minten *et al.* 2018).

It is generally agreed upon that teff was domesticated in the Ethiopian highlands by the 1st millennium BC (Boardman 2000; D'Andrea 2008; D'Andrea & Wadge 2011). Scholars point out that teff was cultivated in the kingdom of Aksum along with other cereals such as wheat, barley, sorghum, and finger millet (Boardman 1999, 2000; D'Andrea 2008; Phillipson 2014: 108–110).

The griddle used for the preparation of injera was called *məṭad* in Amharic and *mägogo* in Tigrinya. According to R. F. Wilding, an archaeologist who was in charge of the examination of the pottery excavated from Aksum by an archaeological expedition between 1972 and 1974, a *məṭad*-like clay tray surfaced for use in around the 6th century (Wilding 1989: 268, 270, 308–311).

In their ethnoarchaeological study of highland Ethiopian griddle technology, D. Lyons and A. C. D'Andrea pointed out the similarity between the griddle found in Tigray and the Sudanese griddle called *doka*, on which fermented flatbread called *kisra* is baked (Lyons & D'Andrea 2003: 523). Although the time of emergence of the *doka* remains a matter of debate, it is generally agreed upon that the use of the *doka* became widespread among the Nubians in Sudan after the 5th century (Lyons 2016: 967–968). It is probable that the Ethiopian highland griddle originated from the *doka*.

However, no scholars affirm that teff injera was the staple food of the kingdom of Aksum. Based on the opinion of R. F. Wilding, D. W. Phillipson, an archaeologist specializing in Aksumite sites, states that the preparation of injera may be indicated by the presence of a *məṭad*-like clay tray and this type of tray has not been recognized in contexts predating the 6th century (Phillipson 2014: 110). S. Munro-Hay, a specialist on Aksumite archaeology, numismatics, and history, points out that there is no evidence that the people of the kingdom of Aksum consumed teff injera (Munro-Hay 1991: 169).⁽³⁾

Although the kingdom of Aksum expanded its territory to the regions around the Red Sea until the first half of the 6th century, it began to disintegrate from the second half of the 6th century or first half of the 7th century and, eventually, fell into complete ruination (Munro-Hay 1991: 258; Phillipson 2014: 209). Thereafter, the Zagwe dynasty was founded in northern Ethiopia. This dynasty was overthrown by the Solomonic dynasty in 1270. Written records on the history of northern Ethiopia were scarce in the approximately 600 years between the decline of the kingdom of Aksum and birth of the Solomonic dynasty. After the 14th century, the people of northern Ethiopia resumed writing and translating in the Gə'əz, an ancient Ethiopian Semitic language. Subsequently, the Europeans began visiting northern Ethiopia and writing records on the region after the 15th century.

R. Pankhurst, who published numerous books and articles on Ethiopian history based on these historical sources, points out that the references to teff were found in records written after the 14th century. Furthermore, he considers the food

referred to as *apa* by the Jesuits, who stayed in northern Ethiopia during the first half of the 17th century, to be the same as the present-day injera (Pankhurst 1961: 250, 1990: 67). J. McCann, a historian specializing in the history of agriculture and food culture in Africa, also forwards this account about *apa* (McCann 2009: 82). However, both historians did not examine whether changes in the consumption of teff occurred in northern Ethiopia before the 19th century.

Inadequate attention has been paid to the subject on when teff became the principal cereal, and teff injera the staple food, of the people of northern Ethiopia. The purpose of this study is to reveal the period during which the increase in teff consumption and birth of injera in northern Ethiopia occurred and consider the background of the related changes in consumption.

INFORMATION ON TEFF AND ITS BREAD IN WRITTEN SOURCES

I. Information found in Gə‘əz and Arabic sources between the 14th and 15th centuries

Although Amharic was the principal spoken language in the Ethiopian kingdom under the Solomonic dynasty, Gə‘əz was the written one. After the 14th century, its people began to write and translate in Gə‘əz, though references to agriculture and food culture were scarce in Gə‘əz documents.⁽⁴⁾

A book titled *Šar‘atā gəbr*, which is presumed to have been written during the reign of Zār’a Ya‘qob (r. 1434–1468), is noteworthy in this regard (Derat & Kaplan 2014: 147). Until the 1630s, when Gondar became the capital, the Ethiopian monarchs moved along with the court. *Šar‘atā gəbr* contains information on the arrangement of tents in the camp and foods and drinks offered in the court. The important point to note is that the word ‘injera’ is often mentioned in this book, as a food offered in the court (Kropp 1988: 68, 69, 70, 72, 73, 77, 78). However, there is no information on the ingredients and shape of these ‘injeras’.

The oldest written source on the teff cultivation in Ethiopia is in Arabic. *Masālik al-abšār fi mamālik al-amšār* written by Ibn Faḍl Allāh al-‘Umarī (1301–1349), a historian and administrator during the Mamluk period (1250–1517), contains information on the geography and agriculture of Ḥabaša, or Ethiopia (Ibn Faḍl Allāh al-‘Umarī 1988, 1993). According to this book, teff was one of the crops cultivated in Ḥabaša and teff bread was prepared there.

Important information on the names of different types of bread in Ethiopia can be obtained from an Arabic-Ethiopian glossary which was compiled, in A.H. 776 (A.D. 1374/1375), on the orders of Al-Malik al-Afḍal al-‘Abbās, the 6th Rasulid sultan of the Yemen. The point to observe is that this glossary contains a word, ‘*injirah*’, which seems to be equivalent to ‘injera’ (Varisco & Smith 1998: 218; Bulakh & Kogan 2017: 214). This word is used for the Arabic word ‘*khubz*’, the common noun for ‘bread’ (Nasrallah 2010: 563–564).

The Gə‘əz and Arabic documents dating to the period between the 14th and 15th centuries reveal that the word injera was used in Ethiopia, the Muslims of the Yemen regarded the word injera as the Ethiopic general noun for ‘bread’, and teff bread was made in Ethiopia. However, there is no evidence regarding the

fact that the present-day injera was made at the time.

II. Information provided by F. Alvares

1. Travel account by F. Alvares

From around 1400 AD, western Europeans began to write and maintain documents on the geography of northern Ethiopia, based on the information collected from the Ethiopian Christians who made pilgrimages to Jerusalem.⁽⁵⁾ Subsequently, travel accounts on northern Ethiopia began to be published after the 16th century. In his book, *Introduction to the Economic History of Ethiopia*, Pankhurst lists references to agriculture found in these written sources (Pankhurst 1961: 200–214). The contents of these references are diverse in quantities and in details. The first noteworthy source on the agriculture of northern Ethiopia is the travel account by F. Alvares, a Portuguese clergyman who visited the Ethiopian kingdom in the 1520s.

One of the aims of the Portuguese, who headed for the East in the Age of Discovery, was to seek Prester John, a legendary Christian king who was said to have ruled over a Christian kingdom in the East. The Portuguese believed that the Christian monarch of the Ethiopian kingdom was Prester John, and they attempted to make contacts with the monarch in the second half of the 15th century. P. da Covilhã, a Portuguese diplomat who was dispatched by King John II of Portugal (r. 1455–1495), succeeded in reaching the Ethiopian kingdom towards the end of the 15th century. Subsequently, a Portuguese mission, sent by King Manuel I of Portugal (r. 1495–1521), arrived and stayed in the kingdom until 1526. After returning to Portugal, F. Alvares, a Portuguese priest who was a member of this mission, published a travel account titled *Verdadeira informação sobre a terra do Preste João das Índias* in 1540.⁽⁶⁾

Chapters 1 to 69 of Alvares' travel account records his experiences, beginning from his landing in Massawa to the mission's arrival at the court of Ləbnä Dəngəl (r. 1508–1540). The Portuguese embassy, that landed in Massawa, reached Aksum by the route of the Däbrä Bizän monastery and Adwa. After departing from Aksum, it was directed to the East and went southwards along the eastern edge of the present-day Tigray and Amhara regions. It eventually caught up with the court of Ləbnä Dəngəl at a location called Tahagui (Figure 2).

2. Information on the ingredients of bread

Several descriptions of the crops cultivated, the foods and drinks consumed in the Ethiopian kingdom are found in the text, from Chapter 1 to Chapter 69, in the travel account by Alvares. He reported that the people of the Ethiopian kingdom made bread⁽⁷⁾ from several cereals and pulses (Alvares 1889: 15, 51, 65, 1961 I: 88, 190, 233). Alvares made references to the following cereals and pulses as the ingredients of bread: *trigo*, *cevada*, *centeio*, *milho zaburro*, *milho*, *daguça*, *lentilha*, *ervilha*, *feijão*, *fava*, *grão*, *linhaça*. *Trigo* is wheat, *cevada* is barley, *centeio* is rye, *lentilha* is lentils, *ervilha* is pea, *feijão* is bean, *fava* is broad bean, and *linhaça* is linen. *Daguça* is *dagussa* in Amharic, and it means finger millet. We ought to carefully look into *milho*, *milho zaburro*, and *grão*.

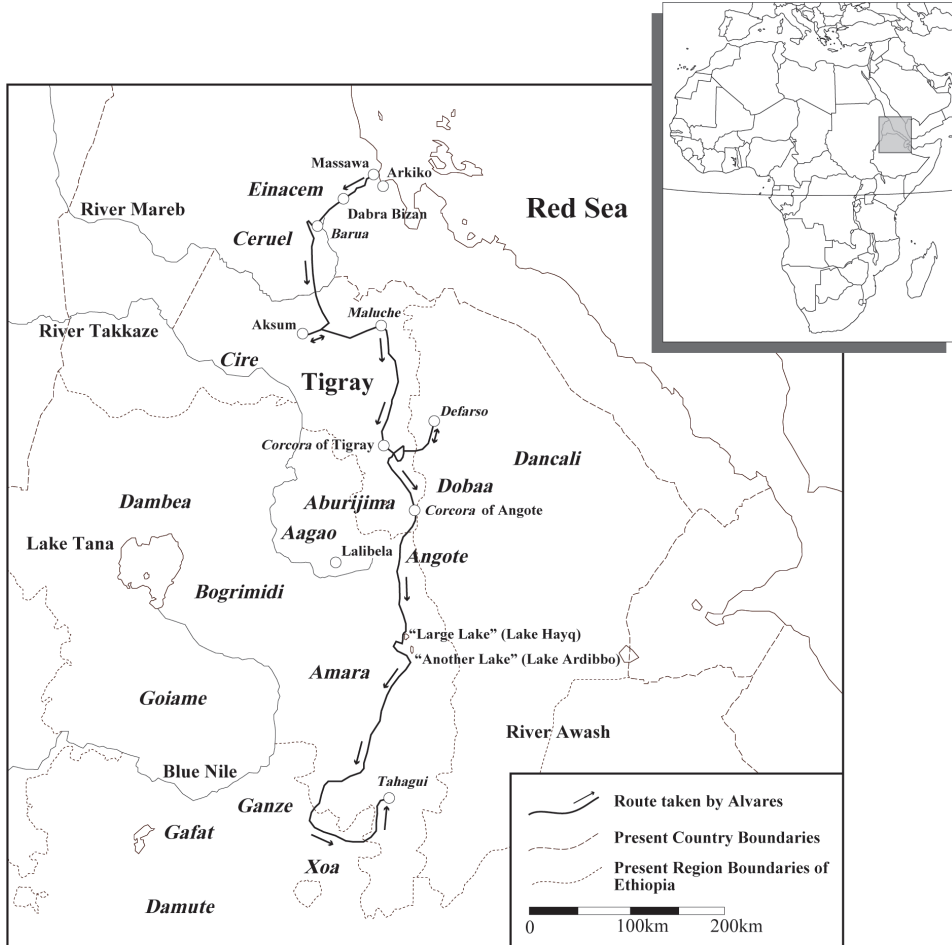


Figure 2 Routes taken by Alvares from Massawa to Tahagui in 1520.

