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“Camel and the Household Economy of the Afar”

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# Camel and the Household Economy of the Afar:

## A study of selected members of Wahlifanta Camel Herders' Society of Awssa, Ethiopia<sup>1</sup>

*Tegegne Teka*

This study focuses on selected Afar households of the Wahlifanta Camel Herders' Society of Awssa district. The objective is to see the extent to which camel plays a pivotal role in the subsistence economy of the households of the Afar camel pastoral population. The dominant aspects of economic life of camel pastoralists, such as ownership of livestock, crop production, and trade activities are considered. The role of camel in periods of crises is also discussed. The article concludes that the household economy of the camel pastoralist is almost entirely contained in the camel. It is the strong conviction of the author that without the camel neither the studied households nor the support systems built on camel into the wider society will escape collapse.

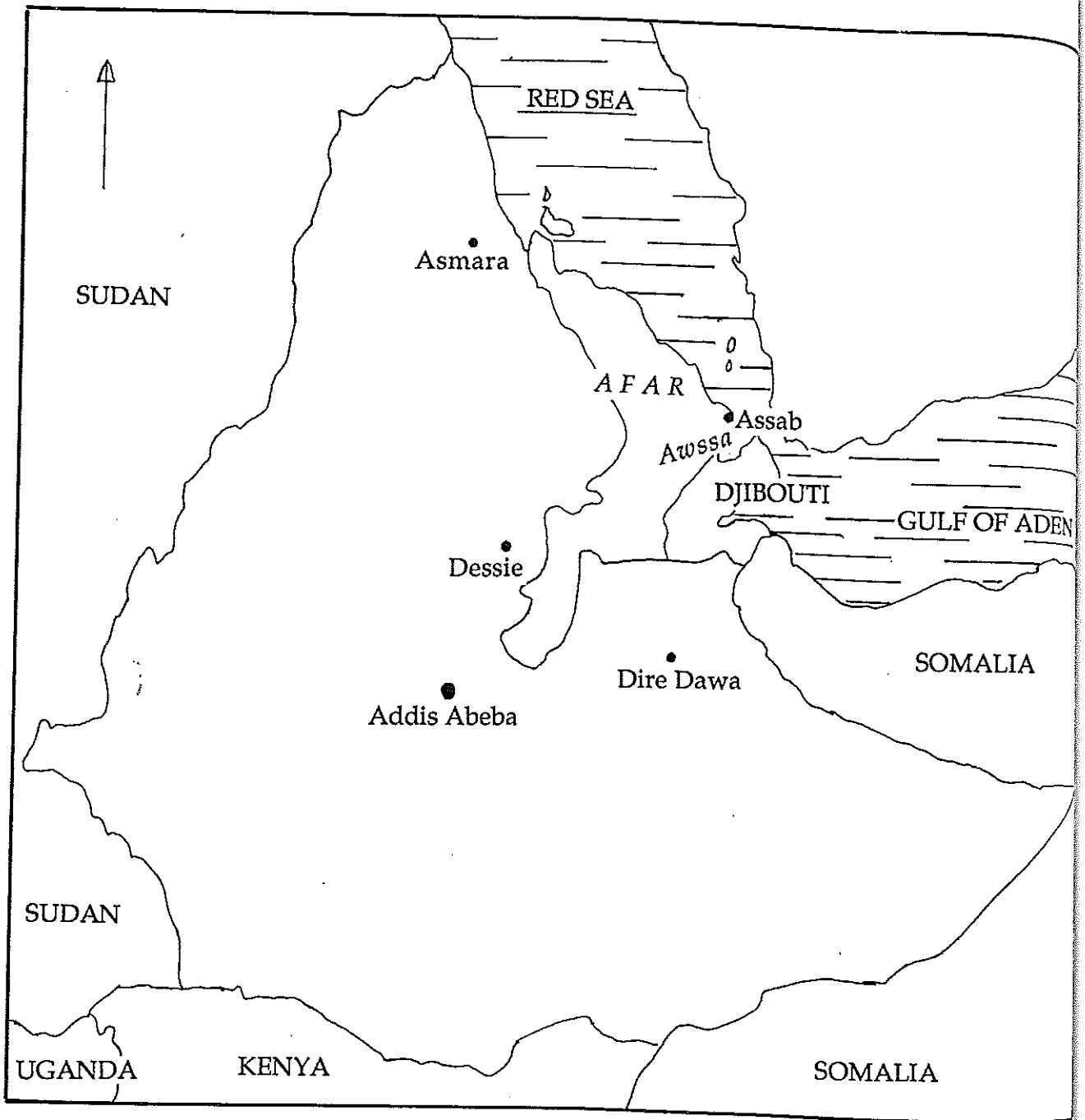
### Introduction

The Afar triangle (the area which is more or less bounded by the Red Sea, the eastern wall of the Rift Valley and Djibouti), lies to the east of Ethiopia. The Afars raise cattle, camel, sheep and goats. Although multi-species herding is a common practice, cattle and camel stand out as the two most important activities. This study focuses on camel pastoralism. Most studies on the Afars (Mukasa, Gebre Mariam, Cossins, Helland, Wilson, Tilahun, et al.) show that the camel is used in a mixed livestock economy, and that the Afars rely less on their camels and more on small ruminants to meet their subsistence requirements. Though this is generally true for the Afar cattle pastoralist, it may not hold true for the camel pastoralist society covered in this study. This is not to say that members of a camel herders society do not practice mixed livestock economy, but to emphasise the fact that they rely more on camels in the sustenance of their household economy. In fact, this may be because very little is known about camel husbandry

as compared to cattle husbandry within the Afar pastoral production complex.