Prepared by the author using Maps 1, 2a, and 2b in the travel account of Alvares (1961).

The names of places, in italics, are those used by Alvares.

Alvares made references to the word *milho* 21 times. The Portuguese word *milho* is derived from the Latin *milium* and it has come to mean maize since the Age of Discovery. Including misspellings, *milho zaburro* is mentioned four times. This word means sorghum in contemporary Portuguese. The English translation published by the Hakluyt Society in 1961 (Alvares 1961) translated *milho* as millet and *milho zaburro* as maize.

The travel account by Alvares shows that both *milho* and *milho zaburro* were used for making bread or alcoholic beverages (Alvares 1889: 15, 45, 51, 65, 137, 1961 I: 88, 176, 190, 233, II: 391). Alvares' descriptions of the ingredients of bread and names of crops in the region called Angote⁽⁸⁾ are important to understand the relation between these words. When listing the cereals and pulses which were

the ingredients of bread made in Angote, Alvares wrote “*milho, acaburro*” along with other crops (Alvares 1889: 51). It is highly likely that these words are the misspelling of *milho zaburro*. These words are translated as ‘maize’ in the English translation published in 1961. When listing the crops cultivated in Angote in Chapter 55 (Chapter 56), Alvares did not mention *milho zaburro* and only wrote *milho* (Alvares 1889: 63). When listing the crops related to or ingredients of bread, Alvares did not arrange *milho* and *milho zaburro* in the same sentences as seen in Chapter 9 of the supplement. These facts suggest that *milho* and *milho zaburro* were used to refer to the same crop by Alvares.

About a 100 years after Alvares’ stay in the Ethiopian kingdom, M. de Almeida, a Portuguese Jesuit, engaged in the missionary work in the kingdom from 1624 to 1633. In his book *Historia de Ethiopia a Alta ou Abassia*, Almeida mentioned ‘one of type of *milho* called *Zangadâ*’ (*certa casta de milho, que chamão Zangadâ*) (Beccari 1969 V: 33; Beckingham & Huntingford 1954: 42). It is clear that *zangadâ* is *zängada* in Amharic, and it means sorghum (Kane 1990 II: 1658). This shows that Almeida called sorghum *milho*. In another chapter, Almeida listed wheat, barley, teff, finger millet, and *milho* as cereals cultivated in the Ethiopian kingdom (Beccari 1969 V: 37; Beckingham & Huntingford 1954: 45). M. Barradas, a Portuguese Jesuit who stayed in the Ethiopian kingdom almost at the same time as Almeida, reported wheat, barley, teff, finger millet, and *milho zaburro* to be the cereals that were cultivated in the Tigray region in his book *Tractatus tres historico-geographici* (Beccari 1969 IV: 93).

McCann (2005: 77–80) refuted the argument that the Portuguese brought maize to Ethiopia and supported the opinion of Merid W. Aregay, a specialist in the history of Ethiopia of the 16th and 17th centuries, that maize was introduced by the Arab or Indian merchants as the ‘most plausible hypothesis’.

These facts show that *milho* and *milho zaburro* were used to refer to the same crop, and both signified not maize but sorghum in the Portuguese documents on Ethiopia in the 16th and 17th centuries.

Alvares made references to the word *grão* 12 times in his travel account. This word means grain or seed in contemporary Portuguese and is not used as a crop name. However, *grão-de-bico* means chickpea in contemporary Portuguese. In the English translation of the travel account by Alvares, *grão* has been translated as chickpea, pea, pulse, grain (Alvares 1961 I: 104, 141, 189, 190, 191, 230, 233, II: 447, 512). Chickpea was cultivated by the people of the kingdom of Aksum, and it is a principal pulse in northern Ethiopia, the others being pea, broad bean, and lentil (Boardman 1999: 142–143; Westphal 1974: 57). Alvares listed pea, broad bean, and lentil as the pulses cultivated in the Ethiopian kingdom and made references to *grão* along with the mention of these pulses. Thus, it is natural that the word *grão* was used for chickpea in the travel account by Alvares.

3. Descriptions of teff cultivation and its bread

Table 1 presents descriptions of the cereals that have been mentioned in Chapters 1 to 69 of Alvares’ travel account. Alvares mentioned teff as *tafo*, and he made references to *tafo* six times from Chapters 1 to 69.

In Chapter 13, Alvares elaborated on the daily meals of the monks of the Däbrä

Table 1 Descriptions of cereals from chapters 1 to 69 of Alvares' travel account

Cereal	Chapters and Pages*	Mentioned As
Teff	Chapter 13 (P15, E88)	An ingredient of bread prepared in the Däbrä Bizän monastery (<i>Mosteiro de Bisam</i>)
	Chapter 33 (P33, E136)	A crop damaged by locusts in Aagao
	Chapter 46 (Chapter 47) (P48, E184)	A crop grown around Corcora in Tigray
	Chapter 47 (Chapter 48) (P51, E190)	An ingredient of bread prepared in Angote
	Chapter 55 (Chapter 56) (P63, E230)	A crop grown in Angote
	Chapter 56 (Chapter 57) (P65, E233)	An ingredient of bread offered at the banquet hosted by <i>Angoteraz</i>
Wheat	Chapter 12 (P13, E83)	An ingredient of the sacramental bread prepared in the Däbrä Bizän monastery
	Chapter 19 (P20, E103, 104) (mentioned two times)	An ingredient offered by the mother of <i>Barnagais</i> and a crop grown in Barua
	Chapter 32 (P32, E133)	A crop grown in Barua
	Chapter 33 (P33, E136)	A crop damaged by locusts in Aagao
	Chapter 41 (Chapter 42) (P43, E169)	A crop grown in Maluche in Tigray
	Chapter 43 Chapter 44) (P45, E176)	An ingredient of bread prepared in the church of St. George in Tigray
	Chapter 46 (Chapter 47) (P48, E183, 184) (mentioned two times)	A crop grown around Corcora in Tigray
	Chapter 47 (Chapter 48) (P51, E190)	An ingredient of bread prepared in Angote
	Chapter 51 (Chapter 52) (P56, E200)	A crop grown in Abrijjima
	Chapter 55 (Chapter 56) (P63, E230)	A crop grown in Angote
	Chapter 56 (Chapter 57) (P65, E233)	An ingredient of bread offered in the banquet hosted by <i>Angoteraz</i>
	Chapter 62 (Chapter 63) (P71, 72, E249, 250, 252) (mentioned three times)	A crop grown around the 'Large Lake' in Amara
Chapter 63 (Chapter 64) (P73, E253) (mentioned three times)	A crop grown around the 'Another Lake' in Amara	
Barley	Chapter 13 (P15, E88)	An ingredient of bread prepared in the Däbrä Bizän monastery
	Chapter 15 (P16, E93)	A crop grown around the Däbrä Bizän monastery
	Chapter 19 (P20, E103, 104) (mentioned three times)	An ingredient of foods offered by <i>Barnagais</i> and his mother and a crop grown in Barua
	Chapter 33 (P33, E136) (mentioned two times)	A crop damaged by locusts in Aagao and food for the Portuguese embassy
	Chapter 41 (Chapter 42) (P43, E169)	A crop grown in Maluche in Tigray

Table 1 (Continued)

Cereal	Chapters and Pages*	Mentioned As
	Chapter 43 (Chapter 44) (P45, E176)	An ingredient of bread prepared in the church of St. George in Tigray
	Chapter 46 (Chapter 47) (P48, E183, 184) (mentioned two times)	A crop grown in Corcora in Tigray
	Chapter 47 (Chapter 48) (P51, E190)	An ingredient of bread prepared in Angote
	Chapter 51 (Chapter 52) (P56, E200)	A crop grown in Abrijima
	Chapter 54 (Chapter 55) (P60, E223)	A crop grown in Lalibela
	Chapter 55 (Chapter 56) (P63, E230)	A crop grown in Angote
	Chapter 56 (Chapter 57) (P65, E233)	An ingredient of the bread offered in the banquet hosted by <i>Angoteraz</i>
	Chapter 62 (Chapter 63) (P71, 72, E249, 250, 252) (mentioned three times)	A crop grown around the 'Large Lake' in Amara
	Chapter 63 (Chapter 64) (P73, E253) (mentioned three times)	A crop grown around the 'Another Lake' in Amara
	Chapter 66 (Chapter 67) (P77, E263)	A crop grown around the Däbrä Libanos monastery (<i>Mosteiro de Brilibanos</i>)
Sorghum	Chapter 8 (P7, E70)	A crop grown around the Däbrä Bizän monastery
	Chapter 12 (P13, E84)	A crop grown around the Däbrä Bizän monastery
	Chapter 13 (P15, E88)	An ingredient of bread prepared in the Däbrä Bizän monastery
	Chapter 15 (P16, E93) (mentioned two times)	A crop grown around the Däbrä Bizän monastery
	Chapter 19 (P20, E104)	A crop grown in Barua
	Chapter 33 (P33, E136)	A crop damaged by locusts in Aagao
	Chapter 41 (Chapter 42) (P43, E169)	A crop grown in Maluche in Tigray
	Chapter 43 (Chapter 44) (P45, E176)	An ingredient of a beverage called Cana prepared in the church of St. George in Tigray
	Chapter 46 (Chapter 47) (P48, E184)	A crop grown in Corcora in Tigray
	Chapter 47 (Chapter 48) (P51, E190)	An ingredient of bread prepared in Angote
	Chapter 51 (Chapter 52) (P55, E199)	A crop grown in Ancona
	Chapter 55 (Chapter 56) (P63, E230)	A crop grown in Angote
	Chapter 56 (Chapter 57) (P65, E233)	An ingredient of bread offered in the banquet hosted by <i>Angoteraz</i>

Table 1 (Continued)

Cereal	Chapters and Pages*	Mentioned As
	Chapter 62 (Chapter 63) (P71, 72, E249, 250, 251, 252) (mentioned four times)	A crop grown around the 'Large Lake' in Amara
	Chapter 65 (Chapter 66) (P76, E260)	A crop grown near the border between Amara and Xoa
Finger Millet	Chapter 46 (Chapter 47) (P48, E184)	A crop grown in Corcora in Tigray
	Chapter 47 (Chapter 48) (P51, E190)	An ingredient of bread prepared in Angote
	Chapter 55 (Chapter 56) (P63, E230)	A crop grown in Angote
Rye	Chapter 15 (P16, E93)	A crop grown around the Däbrä Bizän monastery

*Abbreviations 'P' signifies Alvares (1889) and 'E' signifies Alvares (1961 I).

Bizän monastery (Alvares 1889: 15, 1961 I: 88). According to him, the bread the monks received was made of sorghum, barley, and teff, and this bread was 'round, and of the size and roundness of *zamboa*'. In the English translation, *zamboa* is translated as 'pome-citron' (Alvares 1961 I: 88). However, in the Portuguese dictionary compiled by R. Bluteau, 'Pomum Adami' is mentioned as another name of *zamboa* (Bluteau 1712–1728 VIII: 628). This suggests that *zamboa* is a type of citrus fruit called *Citrus lumia*.

In Chapter 33, Alvares wrote about the experience of a short trip from a region called Abrigima to another called Aagao (Alvares 1889: 33, 1961 I: 136). Aagao was a region where the Agäw, a Cushitic-speaking ethnic group, lived. It was purportedly the north-eastern part of the present-day Amhara Region (Alvares 1961 I: 135–136). Alvares reported that the locusts destroyed crops such as sorghum, wheat, barley, and teff in Aagao.

In Chapter 46, Alvares enumerated crops cultivated around the Church of Our Lady near Corcora⁹⁾ in Tigray (Alvares 1889: 48, 1961 I: 184). According to him, 'wheat, barley, sorghum, chickpea, lentil, pea, broad bean, teff, finger millet and as many other vegetables as there are in the country' were cultivated.

In Chapter 47, Alvares elaborated on bread made and consumed by people in Angote (Alvares 1889: 51, 1961 I: 190). According to him, bread in Angote was made of cereals such as wheat, barley, sorghum, teff, and finger millet, and pulses such as lentil and broad bean, and linen.

In Chapter 55, Alvares described the crops cultivated in Angote (Alvares 1889: 63, 1961 I: 230). According to him, almost all of Angote comprised valleys and mountains with low yields of wheat and barley, but it produced high yields of sorghum, teff, and finger millet.

In Chapter 56, Alvares made references to the ingredients of bread offered by the governor of Angote, called *Angoteraz*, to the Portuguese embassy (Alvares 1889: 65, 1961 I: 233). He saw bread made of wheat, barley, sorghum, chick pea, and teff.

After returning to Portugal, Alvares replied to the questions posed by D. de

Sousa, the Archbishop of Braga. In his replies, which were recorded in Chapter 9 of the supplement, Alvares mentioned teff as one of the crops cultivated in the Ethiopian kingdom (Alvares 1889: 194, 1961 I: 512).

Now the importance of teff in the Ethiopian kingdom in the 1520s ought to be looked into. Table 1 shows that teff is mentioned three times as a crop and three times as an ingredient of bread, from Chapters 1 to 69 in the travel account by Alvares. The number of descriptions of crops is as follows: wheat-14 times, barley-16 times, sorghum-15 times, finger millet-2 times. The number of descriptions of each ingredient of bread is as follows: wheat-five times, barley-five times, sorghum-three times, finger millet-one time. In his reply to the questions posed by de Sousa, Alvares stated that, in the Ethiopian kingdom, many regions abundantly produced wheat and barley, some regions yielded more sorghum than wheat and barley, and the regions that lacked wheat and barley had plenty of teff and finger millet (Alvares 1889: 194, 1961 I: 512).

There is a difference in the number of descriptions of the cultivation of the two groups of crops, 'Wheat, barley, & sorghum' and 'teff & finger millet'. Moreover, Alvares mentioned wheat, barley, and sorghum at first when he explained about cereals in the Ethiopian kingdom. These facts suggest that wheat, barley, and sorghum were principal cereals in the Ethiopian kingdom and teff and finger millet were less important than these three cereals at that time.

4. Descriptions of the form and taste of bread, and manner of serving bread

As already mentioned, Alvares compared the bread made in the Däbrä Bizän monastery to a type of citrus fruit called *zamboa*. He also reported the making of the bread of the Sacrament in this monastery. This report contains interesting information on the cooking utensils used for baking bread (Alvares 1889: 12–13, 1961 I: 83–84).

According to Alvares, an iron plate, round in shape and fairly big, was used for baking the bread of the Sacrament in the Däbrä Bizän monastery. Other churches used copper plates and financially weak churches used clay plates. When baking the bread of the Sacrament, a portion of the dough, made of wheat, was placed onto the iron plate and spread with a wooden spoon to form a round flat disc. When it was set, it was taken off for the subsequent bread to be made in the same manner. Subsequently, a single loaf, combining these two parts, was made and baked on both sides. This description shows that the bread of the Sacrament was prepared by the method used for baking flatbread.⁽¹⁰⁾

Alvares also reported that bread was served on a very wide tray called *ganeta* or *gamela*; the people ate the bread sitting around the tray; they did not use tablecloths (*toalha*) or napkins (*guardanapo*) (Alvares 1889: 15, 65, 192, 1961 I: 87, 233, II: 509–510).

Thus, the travel account by Alvares, who stayed in the Ethiopian kingdom in the 1520s, reveals that teff was not the main cereal in the kingdom; bread was served on wooden trays and people ate it while sitting around these trays. It ought to be noted that Alvares did not report that the bread in the Ethiopian kingdom had a sour taste.

III. Records from the 17th century: The Jesuits and J. Ludolf

1. Reports by the Jesuits

From the 14th century onwards, the Christian kingdom of Ethiopia and Muslim principalities kept clashing at the centre of Ethiopia. However, the period between 1520 and 1526, when Alvares visited the Ethiopian kingdom, was a brief interval of tranquillity after these clashes. After Alvares' return to Portugal, the army of the Adal Sultanate led by Aḥmad b. Ibrāhīm (Graññ in Gə'əz sources) began a military campaign against the Ethiopian kingdom. The Ethiopian army lost several battles, and Ləbnā Dəngəl had to escape from the kingdom. However, in May 1541, a Portuguese fleet, which was organized for the attack on the Ottoman naval base at Suez, arrived at Massawa. When Cristóvão da Gama, the fourth son of the famous Portuguese explorer Vasco da Gama, learnt about the adverse circumstances of the Ethiopian kingdom, he decided to send relief to the kingdom in the form of 400 Portuguese soldiers. Subsequently, Cristóvão da Gama was captured by the Muslim army and executed. However, the remaining soldiers of the defeated Portuguese army joined the small Ethiopian army, and, together, they succeeded in repulsing the army of the Adal Sultanate.⁽¹¹⁾

When news of the victory of the Christian kingdom of Ethiopia reached Europe, the Europeans learnt that Ləbnā Dəngəl had promised to convert to Roman Catholicism in exchange of military aid from Portugal. Upon receiving this information, the Jesuits regarded Ethiopia as a promising land for the propagation of Roman Catholicism and, thus, decided to send missionaries. As a result, the Jesuits engaged in missionary work in the Ethiopian kingdom from the 1550s to 1630s.

The Jesuits' efforts did not yield the desired results during the second half of the 16th century. However, the situation changed for the better after 1603 when P. Paez, a Spanish Jesuit missionary, entered the Ethiopian kingdom. He succeeded in converting Susnəyos (r. 1607–1632), who acceded to the throne in 1607, and his brother-in-law, Sə'ələ Krəstos, to Roman Catholicism. The Jesuits expanded their scope of missionary work under their protection. Figure 3 shows the distribution of the Jesuits' residences in the Ethiopian kingdom in 1629. This figure shows that the Jesuits engaged in missionary work mainly in the regions around Lake Tana and a part of the present-day Tigray Region.

Several Jesuits who stayed in the Ethiopian kingdom in the first half of the 17th century wrote books on Ethiopia. These books can be classified into two types. The first type describes the geography, history, and culture of the Ethiopian kingdom and Jesuit mission in the kingdom; the second type is specifically based on the missionary activities. The first type includes *Historia da Etiopia* by P. Paez, *Historia de Ethiopia a Alta ou Abassia* by M. de Almeida, and *Expeditionis Aethiopicæ* by A. Mendez; the second type includes *Tractatus tres historico-geographici* by M. Barradas and *Itinerario* by J. Lobo. The book by A. Mendez is written in Latin, while the other books are in Portuguese.⁽¹²⁾

These books contain descriptions on the agricultural processes and crops in the Ethiopian kingdom. The Jesuits concurred that wheat, barley, sorghum, finger millet⁽¹³⁾, and teff were cultivated in the Ethiopian kingdom, teff grains were too

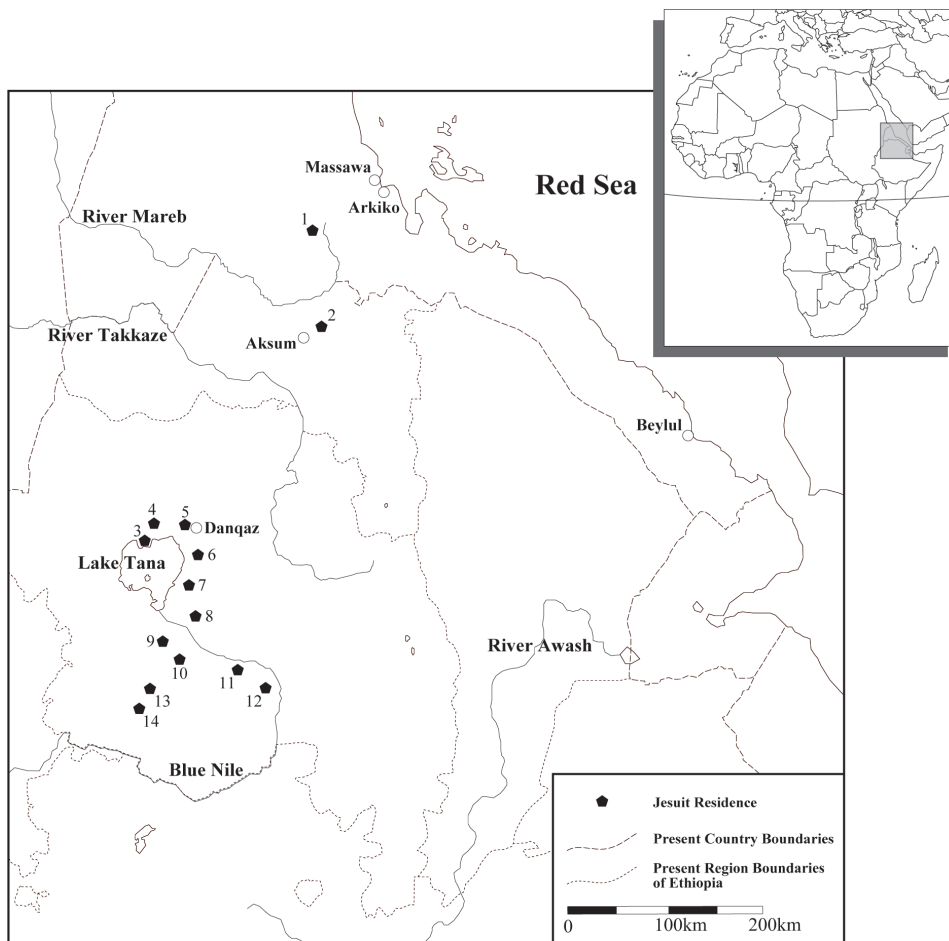


Figure 3 The Jesuits' residences in northern Ethiopia in 1629.