There are two Afar camel herders societies in Awssa region, the *Romayitu* and the *Wahlifanta*. These societies were created following the changes of the 1974 popular upsurge which resulted in the promulgation of the land reform and the abolition of feudalism in Ethiopia. The decision to create these societies was taken by the Ethiopian Provisional Military Government. It ordered that livestock owned by individuals, like Sultan Alimirah, be returned to the people if they were willing to organize themselves into some form of a society (Seyoum and Gebre, 1989). This study focuses on Wahlifanta Camel Herders' Society created in this way.<sup>2</sup>

Wahlifanta Camel Herders' Society is in Awssa district, and the office is 5 kms outside of Assayita town, the capital of Awssa Sub-Provinces. The camel is the subsistence base of the Wahlifanta pastoralists. Wahlifanta has a membership of 167 people, all male, and a camel population of 205 (Office of the Awraja Peasant Association (PA)).<sup>3</sup> The camels are owned collectively and decisions to sell



Map over Ethiopia with Afar

Source: Institute for the Study of Ethiopian Nationalities, 1988.

or to slaughter are made by the leadership of the society (Seyoum and Gebre, 1989).

On paper, in the Awraja PA Office, Wahlifanta Camel Herders' Society looked viable and gave the impression of a very strong rural institution. The Awraja PA has the list of all members of the society. It has a chairman, secretary, control committee, peoples militia, etc. But in reality there is not much to show. Wahlifanta has no office, no records, and the chairman's residence is the *de facto* office of the camel herders' society. It is in this office where community matters are raised, discussed, and resolved collectively through discussion.

This paper attempts to give an impression of the role of the camel in the households of Wahlifanta Camel Herders' Society. The objective is to see the extent to which the camel plays a pivotal role in the subsistence economy of the households of the Afar camel pastoral population. The dominant aspects of economic life of camel pastoralists, such as ownership of livestock, crop production and trade activities, are also considered, along with the role of the camel in periods of crises. The paper concludes that the household economy of the camel pastoralist is almost entirely contained in the camel. It is the strong conviction of the author that, without the camel, neither the studied households nor the support systems built on the camel into the wider society will escape collapse.