Prepared by the author using Figure 3.1.2 in the book by Fernández *et al.* (2017).

The Jesuit residences' names: 1. Adegada, 2. Fremona, 3. Gorgorra, 4. Azazo, 5. Dancaz, 6. Depsan, 7. Coga, 8. Atqhana, 9. Serca, 10. Collela, 11. Adaxa, 12. Nebesse, 13. Nefassa, and 14. Ligenugus

small, and teff was peculiar to Ethiopia (Barradas 1996: 15–16; Beccari 1969 II: 248–249, IV: 93, V: 37, VIII: 36; Beckingham & Huntingford 1954: 45–46; Páez 2008: 226–227, 2011 I: 240; Pais 1945–1946 I: 209).

As mentioned above, the Jesuits reported a food called *apa* and scholars regarded *apa* to be the same as the present-day injera. The word '*apa*' originated from the name of the pancake called *appam*, which was used to refer to 'flatbread' by the Portuguese in India (Dalgado 1988 I: 47–48). *Appam* is common in Sri Lanka and the districts of Kerala and Tamil Nadu in Southern India. Its batter is made of rice flour and coconut milk, and it is fermented to add a sour taste (Tamang 2020: 270–271).

Barradas, who was engaged in missionary work in the Ethiopian kingdom from

1624 to 1633, elaborately described banquets hosted in the kingdom (Barradas 1996: 73–74; Beccari 1969 IV: 163–165). The following points are noteworthy.

- The round table that people used for having meals was called *gavetâ*. Large ones measured seven or eight *palmos*⁽¹⁴⁾ in diameter, while the ordinary ones were four or five *palmos* in diameter.
- The tablecloths that were spread over these tables were *apas*. Their appearance was like round cakes (*bolos redondos*), and they were big and very thin. Two or, at most, three *apas* covered an entire *gavetâ*.
- On the *gavetâs*, the black *apas*, made of teff, were placed. Subsequently, *apas* made of ‘others, better and more attractive grains, sorghum,⁽¹⁵⁾ and wheat’ were placed on them.
- When people found their hands to be dirty, they wiped them with a piece of *apas*.

In his account of a banquet, Barradas wrote of two types of bread:

. . . que as apas, ou seião as de que acima falei, ou outras mais pequenas na redondeza mas muito grossas, que alguns costumão fazer e comem com mais gosto porque toçã de azedas, as assão em huns testos largos e redondos . . .

In this account, he referred to two types of bread, or *apa*, and ‘others that are smaller in diameter but very thick’ (*outras mais pequenas na redondeza mas muito grossa*). The question that we must consider is the interpretation of the paragraph ‘*que alguns costumão fazer e comem com mais gosto porque toçã de azedas*’. In the English translation published in 1996, E. Filleul translated this paragraph as ‘are made by many and eaten with more relish because they are slightly sour’ and thought that this paragraph qualifies both *apa* and ‘others’ (Barradas 1996: 73–74). However, *alguns* is a Portuguese indefinite pronoun, and it is not adequate to translate it as ‘many’. This paragraph ought to be translated as ‘that some people accustomed to make and they eat deliciously because they are slightly sour’. As *apa* was a popular bread in those days, this paragraph ought not to be considered appropriate for qualifying *apa*. Thus, this paragraph ought to be interpreted to qualify only ‘others that are smaller in diameter but very thick’.

This explanation by Barradas suggests that only ‘others that are smaller in diameter but very thick’ had a sour taste and *apa* had no remarkable sourness. This matches the fact that other Jesuits did not mention the sour taste of *apa*.

On the form of *apa*, Almeida wrote ‘thin like *filhós*, but bigger, and is normally 2 *palmos* and sometimes 3 *palmos* in diameter’ (Beccari 1969 VI: 194). *Filhós* are a traditional fried Portuguese dessert. This explanation by Almeida reveals that the diameter of the normal *apa* was almost 45 cm.

The account by Barradas shows that teff was not as valued as wheat and sorghum in the Ethiopian kingdom at that time. Paes’ descriptions of teff and teff bread are also noteworthy (Beccari 1969 III: 94; Páez 2008: 526, 2011 II: 66;

Pais 1945–1946 II: 322). After mentioning that teff was not cultivated in Spain and its grains were extremely small, Paes reported that Susnəyos explained to him that, initially, poor people began to consume teff out of hunger; subsequently, they began to sow and become accustomed to eat it (*a fome obrigou primeiro aos pobres a comer e depois a foram semeando e acustumandose a ella*). When describing the crops cultivated in the Ethiopian kingdom, Paes stated that bread made of teff and finger millet was eaten by ‘the ordinary people’ (*gente ordinaria*), and it was black in colour and had low nutritional value (Beccari 1969 II: 248; Páez 2008: 226, 2011 I: 240; Pais 1945–1946 I: 209).

When writing about the agricultural practices in the Ethiopian kingdom, Almeida wrote that wheat, barley, sorghum, finger millet, and teff were cultivated in the kingdom, and teff was peculiar to Ethiopia and highly valued by the people. According to him, people valued teff because it grew well and had a good harvest (*porque se da bem e sustenta bastantemente*) (Beccari 1969 V: 37; Beckingham & Huntingford 1954: 45).

2. Books by H. Ludolf

In the latter half of the reign of Susnəyos, his pro-Roman Catholicism policy came to be increasingly opposed by the priests and monks of the Ethiopian Orthodox Church and common people. Subsequently, he decided to withdraw his pro-Roman Catholicism policy at the end of his reign, immediately after which he died. His successor, Fasilädäs (r. 1632–1667) expelled the Jesuits and persecuted the Ethiopian Roman Catholic converts in the kingdom.

When the Jesuits were expelled from Ethiopia, some Ethiopian converts, including Abba Gorgoryos, were also expelled to India. Gorgoryos was born to an aristocratic family of Mäkanä Šállase, situated in the eastern part of the present-day Amhara Region. He was ordained a priest in the Ethiopian Orthodox Church. Subsequently, Gorgoryos was converted to Roman Catholicism during the reign of Susnəyos, and he cooperated with the Jesuits. After his expulsion to India, Gorgoryos tried to return to Ethiopia but he was unsuccessful. As a result, he travelled to Rome by way of Egypt. In Rome, Gorgoryos met H. Ludolf, a German orientalist born at Erfurt. Ludolf learnt Amharic and Gə‘əz from Gorgoryos and also obtained information on Christianity and the history of Ethiopia. Based on the information received from Gorgoryos, Ludolf published several books on Ethiopia.

In Chapter 9 of the ‘1st Book’ of *Historia Aethiopica* (Ludolf 1681), Ludolf described the crops cultivated in the Ethiopian kingdom and elaborated on teff as a crop peculiar to Ethiopia. He also reported that when Gorgoryos smelled rye bread, he said that it smelled similar to teff bread.⁽¹⁶⁾ Ludolf’s Amharic-Latin dictionary published in 1698 contains the following Amharic bread names⁽¹⁷⁾: *anğära*—a species of round and plain bread (*Species panis rotundi & plani*), *dabo*—round and thick bread made of wheat or winter wheat (*Panis, in specie triticeus val filagineus, rotundus elevates*), *q^wärafe*—white bread (*Panis albus*), *ḥämbaš*—massive bread (*Panis maximus*), *dəfo*—thin and large (*Tenuis & latus*),⁽¹⁸⁾ *šäfäto*—square bread (*Panis quadratus*), and *k^wərnk^wərit*:—white and round bread (*Panis albus rotundus*) (Ludolf 1698: 62, 65, 83).⁽¹⁹⁾

Thus, records from the 17th century show that the custom of consuming teff had been popular among the common people well into the reign of Susnəyos; Susnəyos thought that poor people began to consume teff out of hunger; flatbreads became important in the food culture of the Ethiopian kingdom; flatbreads were used instead of plates; a common type of flatbread, called *apa* by the Jesuits, had no remarkable sourness; the word ‘injera’ meant round flatbread; various types of bread were baked.

IV. Information on teff and teff bread during the second half of the 18th century

1. Report by R. Prutky

After expelling the Jesuits, Fasilädäs feared that the western Europeans would infiltrate his kingdom and propagate Roman Catholicism again. Therefore, he tried to prevent the Europeans from entering the kingdom with the cooperation of the neighbouring Muslim states such as the Yemeni Zaidi State.⁽²⁰⁾ As a result, it was difficult for the Europeans to gain access to the Ethiopian kingdom in the first half of the Gondar Period⁽²¹⁾ (1632–1769). However, the situation changed towards the end of the 17th century.

For the treatment of an illness, Iyasu I (r. 1682–1706) invited Ch.-J. Poncet, a French physician who lived in Egypt, to the capital city of Gondar. Subsequently, R. Prutky, a Czech Franciscan, and two fellow Franciscans, visited the Ethiopian kingdom in the early 1750s at the invitation of Iyasu II (r. 1730–1755). They landed in Massawa in November, 1751 and reached Gondar in February, 1752. Although, at first, they were welcomed because of their knowledge of the medical arts and languages, the priests of the Ethiopian Orthodox Church, who had not forgotten the confusions, related to faith, caused by the Jesuit mission in the previous century, began to denounce them. As a result, they were obliged to leave Gondar in December, 1752 and returned to Europe, from Massawa, in April, 1753. After returning to Europe, Prutky wrote a travel account, in Latin, entitled *Itinerarium*. This book has two parts. Descriptions of Ethiopia feature in the second part.⁽²²⁾ As mentioned above, Prutky’s account on Ethiopia was based on his experiences from November, 1751 to April, 1753, and he observed the regions along the trade route between Massawa and Gondar.

In his travel account,⁽²³⁾ Poncet made references to the fertility of the lands, but he did not leave any descriptions of the crops cultivated in the Ethiopian kingdom. On the account of the royal banquet (Poncet 1949: 119–120, 2010: 111–117), he reported that he was surprised to see raw beef being served, but he did not make references to bread. However, Chapters 24 ‘The Emperor’s dining establishment, and customs at table’, 29 ‘Crops and fruits’, and 42 ‘Their food, drink, and other practices’ of the second part of the travel account by Prutky contain interesting descriptions of the crops and food culture. Prutky made several references to teff. The main points of the descriptions, in Chapters 29 and 42 (Prutky 1991: 192, 284; Prutký 2007: 136, 204–205), are:

- The soil of the lands of Ethiopia yields a variety of grains, of which the most extensively grown and prized by the Ethiopians for their daily bread,

is teff.