### The Studied Households

The Afar households in this study consist of 67% camel pastoralists, 17% semi-pastoralists and 16% permanent settlers. The household heads that are members of the Wahlifanta Camel Herders' Society are all males. Whereas the pastoralists engage themselves in continuous movements with their camels, the semi-pastoralist use movement to a limited extent. The latter herd camels and practice agriculture. They stay about five to six months in Wahlifanta, and then the households move to another territory. Those camel pastoralists with permanent settlements

have their place of residence in Wahlifanta, and the households have not moved at all since 1981. Since camel herding is taken in turns, the head of the household will be away from home for a given period of time, leaving the family behind in Wahlifanta.

Thirtythree percent of the interviewed households (HHs) were in the age group of 20-30 years; 17% of 31-45, and 50% of 46-50. Sixteen percent of the heads of HHs were not yet married and 15% had two wives. The average household size was 8 persons, almost twice the national average (4.4 persons) for the rural areas of Ethiopia. Twentythree percent of the households were members of the extended family, and were largely young dependants. Children represented 52% of the surveyed population. This brings the percentage of dependants to nearly 63% of the total members of the interviewed households. These figures indicate the pressure of the subsistence economy and on every pastoral household. Certainly, a much wider socio-economic survey on the Afar camel pastoral households may provide more generalized conclusions.

### Ownership of Livestock

Multi-species (camel, cattle, goats and sheep) pastoralism is the most preferred livestock husbandry among the Afar (Gebre Mariam, 1987). Furthermore, the Afars are still largely dependent on selling small stock for subsistence (Cossins, 1983) and may practice cattle husbandry. But when we deal with an Afar community like Wahlifanta Camel Herders' Society which is predominantly into camel husbandry, the picture is a little bit different.

Camels were the main livestock owned by the interviewed households. Sixtyseven percent of the households had no other livestock than camels. The households owned an average of 44 camels, 70% of the herds being female, 6% male and 24% calves. A study by Gebre Mariam in the Afar region has shown that, "...the average camel holding per household was 1.7 with a variation from 1-8 camels per household... (and) 43%

of the total camel population were adult females" (Gebre Mariam, 1982:7). This clearly indicates the differences in camel ownership among the Afars between the predominantly cattle pastoralist, as shown by Gebre Mariam, and the camel pastoralist as shown in the case of Wahlifanta. In Wahlifanta, female camels are valued significantly higher as they can guarantee a stable recovery and continuity of camels in the community. Wilson (quoted in Gebre Mariam, 1987:6) argues that "...the type of herd structure involving a minimum of 50 percent breeding females is suitable for providing a more or less continuous supply of milk and normally allows a rapid recovery of herd numbers after a drought or an outbreak of epidemic".

Few members of the studied households own large numbers of livestock other than camels. It was found that 33% of the households (HHs) owned 51% of the camels and 100% of the goats, cows, oxen and sheep. This does not mean that 67% of the HHs never had any livestock other than camels, but rather that they lost them during the drought of 1984/85, an issue which I will address later. Whenever camel pastoralists are asked how many camels they own, they only count the female camels. Wealth in the Afar camel pastoral societies is assessed mainly on the basis of the number of female camels one owns. Accordingly, the average ownership of female camels in the studied households is 41, with one household owning 10, the lowest, and another household owning 51, the highest. This study observed the low number of male camels in the interviewed households, and generally in the Wahlifanta Camel Herders' Society. Indeed, the highest number of male camels owned by a household in the study area was four.

In a discussion with the members of Wahlifanta Camel Herders' Society, we asked them to suggest wealth categories or stratification in the ownership of camels. They came up with the following formula. A person who owns no camels is poor, 1-2 camels is below subsistence and highly

vulnerable, and 10 camels is subsistence level. Anyone who has 70 camels or more is rich, and someone with more than 100 camels is considered to be very rich. Based on this local perception of wealth and poverty we estimated that 33% of the interviewed households live at the subsistence level and 67% of the households are above subsistence.

The 1984/85 drought in the region has resulted in the decline of livestock ownership in the region as a whole. For instance, according to the estimates of the Awssa Awraja Peasant Association, 2,438 people, 15,841 camels, 106,581 goats and sheep, 59,581 cattle and 4,987 donkeys died between August 1984 and August 1986 (Awssa Awraja PA Office, 1989). Livestock, including camels in the studied households, did not escape this catastrophe. Put together, the households lost 32% of the present camel stock and 4 times the number of goats, sheep and cattle they own today. The attrition rate of goats, sheep and cattle is 3.5 times higher than that of the camels. Of the camels that the interviewed households lost during the drought, 84% were female, 9% male and 7% calves. The current low number of livestock ownership that we saw in the studied households is because they have not yet recovered from the effects of the drought. Recovery of herd size has been found to be quicker in those households that own larger camel herds than those who do not. For instance, our study has shown that 33% of the households which own 51% of the camels own 100% of the goats, sheep and cattle. "When droughts occur, camels prove to be the primary source of subsistence and mobility, and hence the key to survival" (Hately, 1979 in Mukasa-Mugerwa, 1981).

## Land and Crop Production

All the interviewed households are agropastoralists, practice camel pastoralism and own farm plots. The average size of farm land owned is 0.9ha, with a maximum of 1.2ha and minimum of 0.8ha. The farm land is directly proportional to household size. Land measurements in the Wahlifanta area

are made by the use of a standard rope or *Gemed* which is equal to 40 arms-length (approximately 20 meters). A small household is allotted  $2 \times 10$  *Gemed* and a big household receives  $3 \times 10$  *Gemed* of land. Members of the camel herders society do not pay land tax but pay livestock tax, and since they practice camel husbandry they mainly pay camel tax. This is also the case with those practicing cattle husbandry. They pay mainly cattle tax. In this regard, it may be of use to indicate the annual tax rate per head for different domestic animals in the Afar region. Annual tax for a head of camel is Birr 0.50, for an ox/cow Birr 0.25 and for a goat/sheep, Birr 0.10 (Assayita Branch Office of the Ministry of Finance, 1989). The annual average tax paid by the studied households is Birr 21, with the lowest being Birr 8, and the highest being Birr 50 (Eth. Birr 2.07 = USD 1, according to the official exchange rate).

The camel pastoralists use the farm plots to grow maize, their main staple food. Maize is grown in the rainy season, between November and January. The most commonly used farm implement in maize cultivation among the Afar camel pastoralist is the hoe or *Torya*. Fifty percent of the households indicated that they use both *Torya* and oxen on their farm plots. They often borrow oxen from relatives or neighbours. Only one of the studied households owns a pair of oxen which is used for farming, and another household owns the plough and borrows oxen from people around the village or a distance place. It is proper, here, to point out that the Yemen Arab community which migrated to Ethiopia many years ago (elders say three centuries) and now live in the Afambo area, in the centre of the Afar region, have been using the ox and the plough for farming. Though one may question why the ox-plough culture, with the abundant supply of water from the Awash River, was not favourably accepted by the Afar Community when it existed next to them, one cannot deny that the knowledge of it existed in the region for more than a century. Camel traction has just been introduced and

if accepted by the Afars and supported by the government, it shall have some impact on small irrigated agriculture. Yet, all of the interviewed households reveal that the camel could do well in farming because of its enormous power.<sup>4</sup> Cooperative work or the use of group labour, *Lolla* as it is locally called, is also used in farming activities. The person who is benefiting from the *Lolla* is obliged to provide food and drink to the participants.

Maize production is practiced once a year during the rainy season or twice if an opportunity of irrigation from the Awash River exists. Now that the Awash is heavily used by the state farms there is insufficient water for the pastoralists to irrigate their land when they need it most. This is due to the fact that both the pastoralists and the state farm need the water for irrigation at the same time. Despite the limitations, we estimated that average production of maize in 1987/88 for all the studied households was 7.7 quintals (qtls)/ha. When compared with the national estimate of 8.9 qtls/ha for the *Belg* season of 1985/86,<sup>5</sup> one would say that it is not a dismal performance considering the fact that farming is a secondary activity among Afar camel pastoralist. The Afars claim that they obtain better results because their maize variety could carry as many as 6-8 heads, unlike the highland variety which could only carry 2 heads. Nevertheless, considering the maize variety they claim to have and the fertility of the soil, the potential for increased maize production does exist provided that there is more water from the Awash River and a little bit of extra effort to harness the camel for traction. The Afars have recognized the need for crop production and what exists now is for government and non-governmental organisations to support and assist this local need and demand.