- The Ethiopians prefer teff bread. There are two types of teff—white and black. The nobles and officers consume white teff, while the common people consume the black type.
- While preparing teff bread, teff flour is mixed with a little water; thereafter, the dough is shaped into a thin and round disc of about two spans⁽²⁴⁾ in size. Subsequently, it is placed on a circular iron pan set on the fire. When one side is done, it is turned over and the other side is baked quickly. The baked teff bread has a sour taste and is soft.
- The Ethiopian people eat curdled milk (*lac coagulatum*) with an admixture of pepper (*intingulo de pipere*), together with the bread.

In Chapter 24, Prutky described how bread was placed on the table in the court and reported the custom of eating raw meat with bread (Prutky 1991: 164–165; Prutký 2007: 117–118).

- On low tables, round unleavened bread is piled instead of plates and raw meat is set in the midst of the bread. In the centre of the table, a dish of curds and grilled meat is placed.
- Slave girls wrap small pieces of raw meat with bread, and they place them in the mouths of the guests.

2. Report by J. Bruce

J. Bruce, a Scottish explorer, visited the Ethiopian kingdom at the beginning of the 1770s to search for the source of the river Nile. After returning to Europe, he published *Travels to Discover the Source of the Nile, in the Years 1768, 1769, 1771, 1772, and 1773* (Bruce 1790). This book contains valuable information on the Ethiopian kingdom.

Bruce landed at Massawa in September, 1769 and reached Gondar in February, 1770 by way of Aksum. Thereafter, he explored the basin of the river Little Abbay (*Galgal Abbay*), which poured into Lake Tana; he succeeded in reaching its source, or the source of the Blue Nile, in November, 1770. After returning to Gondar, Bruce departed for Sudan in December, 1771 to travel back to Europe. The regions which Bruce observed were those along the trade route from Massawa to Gondar, around Lake Tana, and along the trade route from Gondar to Sudan (Figure 4).

The fifth volume of Bruce's travel account is worthy of attention regarding the descriptions of teff and teff bread. This volume contains descriptions and illustrations of the plants and animals of Ethiopia. The main points of explanation on teff (Bruce 1790 V: 76–80) are:

- Teff is commonly sown all over Abyssinia.⁽²⁵⁾ Teff bread is commonly consumed throughout Abyssinia.
- The Abyssinians have plenty of wheat, and some are of an excellent quality. However, wheat-bread is chiefly consumed by 'people of the first rank'.
- In contrast, teff is eaten by 'all sorts of people from the king downwards'.

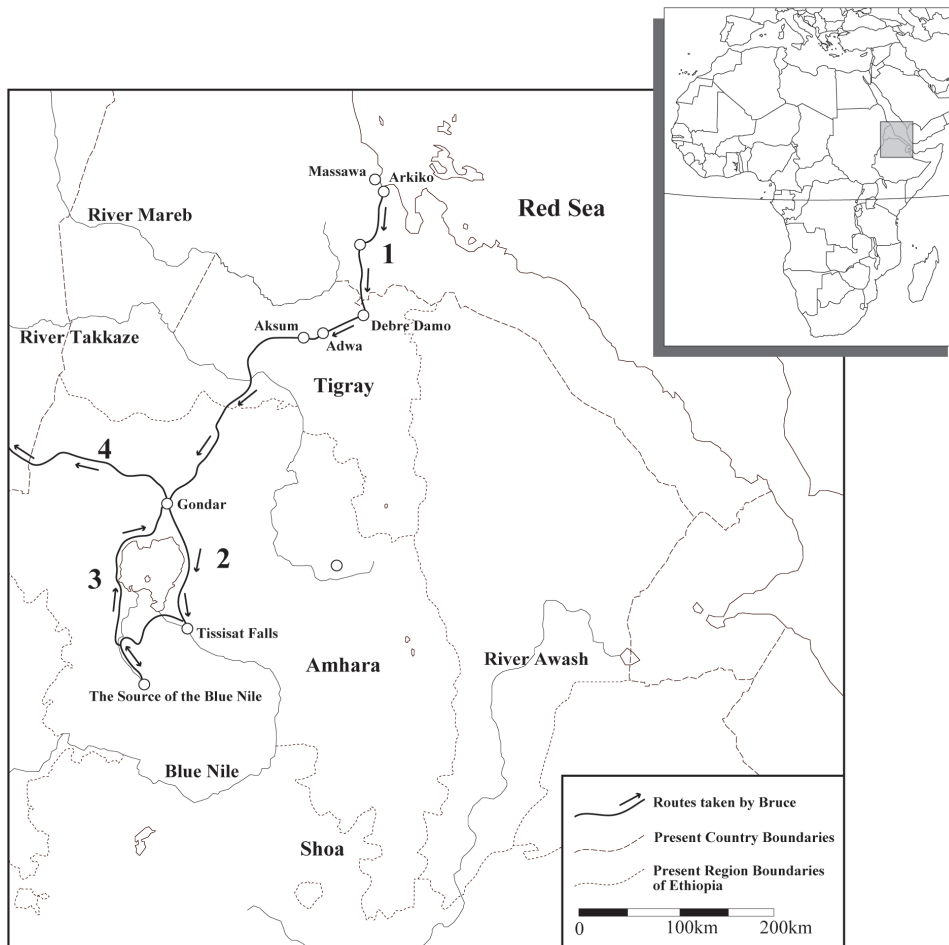


Figure 4 Routes taken by Bruce between 1769 and 1771.

Prepared by the author using the map in the book by Reid (1968: 152).

Routes taken by Bruce: 1. from Massawa to Gondar, 2. from Gondar to the source of the Blue Nile, 3. from the source of the Blue Nile to Gondar, and 4. from Gondar to Sudan.

- There are types of teff which are esteemed as much as wheat. The best type is as white as flour, exceedingly light, and easily digested. There are 'others, of a browner colour, and some nearly black'. The black ones are the food of the 'soldiers and servants'.
- When the people prepare teff bread, they make a lump of teff flour with water and put it into an earthen jar at some distance from the fire, where it remains till it begins to ferment or turn sour. Thereafter, it is baked into 'cakes of circular form, and about two feet in diameter'. Further, it 'is of a spungy,⁽²⁶⁾ soft quality, and not a disagreeable sourish taste'.
- Two cakes of teff bread a day and 'a coarse cotton cloth' once a year were the wages of 'a common servant'.

Bruce also stated that ‘At Adwa, and all neighbourhood, they had three harvests annually’, and he described the crops cultivated at Adwa (Bruce 1790 III: 124):

- The first sowing time is in July and August. This is the principal sowing time for wheat, but people sow finger millet, teff, and barley in the same season. From the 20th of November, people first reap barley, thereafter, wheat, and teff in the end.
- People immediately sow barley, which they reap in February, on the same lands.
- Thereafter, people often sow teff, though pea, called *shimbara*,⁽²⁷⁾ is often sown more frequently. These are cut before the first rains, which are in April.

When Bruce explained the geography and customs of the Ethiopian kingdom, he made a reference to a banquet in which raw beef was offered as the main dish (Bruce 1790 III: 280, 301–304). The main points regarding this banquet are:

- There are several types of bread in Abyssinia. The ‘king of Abyssinia’ eats bread made of wheat only grown in the region called ‘Dembea’ where Gondar is situated.
- For banquets, a long table and benches are set in the room, and bull hides are spread on the ground, outdoors.
- Instead of plates, ‘round cakes’ are laid before the guests. The bread is ‘about twice as big as a pan-cake’. These ‘round cakes’ are ‘unleavened bread of a sourish taste’ and they are ‘made of a grain called teff’. ‘Three or four of these cakes are generally put uppermost, [as] the food’ and ‘Beneath these are four or five of ordinary bread, and of a blackish kind’. The ‘ordinary bread’ is served for the guests to wipe their fingers.
- At the banquet, raw beef is cut into small pieces. People lay each piece on a piece of teff bread, generously powder it with black pepper, or Cayenne pepper, and salt, and then wrap the teff bread around the piece of meat.

Travel accounts by Prutky and Bruce indicate that teff became the principal cereal in the Ethiopian kingdom by the early 1750s, all the people ate teff bread by the early 1770s, people used flatbreads as plates, tablecloths, and napkins like people during the reign of Susnəyos did, and the custom of eating raw beef wrapped in teff bread, which the Jesuits during the reign of Susnəyos did not observe, became popular.

The flatbread with a sour taste, found in Chapter 42 of the second part of the travel account by Prutky, was baked on both sides. The method of cooking it was different from that of the present-day injera. However, the teff bread described by Bruce was round and spongy, with a sour taste. It had the principal features of the present-day injera.

Table 2 List of books written by Europeans based on their experiences of staying in Ethiopia in the first half of the 19th century

Author Name	Period of Stay in Ethiopia	Title
G. Annesley	1805	Voyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt, in the Years 1802, 1803, 1804, 1805, and 1806. 3 vols. William Miller. 1809.
H. Salt	1809–1810	A Voyage to Abyssinia, and Travels into the Interior of that Country, Executed under the Orders of the British Government, in the Years 1809 and 1810. F. C. & J. Rivington. 1814.
N. Pearce	1810–1819	The Life and Adventures of Nathaniel Pearce Written by Himself during a Residence in Abyssinia from the Years 1810 to 1819. 2 vols. Henry Colburn & Richard Bentley. 1831.
S. Gobat	1830–1832	Journal of a Three Years' Residence in Abyssinia, in Furtherance of the Objects of the Church Missionary Society. M. W. Dowd. 1850.
E. Rüppell	1831–1833	Reise in Abyssinien. 2 vols. Siegmund Schmerber. 1838–1840.
E. Combes and M. Tamisier	1835–1837	Voyage en Abyssinie, dans le pays des Galla, de Choa et d'Ifat. 4vols. Louis Desessart. 1838.
A. d'Abbadie	1838–1846	Douze ans de séjour dans la Haute-Éthiopie (Abyssinie). Librairie de L. Hachette et Ce. 1868.
Ch.-X. R. d'Hericourt	1839–1840	Voyage sur la côte orientale de la Mer Rouge, dans le pays d'Adel et le royaume de Choa. Arthus Bertrand. 1841.
C. W. Isenberg and J. L. Krapf	1839–1942	Journals of the Rev. Messrs. Isenberg and Krapf, Missionaries of the Church Missionary Society: Detailing their Proceedings in the Kingdom of Shoa, and Journeys in Other Parts of Abyssinia, in the Years 1839, 1840, 1841, and 1842. Seeley, Burnside & Seeley. 1843.
Th. Lefebvre	1839–1843	Voyage en Abyssinie exécuté pendant les années 1839, 1840, 1841, 1842, 1843. 6 vols. Arthus Bertrand. 1845–1848.
P. V. Ferret and J. G. Galinier	1839–1843	Voyage en Abyssinie: Dans les provinces du Tigré, du Samen et de l'Amhara. 2 vols. Paulin. 1847.
Ch. Johnston	1841–1842	Travels in Southern Abyssinia, through the Country of Adal to the Kingdom of Shoa. 2 vols. J. Madden. 1844.
W. C. Harris	1841–1843	The Highlands of Aethiopia Described during Eighteenth Months' Residence of a British Embassy at the Christian Court of Shoa. 3 vols. Longman, Brown, Green & Longmans. 1844.
Ch.-X. R. d'Hericourt	1842–1845	Second voyage sur les deux rives de la Mer Rouge dans le pays des Adels et le royaume de Choa. Arthus Bertrand. 1846.
M. Parkyns	1843–1846	Life in Abyssinia: Being Notes Collected during Three Years' Residence and Travels in that Country. John Murray. 1853.
W. C. Plowden	1848	Travels in Abyssinia and the Galla Country with Account of a Mission to Ras Ali in 1848. Longmans, Green, & Co. 1868.

V. Records from the first half of the 19th century

From the beginning of the 19th century, the number of Europeans entering northern Ethiopia increased. Table 2 presents the list of travel accounts written by the Europeans who had experienced travelling to or living in northern Ethiopia in the first half of the 19th century. These accounts often contain descriptions of teff and teff bread, but most of these descriptions are brief.

During the first half of the 19th century, the power of the monarchs of the Ethiopian kingdom declined, and Šahlä Šəllase, who ruled Shoa, a historical region situated in the centre of the present-day Ethiopia, proclaimed himself *nəguś* or king and began to strengthen his self-reliance. The British Empire decided to negotiate with Šahlä Šəllase, sending an embassy, led by W. C. Harris, that stayed in Ethiopia from 1841 to 1843. After returning to England, Harris published his travel account in three volumes (Harris 1844). On the bread in Shoa, he explained: ‘Sour bread, made from teff, barley, and wheat, is eaten with a stimulating pottage of onions, red pepper, and salt. *Daboo*, the most superior description of bread manufactured, is restricted to the wealthier classes; but there are numerous other methods employed in the preparation of grain, descending through all the grades of *hebest*, *anbabéro*, *anabroot*, *deffo*, *amasa*, *debenia*, *demookta*, *kitta*: the first four being composed of wheaten flour, and the remainder of teff, gram, juwarree⁽²⁸⁾, barley, and peas’ (Harris 1844 III: 173).

M. Parkyns, an English traveller, left valuable information on bread-making in northern Ethiopia. He stayed in Tigray from 1843 to 1846 and published *Life in Abyssinia* (Parkyns 1853) in 1853. The defining feature of this book is its richly detailed descriptions on the customs and culture of northern Ethiopia. Parkyns described four types of bread: ‘*taita* or *tabita*’, ‘*kitcha*’, ‘*hambasha*’, and ‘*hanza*’ (Parkyns 1853 I: 367–370). According to Parkyns, *tabita* was prepared using the following method: people mix flour with water ‘so as to form a sort of paste or dough of about the consistence of weak gruel. This is put into an earthen jar, and left to stand for a day and night to leaven’, and ‘of the “gruel” or liquid dough a sufficient quantity to make one cake is then poured on the oven, and with the hand, it is spread over the whole circular concave’, and ‘the cover being put on for two or three minutes, the bread is taken off ready for eating.’ On the size, form, and taste of *tabita*, Parkyns explained that it was ‘about eighteen inches in diameter, of the thickness of a twopenny piece, and full of holes, like sponge or a honeycomb’ and, ‘as for its taste, only fancy yourself chewing a piece of sour sponge’.⁽²⁹⁾ *Kitcha* is ‘crisp and dry, being made merely of flour and water’ and ‘in size it is nearly of the same diameter as the “tabita”, but much thinner’. On *hambasha*, Parkyns explained ‘this, being invariably made of wheat, is perhaps the bread most suitable to an European’s taste’. According to him, *hanza* is ‘a large cake, more frequently met with in the lower provinces of Tigré. It is made either of millet or teff’ and prepared with two *tabitas* and a paste called ‘*dillikh*’.

C. W. Isenberg, a missionary from the Church Missionary Society who stayed in Tigray and Shoa from 1834 to 1843, compiled several volumes of dictionaries and vocabularies on the Ethiopian languages. His Amharic-English dictionary,

published in 1841, contains several bread names (Isenberg 1841: 79, 115, 116, 128). According to this dictionary, the word ‘injera’ is the ‘common designation for bread’; ‘*ämza*’, called ‘*hänza*’ in Tigrinya, is ‘leavened cakes of Têf-bread’ and has another name—‘*tabita*’; ‘*qita*’ (also called ‘*qiça*’, ‘*qiša*’, ‘*qəša*’) is ‘unleavened bread-cakes’; ‘*ämbäša*’ is ‘leavened wheat-bread’, and it is called ‘*həmbäša*’ in Tigray and *dabo* in Shoa.

The descriptions in travel accounts and a dictionary written in the first half of the 19th century reveal that three types of bread, ‘sour and spongy teff flatbread’, ‘unleavened flatbread’, and ‘leavened wheat bread’ were the principal types of bread consumed in the regions spanning northern to central Ethiopia. The *tabita*, observed by Parkyns, almost had all the principal features of the present-day injera.

We must draw attention to the difference between the method of preparing *tabita* as observed by Parkyns and that of the present-day injera. To prepare the present-day injera, the batter is poured in a circular motion onto a heated griddle. The batter of *tabita* was spread with the hand on the griddle to take a circular form. This shows that the method of making the present-day injera was not established in the 1840s and the batter of the *tabita*, as observed by Parkyns, was more viscous than that of the present-day injera.

EXAMINATION OF THE CHANGES IN TEFF AND TEFF BREAD

I. Difference of environments of the area of observation

Descriptions on teff and teff bread from the 14th century to the first half of the 19th century show that Alvares, who stayed in the Ethiopian kingdom in the 1520s, did not mention teff as an especially important cereal, while the Jesuits, in the first half of the 17th century, and Prutky and Bruce, in the second half of the 18th century, pointed out the importance of teff in the food culture of the Ethiopian kingdom.

After landing at Massawa, Alvares travelled to Aksum, subsequently headed east, then, turned southwards and, eventually, reached the central region of the present-day Ethiopia. The Jesuits, Prutky, and Bruce, went towards the southwest from Aksum and reached the regions around Lake Tana. Before considering changes in the status of teff and the features, consumption, and methods of making teff bread, attention must be drawn to whether there was a difference in the environments observed by Alvares and the Jesuits, Prutky and Bruce, respectively.

Northern Ethiopia has a traditional system of land classification based on altitude. By this system, land is divided into the following five zones: *Bäräha*, *Q"älla*, *Wäyna Däga*, *Däga*, *Wurč*. In the article ‘*Wäyna Däga*’ (Ritler 2011) of *Encyclopaedia Aethiopica*, the upper limit of ‘*Wäyna Däga*’ is defined as 2,300–2,400 m and the lower limit as 1,600–1,800 m. In the article ‘*Däga*’ (Mekete 2005), the altitudinal range of ‘*Däga*’ is defined as 2,300–3,300 m. Figure 5 shows the routes Alvares and Bruce took, respectively and the distribution of *Wäyna Däga*, *Däga*, and *Wurč*. In this figure, the altitude range of *Wäyna Däga*

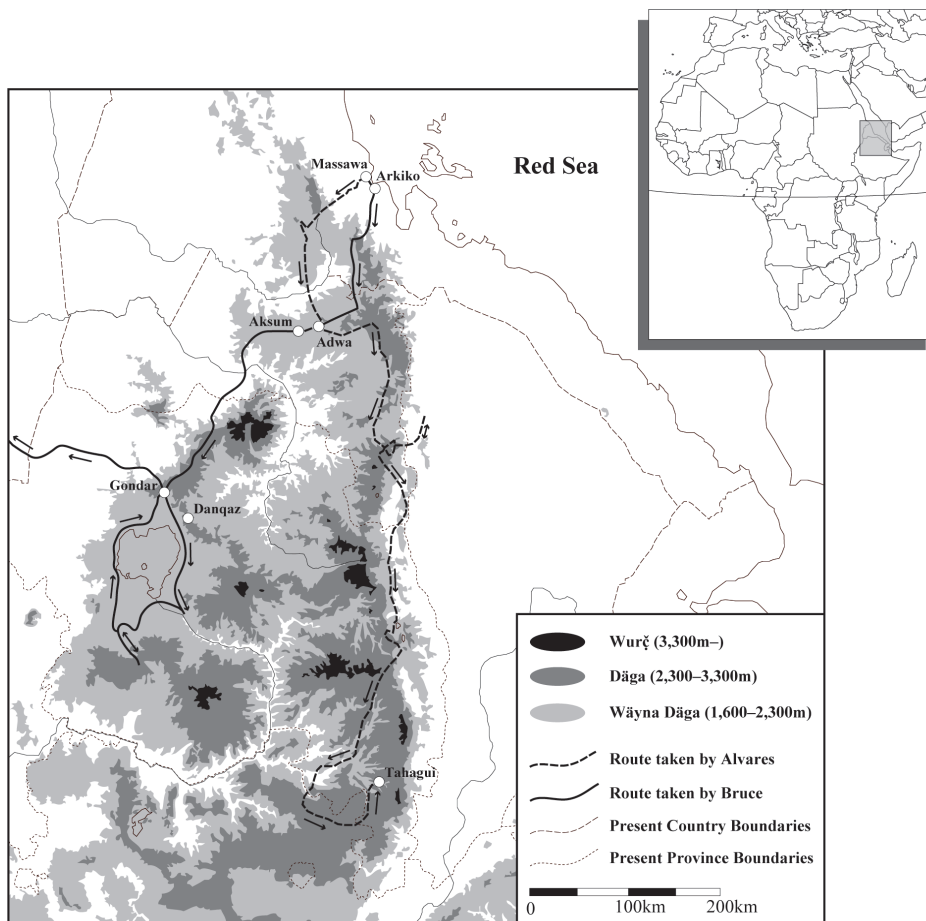


Figure 5 Distributions of Wäyna Däga, Däga, Wurç and the routes taken by Alvares and Bruce. Prepared by the author using Google Maps and altitude data obtained from the Flood Map (<https://www.floodmap.net/>)

is defined as 1,600–2,300 m and that of *Däga* as 2,300–3,300 m, for the sake of convenience. This figure indicates that Alvares and Bruce mainly passed through *Wäyna Däga* and *Däga* and there was not much of a difference in the environments observed by them.⁽³⁰⁾

II. Changes in the status of teff and teff bread

Alvares, the Jesuits, Prutky, and Bruce stayed in the same climate zones. It is reasonable to suppose that the differences of their descriptions on teff signify the following changes in the status of teff.