The main sources of food for the camel pastoralist are maize and milk. Maize is their staple food. Their most preferred diet is maize bread<sup>6</sup> served with camel milk, which I had a chance to taste. Maize is a scarce commodity among the camel pastoralist. The interviewed households fulfill their



maize requirements either by producing it in their plots of land or by buying it from the market. When produced it is not enough, and when bought from the market it is expensive. From the interviews and discussions conducted with the camel pastoral households, we were able to estimate that, under conditions of normality, 17% of the households could produce 25% of their annual maize requirement, 17% of the households produced 33%, 33% of the households produced 75% and 33% of the households produced 100% of their annual maize requirement. From these we get a general picture that 67% of the interviewed households experience food shortages.

When a pastoral household is short of maize supply, it either buys from the market if cash is available, or borrows from neighbours, friends or relatives. A study among the Afar cattle pastoralists had recorded that an average household purchased 5.3qtls of grain per year (Tilahun, 1983:1). When all these alternatives fail, they resort to selling camels or face starvation. During crises, the households serve boiled maize with camel, goat, or cow milk, a method used to economize the maize. During severe crises, they try to live on milk alone, especially camel milk. The milk of one camel, they say, is enough to feed four persons, whereas, the milk of one cow is enough to feed only one person. A study by ILCA has indicated that, "...as little as 10% of an Afar family's energy requirements may be provided by milk, and that grain purchases through the selling of small stock are crucial to the Afar existence" (Tilahun, 1983:1). Nevertheless, it is the camel that they resort to when their survival is at stake.

Following the drought and famine of 1984/85, the Relief and Rehabilitation Commission (RRC) and non-governmental organizations (NGOs) have distributed relief food aid, mainly wheat to the camel pastoralists. Since the pastoralists prefer maize to wheat, they sell wheat at lower prices and buy maize at higher prices. In the camel pastoral areas of the Afar, the market price of maize has always been higher than

the market price of wheat. Even during famine, it cost them their labour to go to the market to sell the relief wheat in order to get maize. For instance, when we made the field visit in 1988/89, the market price for maize was Birr 45 per qtl, while that of wheat was Birr 44 per qtl. The information we received from the grain merchants of Assayita market shows that the price of maize has been drastically fluctuating. During the drought and famine of 1984/85, it was Birr 150 per qtl, 1985/86 Birr 90, 1986/87 Birr 35, 1987/88 Birr 60, and in 1988/89 Birr 45.

### Camel Meat

Camel meat is the other source of food in the camel pastoral areas. But it is not part of the daily food consumption pattern in the studied Afar households. In fact, there is a higher consumption of camel meat among the Somalis than the Afars of Ethiopia. There are camel meat shops in almost all the towns where the Somalis live: Melka Jebdu, Gursum, Jijiga and Degehabour. One is certain to find more camel meat shops as one goes deep into the Ogaden, as opposed to the Afar region where there is not one camel meat shop operating everyday in a big town like Assayita. For the Afars, camel meat is a luxury which can only be served on particular occasions. Of course, from time to time people organize themselves to buy a camel and distribute the meat proportionate to the share of purchase. Yet, one does not see market price differentials between Ogaden and Afar camels. A big male camel costs between Birr 900-1,000 in most of the Somali camel markets, including the Dire Dawa market, in the Assayita market of the Afar, and in the other big camel market of Bati (Wello). The same price is paid for male and female camels of the same size as shown in Table 1 on camel prices in the Afar Region.

The most interesting phenomenon one observes in the Dire Dawa area is the number of camels slaughtered in the abattoir of the city of Dire Dawa, mainly for consumption by the Somali population. The city abattoir slaughters camels for the only butcher house

which sells camel meat. Table 2 presents the number of camels and cattle killed in the city abattoir of Dire Dawa. The average percentage of camels slaughtered in the five years stands at 3%. This shows that there is a stable demand for camel meat by certain sections of the urban population, mostly the Somalis.