Although teff was one of the cereals used as an ingredient for making bread, teff bread was not a staple food in the 1520s when Alvares stayed in the Ethiopian kingdom. The custom of consuming teff became popular among the common

people by the beginning of the 17th century. Thereafter, teff became the principal cereal by the early 1750s when Prutky visited the Ethiopian kingdom. By the beginning of the 1770s, when Bruce travelled across northern Ethiopia, everyone began to like teff flatbread. As the custom of consuming teff spread, a new food-related habit became popular: people of the high social classes ate the white type of teff bread, while people of the low social classes ate the brown or black type. There were some types of teff that were esteemed as much as wheat during Bruce's stay.

It is pertinent to examine the evolution of the features, consumption, and methods of making teff bread from the 16th to 18th centuries. Alvares did not report that the round flatbread had special importance in the food culture of the Ethiopian kingdom. He also observed that bread was served on wooden trays. In contrast, Prutky and Bruce left numerous descriptions of the round flatbread. They also reported that the people set flatbreads on tables as a substitute for tablecloths, placed flatbreads on them for consumption, and guests wiped their hands with pieces of the flatbread placed below those placed for consumption. The differences found in these descriptions indicate that the importance of the round flatbread in the food culture of the Ethiopian kingdom increased and there were changes in the way dishes were placed on the table and table manners, from the 1520s to the beginning of the 17th century.

The flatbread referred to as *apa* by the Jesuits during the reign of Susnəyos was made of wheat, sorghum, and teff. The Jesuits did not report that the *apas* had a sour taste. In the early 1750s, when Prutky visited the kingdom, he reported that the people liked to eat round teff flatbreads, baked on both sides, with a sour taste. In the beginning of the 1770s, Bruce observed that spongy and round teff flatbreads had become a staple food in the Ethiopian kingdom. In the 1840s, Parkyns reported about the *tabita*, a round and spongy teff flatbread with a sour taste, and he observed that its batter was spread with the hand on the griddle to take a circular form, which was baked on one side with a cover placed over it.

As mentioned above, the Jesuits reported that some people liked to consume bread with a sour taste that was different from *apa* during the reign of Susnəyos. It may be said that the tendency of favouring the sour taste increased among the people of the Ethiopian kingdom from the first half of the 17th century to the middle of the 18th century, as the importance of the flatbread in the food culture of the kingdom increased.

The staple food, when Bruce visited the Ethiopian kingdom in the 1770s, was a spongy and round teff flatbread with a sour taste. Although he did not leave detailed descriptions of the method of making this type of flatbread, he reported that it had the same features as of the present-day injera, in taste and appearance. Therefore, it seems reasonable to suppose that it was the prototype of the present-day injera.

In the early 1750s, when Prutky visited the Ethiopian kingdom, the round flatbread baked on both sides with a sour taste was a staple food in the kingdom. Subsequently, a round and spongy teff flatbread with a sour taste became popular by the beginning of the 1770s. Prutky and Bruce reported that the people in the Ethiopian kingdom liked to eat raw beef wrapped with round teff flatbread.⁽³¹⁾ It

is probable that the change in consumption from that of round flatbreads baked on both sides, as observed by Prutky, to that of the round and spongy flatbread observed by Bruce had a relation to the custom of eating raw beef.

The method of making, taste, and form of *tabita* observed by Parkyns were the same as those of the present-day injera, except for the method of moulding the dough into a circular form on the grill. It ought to be noted that the method of making the present-day injera was not established in the 1840s.

III. Background of the increase in teff consumption

Several observations have shown that the teff consumption increased and teff bread became a staple food in the Ethiopian kingdom from the 16th to 18th centuries. Owing to the lack of information, it is difficult to establish the factors that caused these changes. When considering the factors, attention ought to be paid to Susnayos' comment about the fact that, at first, the poor people began to consume teff out of hunger. According to this comment, food shortages caused changes in the food culture of the Ethiopian kingdom from the 1520s to the beginning of the 17th century.

The explanations provided by Almeida also ought to be noticed. When explaining about the agriculture of the Ethiopian kingdom, he stated that food shortage and famines often occurred, although the land was fertile. As factors of food shortage and starvation, he listed the following four problems (Beccari 1969 V: 37–38; Beckingham & Huntingford 1954: 46).

- The people used larger quantities of cereals to brew a beverage called Çalá⁽³²⁾ than they used for preparing *apas*.
- Plagues of locusts were extremely frequent.
- Looting by soldiers of the kingdom. They were worse than the locusts because the latter ate what grew in the fields, but the former looted what was in people's houses.
- There was difficulty in transporting food from one region to another, especially those areas where food was in short supply, because the roads were difficult to traverse and transportation charges were high.

Excessive consumption of cereals for brewing beverages and difficulty of transporting foodgrains were constant problems and not unique phenomena from the 1520s to the beginning of the 17th century. Furthermore, the peasants' burden that was caused by wars ought to be noted (Beccari 1969 V: 72; Beckingham & Huntingford 1954: 80). The *gwəlt* system was a land tenure system prevalent in the Ethiopian kingdom. The church or an individual who received a piece of land as *gwəlt* enjoyed several rights such as those of collecting tributes from the peasants living on the land (Markakis 1974: 82–84; Taddesse 1972: 100–103). Soldiers maintained their livelihood through this system in peacetime. According to Almeida, the inhabitants of every region of the Ethiopian kingdom were compelled to provide food and shelter for one night to travellers. This custom was followed even when large companies of soldiers were quartered in extremely

small villages. These were heavy burdens for peasants.

A series of wars broke out from the 1520s to the beginning of the 17th century. As mentioned earlier, the army of the Adal Sultanate began a military campaign against the Ethiopian kingdom and forced it into a difficult situation from the end of the 1520s to the beginning of the 1540s. In the second half of the 16th century, the Oromo, a Cushitic-speaking ethnic group, began to attack several regions of the Ethiopian kingdom from the south. Moreover, the Ottoman Empire, which conquered Egypt in 1517 and expanded its territory to the regions around the Red Sea, tried to conquer the Ethiopian highlands. Further, Yəshāq, governor of the region from the Red Sea to the river Mārāb, rose in rebellion in the second half of the 16th century. After the death of Śārşā Dəngəl (r. 1563–1597), the battles for the succession to the throne of the Ethiopian kingdom began. The repercussions of these battles continued from the end of the 1520s to the enthronement of Susnəyos, with the territory of the Ethiopian kingdom almost reduced to half its former expanse and the centre of the kingdom having shifted from the centre of the present-day Ethiopia to the regions around Lake Tana.

Pankhurst describes famines and epidemics in northern Ethiopia from the 15th century to 17th century in Chapter 2 of his book titled *The History of Famine and Epidemics in Ethiopia Prior to the Twentieth Century* (Pankhurst 1985: 25–49). As mentioned in it, serious famines occurred towards the end of the reign of Ləbnā Dəngəl, in the fourth year of the reign of Gälawdewos (r. 1540–1559), towards the beginning of the reign of Minas (r. 1559–1563), during the reign of Susnəyos (between 1625 and 1627), and towards the beginning of the reign of Fasilādās. The locust plagues were often recorded as the chief cause of famines. However, it is likely that plunders by soldiers of the kingdom, land devastation, and burden of supplying food for soldiers also resulted in food shortages.

In Chapter 3, Pankhurst describes famines and epidemics from the Gondar Period to the beginning of the 19th century (Pankhurst 1985: 51–56). As mentioned in it, severe famines occurred at the beginning of the reign of Yoḥännəs I in 1668 (r. 1667–1682), at the end of the reign of Iyasu I in 1706, during the reign of Iyasu II (in 1747, 1748, and 1752), between 1772 and 1773, and between 1788 and 1789 in the ‘Era of the Princes’ or *Zāmānā Māsafānt*⁽³³⁾ (1769–1855).

There were no serious wars reported during the Gondar Period. Therefore, there is no doubt that the plague of locusts was a cause of famines that occurred in this period. Moreover, attention ought to be drawn to climatic changes as well. Since the 1990s, scholars have been researching climatic changes in the second millennium in northern Ethiopia. Studies on the relation between climatic changes and the famines listed in the abovementioned book by Pankhurst were conducted (Machado *et al.* 1998; Mohammed & Bonnefille 2002). These studies reveal that several dry periods were witnessed in northern Ethiopia in the Little Ice Age, which lasted from the early 14th century through the mid-19th century. These dry periods purportedly caused famines.

CONCLUDING REMARKS

Previous studies have revealed that teff was domesticated in the Ethiopian highlands up to the first millennium BC, teff bread was not a staple food in the kingdom of Aksum; clay trays, resembling the griddle used for the preparation of the present-day injera, appeared around the 6th century; and the flatbread referred to as *apa*, by the Jesuits who stayed in the Ethiopian kingdom during the first half of the 17th century, was identified as the present-day injera. Inadequate attention has been paid to the subject about when teff became the principal cereal and teff injera the staple food of northern Ethiopia. Based on the examination of several sources from the 14th to 19th centuries, this study revealed the following points.

I. Increase in teff consumption

Teff bread was not a staple food in the 1520s when Alvares visited the Ethiopian kingdom. Subsequently, consumption of teff spread among the common people by the beginning of the 17th century. Teff consumption became more popular during the Gondar Period (1632–1769), and teff became the principal cereal by the early 1750s when Prutky visited northern Ethiopia. By the beginning of the 1770s, when Bruce visited the Ethiopian kingdom, people of all ranks began to like teff bread. It seems that food shortage was an important factor for the increase in teff consumption from the 16th to 18th centuries. Constant problems in the production and consumption of cereals in the Ethiopian kingdom, devastation caused by a series of wars from the 16th century to the first half of the 17th centuries, and the impact of dry periods in the Little Ice Age are supposed to be factors that caused food shortage.

II. Birth of Injera

As the consumption of teff by the common people increased from the 16th century to the beginning of the 17th century, the importance of the round flatbread in the food culture of the Ethiopian kingdom increased simultaneously. The Jesuits, who stayed in the Ethiopian kingdom during the reign of Susnəyos, did not leave any special mention of the sourness of this round flatbread. Therefore, it will be a mistake to believe that the present-day injera existed in the first half of the 17th century. Although the word ‘injera’ was used in the 14th century, it is highly unlikely that this word referred to the same food as the present-day injera; it was used as the general term for bread. During the Gondar Period, a custom of consuming teff bread spread among the royal family and nobles, and round teff flatbread baked on both sides with a sour taste became the staple food in the kingdom by the early 1750s. Subsequently, spongy and round teff flatbreads with a sour taste became popular in the kingdom by the beginning of the 1770s. It seems reasonable to suppose that this flatbread was the prototype of the present-day injera and it is likely that this flatbread developed from that baked on both sides in the early 1750s. However, the method of making the present-day injera

was not established in the 1840s.

It is concluded that the teff consumption increased in northern Ethiopia from the 16th century to 18th century and the prototype of the present-day injera was born out of this change in consumption.⁽³⁴⁾ However, the following questions remain unanswered: the reason behind the increase in teff consumption among ordinary people during the social confusions from the 16th century to the beginning of the 17th century⁽³⁵⁾; the reason behind the custom of consuming teff spreading among the royal family and nobles during the Gondar Period⁽³⁶⁾; the point in time when the people began to pour the batter in a circular motion onto a heated griddle; and the point in time when the word ‘injera’, which was used as the general term for bread, came to signify the round and spongy flatbread with a sour taste. These questions remain to be examined.