Table 1. Market prices of livestock in the Assayita market (Afar) 1989 (in Birr)

Size	Camel	Goats	Sheep
Small	300	12	40
Medium	600	30	75
Big	900	60	90

Source: Field survey by the author, 1989.

Table 2. Number of cattle and camels slaughtered in the abattoir of Dire Dawa City August 1984–August 1989

Year	Cattle	Camels	% of Camels Slaughtered
1984/85	9,991	327	3.2
1985/86	11,409	346	3.0
1986/87	9,313	335	3.6
1987/88	9,529	295	3.0
1988/89	8,723	329	3.8
Total	48,965	1,632	3.3

Source: Extracted from the Records of the Veterinary Department, Ministry of Agriculture, Dire Dawa, Sept. 1989

Though this needs further study, it appears that the higher consumption of camel meat among the Somalis has something to do with availability of camels, i.e. the Somalis have more camels and their purchasing power is much greater than the Afars. In fact, when we look at the Issa Somalis, the social and cultural occasions in which a camel is killed are much more numerous than that of the Afars. The Issa Somalis kill camels: (a) When they have a special meeting where the *Ugaz*, the clan chief, is present (only one camel);

(b) During *Mawlid*—birthday of the Prophet Mohammed—where the camel meat is shared by all those present in the festival; (c) in honour of a very important man of the clan returning from Mecca; and (d) When very rich men of the clan throw wedding parties. The Afars kill a camel when it is old, or when its body is damaged and it is no longer useful for any productive activity, or when a very important person of a clan dies. Even during *Id Al Adaha* (Arafa) and *Id Al Fater* (Remedan), the Afars kill goats, whereas the Somalis kill camels. It is invariably the male camel that is killed for various occasions. The female camel is killed only if, a) it is infertile, b) it stops producing milk, and c) some parts of its body are permanently damaged and do not permit the continuity of its regular functions.

It is worthwhile adding that camel meat in an urban area like Dire Dawa is mostly consumed by the low-income groups of the Moslem community. In discussions with the camel meat shopkeepers I learned that consumers prefer camel meat as it contains a lot of fat. Camel meat buyers explained that, unlike beef consumers, they get a lot of fat from camel meat for a small amount of cash. Among the Arsi and Somali of Ethiopia, "Except for blood, liver and stomach, the rest of the camel meat is eaten. Those who eat blood, liver and stomach are referred (to) as *Midgan/Bon* or despised groups. Women do not eat a camel's heart and testicles and men do not eat the camel feet. The hump is given first to men and then to women" (Gebre Mariam, 1988:46). Other studies also show that "...mineral concentrations of edible camel tissues are comparable to those found in cattle and that the nutritive value of camel meat may be (is) as good as that of beef" (Abdel Rahim and Gameel, 1986). Moreover, "...the protein content is significantly greater ( $p < 0.05$ ) in the camel meat than in beef (and) intramuscular fat was significantly lower ( $p > 0.001$ ) in camels than in cattle" (Babiker and Tibin, 1986:75). In the Dire Dawa market camel meat is sold for the same price as beef (Birr eight).



## Trade Activities

All the households engaged in some form of trade activities, such as trading in the open market or in the contraband illegal trade. Trading is the most important means of generating cash income. Other means of supplementing household income include the sale of young camels and goats (not the female goats). Though, insignificant, some earn cash by selling cow milk and butter. Camel pastoralists use the money to purchase basic commodity items, such as salt, soap, matches, coffee, clothing, and cigarettes, as well as maize whenever there is a shortage in food production.<sup>7</sup> The rich also buy guns (the Afars in general have a special love for guns).

Trade activities are mainly carried out by the male camels. Male camels constitute only 6% of the total camel herd of the interviewed households, with an average ownership of 1.4 male camels per household. Movement from place to place, contact and interaction with other peoples and cultures, sale and purchase of commodities and the generation of extra cash income, are largely dependent on male camels. Whereas survival and continuity is assured by the female camel, movement, contact, and trade is carried out by the male camel. The male camel is considered by the Afar as part of the household. One male camel, at least, is always kept with the household. It is used in transport of people, the Dibora hut, goods and animals to and from markets, and also to carry fuelwood and water for the household. The female camel is not used to provide direct income or contribution to household requirements except in the periods of crises when the need for more support becomes necessary.

Male camels can be rented out to other pastoralist or to merchants for trade purposes within or outside national borders. It is important to note that male camels can be borrowed or rented from relatives and friends. In the Afar culture, the borrower is assured to get a camel and the owner can not refuse. This is a social arrangement that

is built into the society in the use of camel labour for those who do not own male camels.<sup>8</sup> In fact, this is one of the means by which members of the Wahlifanta Camel Herding Society without male camels operate their market activities and movements in the arid and semi-arid areas and generate cash to supplement shortages in the household needs.

Either lent or rented-out, male camels are used in long distance trading. They travel to Djibouti and within the national borders, as far north as the salt deposits of east Tigray, Eritrea, and the the Red Sea coast. To the west, the Afars take their camels to the famous market points of Bati and Werebabo, where they trade with the Wello Oromos.<sup>9</sup>

Camel rental rates to the three destinations of Djibouti, Bati, and Werebabo, with Wahlifanta or Assayita as the place of origin, are as follows: Djibouti and Bati are Birr 300 return, and Werebabo is Birr 400 return<sup>10</sup>. It has been very difficult to get a reasonable estimate of the amount of money earned from the rent of camels by the studied households. Some rent-out their camels every month, others every other month, and others on the demand for camels. But all agreed that their camels are most frequently destined to the Djibouti market which is the main gateway for the contraband goods of Ethiopia. It is the Afars and the Somali who transport the bulk of the smuggled goods to inland Ethiopia. Afar camels on average carry 3–3.5 quintals. It was reported by Gebre Mariam (1988) that a Horka camel of Arsi and Somali (southern Ethiopia) carries three quintals, with three breaks on the way, over a distance of 240kms. While Gedamu (1989) reported that a Somali camel can carry four quintals as compared to a pickup vehicle which carries five quintals. From this we observe that the male camels, the lorry of the arid lands, are certainly busy and may be overused. The camel has very low maintenance cost and is integrated into the cash economy as a means of subsistence and transport even in a situation where there is modern transport (Gedamu, 1989).

From our interviews with the household heads and discussions with the elders of the community and the Awssa Awraja PA officials, it is reasonable to conclude that the camel can be rented out on the average of once every two months. Those who have been to Djibouti said that it takes 17 days to do one return trip, i.e. 10 days of travelling and 7 days of shopping and rest. As a very conservative estimate, a camel can make approximately six return trips to Djibouti per year, being twice guided by the owner, and the other trips, guided by some other people in the community.

Income from rental of camels depends on the guide from the point of origin of goods to the point of destination. For instance, if the owner rents out his camel and guided it to Djibouti he would earn only 50% of the rent. This means that a household could earn about Birr 1,200 per annum<sup>11</sup> by renting out an extra male camel. Such an activity strengthens the economic power of the rich who own the extra male camels. This cannot be the case for someone who owns only one camel and usually stays with the household. Of course, he can guide his camel to Djibouti but it is unlikely that he will earn more than half of the above sum of money per year.

If we were to draw some parallel in cash income from that of the Borana pastoralist, a study conducted by ILCA on household economics shows that, "...the annual cash income of the households ranges from Birr 108 in Dokole to Birr 2,030 in Did Hara (an average of Birr 1,019). The stated cash income except in Dokole, seems to be significant to meet the subsistence requirements of food and clothing." (Tilahun, 1984:3). The average for Borana pastoralist is more or less the same for the studied Afar households.<sup>12</sup>

## Conclusion

The camel is both an individual and a collective resource in the camel pastoral societies of the Afar. It is very difficult to imagine life in the arid and semi-arid areas without camels. The camel represents everything concerning the survival of the pastoralist. It

is a symbol of life, pride, wealth, hope and continuity. One can easily see how life hinges around the camel. In fact, the totality of the camel pastoral economy is almost entirely contained in the camel. This is true for the households we interviewed and for the camel herding society in general.