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NOTES

- (1) This paper is the revised English version of my article (Ishikawa 2021) written in Japanese.
- (2) When transliterating Ethiopic script, I have observed the style of the *Encyclopaedia Aethiopica* (Uhlig 2003: xx–xxi). However, I have also used popular transliterations, such as injera, Menelik.
- (3) In the 1960s, a view that the origin of injera dates back to the 1st century BC began circulating (Stewart & Asnake 1962). It was based on the legend described in an unpublished paper in the 1950s. Presently, no scholars support this view. Based on the opinion of R. F. Wilding, H. Kloman, who published a book on Ethiopian foods in the USA, states that the people in northern Ethiopia began to make injera by around the 6th century (Kloman 2010: 56). However, the presence of the *məṭad*-like clay tray does not necessarily indicate that the present-day injera was made in it.
- (4) The lack of indigenous documentation of agriculture was, as J. McCann pointed out, due to “a lack of interest and direct involvement of the state and the elite administrative classes in the actual process of production” and “the absence of an indigenous tradition of agricultural history” (McCann 1995: 9). In addition to these reasons, the distinguishing characteristic of the culture of writing in the Christian society of northern Ethiopia, perpetuating that the purpose of writing books was to praise Christianity, seems to be a cause for the lack of written references to agriculture (Ishikawa 2011).
- (5) British archaeologist O. G. S. Crawford translated several itineraries, from Ethiopia to Jerusalem or Cairo, which A. Zorzi wrote in Venice in the years 1519–1524, based on the information of the Ethiopian Christians (Crawford 1958). These itineraries contain information on agriculture in northern Ethiopia. However, there is no reference to teff.
- (6) The travel account by F. Alvares is composed of two parts. The first part comprises 142 chapters which deal with the experiences in the Ethiopian kingdom and the second part comprises nine supplementary chapters which contain records of the homeward journey to Portugal, questions on Ethiopia posed by the Archbishop of Braga, and F. Alvares’ answers to these questions. The Portuguese text of Alvares’ travel account, the edition published in Lisbon in 1889 (Alvares 1889) has been used in this study. When quoting from it, the page numbers of the Portuguese text and those of the English translation

published by the Hakluyt Society in 1961 (Alvares 1961) are noted for the convenience of the reader. Since the Portuguese text, published in 1889, has two chapters labelled ‘Chapter 35’, chapter numbers are different in the Portuguese text and English translation after Chapter 36.

- (7) F. Alvares referred to bread in his travel account, by spelling *pão* and *pam* in Portuguese.
- (8) This is the historical name for the eastern part of the present-day Amhara Region. It is written as Angot in documents in Gə‘əz.
- (9) It seems that ‘Corcora in Tigray’ is ‘Addi Qorqorä’ in the southeastern part of the present Tigray Region. Alvares mentioned ‘Corcora in Angote’ in his travel account.
- (10) Kloman interpreted this bread to be the same as the present-day injera (Kloman 2010: 61). However, this is a description of the bread of the Sacrament and its method of preparation is different from that of the present-day injera.
- (11) *Futūḥ al-Habaša*, written in Arabic, is the principal source of information on the military campaign of the Adal Sultanate’s army against the Ethiopian kingdom. Although this book does not have abundant descriptions of the crops in northern Ethiopia, wheat and barley are mentioned as crops cultivated in the region called Bayt Amḥarā, and a region, in Tigray, called Qarqārā is depicted as a “land full of wheat and honey” (Chihab ed-Din Ahmed 1897–1909 I: 211, 317, II: 306, 416–417; Šihāb ad-Dīn Aḥmad 2003: 244, 350). According to G. W. B. Huntingford, Bayt Amḥarā was the historical name for the eastern part of the present-day Amhara Region and Qarqārā is the ‘Corcora in Tigray’ of Alvares’ travel account (Huntingford 1989: 80, 132). The service account written by M. de Castanhoso, a Portuguese soldier who accompanied Cristóvão da Gama, has several descriptions of the cereals eaten in the Ethiopian kingdom. De Castanhoso reported that *Barnagaes* (*Bahr nāgās*, in Gə‘əz sources, which was the title of the governor who ruled the region from the Red Sea to the river Mārāb) offered the Portuguese 10 fat cows and ‘bread made of sorghum, and from a cereal called *dacheni*’ every day, ‘wheat, barley, sorghum, and other cereals’ were cultivated in the region governed by Barnagaes, and the Ethiopian Christians ate bread made of wheat, sorghum, and chickpea during days of fasting and the Host was made of wheat (de Castanhoso 1564: 7r, 8v, 48r; Whiteway 1967: 11–12, 15, 89). As explained in the note of the English translation of the service account by de Castanhoso (Whiteway 1967: 12), *dacheni* seems to be finger millet. These descriptions show that wheat, barley, and sorghum were the principal cereals of the Ethiopian kingdom.
- (12) When quoting from these sources, the page numbers of the Portuguese and Latin texts and those of the English or French translations are noted for the convenience of the reader.
- (13) Almeida called finger millet ‘the nachenim of India called *Daguçâ*’ (*o nachenim da India á que chamão Daguçâ*) (Beccari 1969 V: 37; Beckingham & Huntingford 1954: 45). As mentioned above, *dagusa* is the Amharic term for finger millet.
- (14) *Palmo* was a unit of length, of about 22–24 cm, used in Portugal.
- (15) This word was translated as ‘corn’ in the English translation of Barradas’ book (Barradas 1996: 73). This is a mistranslation because maize was not cultivated during this period in northern Ethiopia.
- (16) Ludolf’s *Historia Aethiopica* did not have page numbers. In the first volume of the French translation (Ludolf 2008–2014), descriptions of the crops can be seen on the 77th page.
- (17) In addition to these Amharic bread names, several bread names in Gə‘əz were listed in this dictionary.
- (18) It is difficult to identify the type of bread from this description.
- (19) This dictionary has double column setting and column numbers are assigned. These

- numbers are column numbers, not page numbers.
- (20) The Yemeni Zaidi State sent an embassy led by Ḥasan b. Aḥmad al-Ḥaymī to Fasilädäs' court. Al-Ḥaymī wrote, in Arabic, about his experiences in Ethiopia from 1647 to 1649. His travel account titled the *Sīrat al-Ḥabaša* (van Donzel 1986) contains his itinerary from Beylul, a port situated in the southern part of the present-day Eritrea, to Gondar and his experiences in Gondar. However, there is no mention of crops or bread in this book.
 - (21) This is a division of northern Ethiopian history, dating from 1632 to 1769.
 - (22) See the explanation, in the English translation, on Prutky's itinerary and the contents of his book (Prutky 1991: xi–xv).
 - (23) In this study, the French text, published in 2010 (Poncet 2010), is used as the text of the travel account by Poncet. When quoting from it, the page numbers of the English translation, published in 1949, are also noted.
 - (24) A unit of length termed the '*spithama*' is used in the Latin text. This unit corresponds with 'span'. One *spithama* is almost 23 cm long.
 - (25) Bruce used the term 'Abyssinia' as another name of Ethiopia. In his travel account, this term was used to refer to the realm of the Ethiopian kingdom.
 - (26) This is translated exactly.
 - (27) The Amharic word '*šambāra*' means chickpea.
 - (28) One of the names for sorghum in India.
 - (29) Ch. Johnston, an English surgeon who visited Shoa in the early 1840s, recorded the method of baking bread, which he observed in Aliu Amba, Shoa (Johnston 1844 II: 253). According to him, 'a broad circular pan of earthenware placed upon three stones' was used for baking bread. His housekeeper poured 'the leavened batter' 'upon the heated dish, quickly spreading it into a thin layer, and then placing over a hollow shield-like cover, also of earthenware'. This seems to be the same method as that observed by Parkyns.
 - (30) Susnəyos, who regarded teff as the food of the ordinary people, stayed for long in the palace in Dänqāz, which was at a height of 2,750 m, and his main area of activity was in the regions around Lake Tana, 1,800 m above sea level. It is reasonable to suppose that Susnəyos possessed knowledge of the environments and crops of *Wäyña Däga* and *Däga*.
 - (31) Alvares, the Jesuits, such as Barradas and Lobo, and Poncet also reported the custom of eating raw beef (Alvares 1889: 51, 65, 192, 1961 I: 190, 234, II: 510; Barradas 1996: 74–75; Beccari 1969 IV: 165; Lobo 1971: 366, 1984: 170–171; Poncet 1949: 119, 2010: 112). Although they left relatively detailed descriptions of sauce on meat, they made no references to the method of wrapping raw beef with the flatbread.
 - (32) A traditional beer, called *ṭalla* in Amharic and *sawa* in Tigrinya, was brewed from various grains. In his travel account, Alvares called it '*cana*' (Alvares 1889: 45, 1961 I: 176).
 - (33) This is one of the divisions of northern Ethiopian history, dating from 1769 to 1855.
 - (34) In their ethnoarchaeological study of the highland Ethiopian griddle technology, Lyons and D'Andrea stated: 'Tigrayan fermented griddle bread must be considered as part of a wider African bread tradition'; they gave attention to the flatbread made of *ensete* (*Ensete ventricosum*) in Southwestern and Central Ethiopia and the *kisra*, a Sudanese flatbread made of sorghum or finger millet (Lyons & D'Andrea 2003: 523). When examining the origin of injera, attention ought to be drawn to some bread in the neighbouring regions of northern Ethiopia and *appam* in Southern India, in addition to flatbread made of *ensete* and *kisra*.
 - (35) According to G. Jones, 'teff grain can be stored for several years without losing its viability' and 'a very small quantity of grain was sufficient to sow a large area', so teff

had ‘advantage over large-grain cereals in times of famine or war’ (Jones 2010: 886). As features of teff, Fujimoto pointed out that the cultivation period is short and it can be harvested at an immature stage (Fujimoto 2023). It is probable that the peasants regarded these characteristics of teff as advantageous over other cereals in times of famines and wars. When examining the reasons behind the increase in teff consumption from the 16th century onwards, these characteristics of teff and climate changes in northern Ethiopia ought to be considered.

- (36) Although it has often been found, in world history, that court cuisine spreads among the ordinary people, it is rare that the ordinary people’s food becomes the staple food of the higher classes. As a factor of the increase in teff consumption in the Gondar Period, it is fair to say that round teff flatbread suited the taste of the people of the Ethiopian kingdom. It is probable that the food habits of the people of the high social classes who ate the white type of teff and those of the low social classes who ate the brown or black type and the custom of wrapping raw beef with pieces of round teff flatbread with a sour taste also influenced the increase in teff consumption. The reason behind the custom of consuming teff spreading among the higher classes in the Gondar Period needs to be considered, drawing attention to the influence of the people’s preference on food culture.

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