It is important at this juncture to mention the respect and honour the Afar pastoralist gives to a camel. In a group discussion with household heads of Afar camel pastoralists, they were unanimous to endorse the idea that they prefer to lose a son than to lose a camel. According to them, if a son dies you bury him and you may or may not get another son, but life continues, i.e. you move from one place to another, fetch water, collect fuel wood, visit market places, etc. with the help of the camel. But if a camel dies everything is left where it is, and there is no movement which means there is no life and the household collapses.

The camel plays a very crucial role in the sustenance of the members of the Wahlifanta Camel Herders Society. Though all the studied households engage in food production, 67% produce below their annual food requirements, during periods of normalcy. The pastoralist uses camels to earn cash. All loopholes and shortages in the household economy of the Afar camel pastoralist are covered by the camel. The whole support systems of the pastoral households in one way or another depend on camels.

Pastoral life, physical and psychological, is complete when the camels flourish. Whatever the level of technology we try to inject into the pastoral environment, either in the short-term or in the long-term, the camel will remain the dominant force in the camel pastoral economy for sometime to come. In addition, there is no animal as enduring, obedient and useful as the camel in the arid and semi-arid environment. From whatever angle we look at the camel pastoral production systems, it is a noble idea for the camel to flourish. What can we do for the camel to flourish? This is a very serious question where a cooperative effort is necessary if a break-through in dry lands de-

velopment is to be realized. Development experts and researchers should begin to understand the problems of the arid environment and suggest possible solutions to better manage and develop it. National governments in Africa, especially those in east Africa, must consider very carefully their macro-economic planning as should non-governmental organizations in their small grassroots focused projects in order to make development in the drylands as one of their priority areas in the next decade and beyond.

## Notes

- 1 This article is a revised version of a paper which was first presented in 1989 at the Nazareth, Ethiopia, Workshop on Camel Pastoralism as a Food System in Ethiopia.
- 2 This small study has faced some limitations due to the nature of camel pastoralism, i.e. camel herders move continuously following the rains. During the period of this study they were grazing their camels too far out in the bushes. Thus, the researcher was able to conduct interviews and discussions with 6% (10 households) of the members of Wahlifanta Camel Herders' Society and not with 10% as previously planned.  
Since I could not get those households that I picked up by systematic random sampling from the list given to me by the Awraja PA, I instead randomly picked household heads who were around Wahlifanta, and from those members of the society who had come from a distance to resolve some issues of community matters, and those who were going to the market and were dropping by the Chairman's house (the Office). It so happened, finally, that those included in the interview and discussion did come from different corners of the Wahlifanta Camel Herders' Society. My systematic random sampling could not have picked any better.
- 3 In a discussion with the Office of the Awssa Awraja Administration, we were told that the camel population of Wahlifanta was estimated to be 2,800.
- 4 Because of the enormous power of the camel, we should, maybe, start to talk of "camel power" instead of horsepower.
- 5 This is the latest available agricultural sample survey results in the country.
- 6 Maize bread can either be made: a) in pancake size over a piece of metal with the fire underneath

or b) it is baked in a traditional oven with a pit dug into the ground and a metal sheet is made to cover the inside walls of the pit. Alternatively, small stone boulders are put into the pit where in both cases the metal sheet and the stone boulders are heated before the dough is put on them. The pit is then closed until the bread is done.

- 7 "Unlike agriculturalists, pastoral households depend more on market transactions to satisfy their subsistence needs...in Kenya...during the wet season the Maasai obtain up to 50% of their calorie intake from purchased food. This figure can increase to 70% during the dry season." (Bekure, 1983:289).
- 8 I have come across members of the Wahlifanta Camel Herders' Society including the chairman who are without both female and male camels.
- 9 One also observes that the Afar men have started to marry the beautiful women of Wello.
- 10 Birr 2.07 = USD 1.00
- 11 Two return trips to Djibouti guided by the owner (Birr 300 x 2 = 600) and four return trips guided by the person renting the camel would pay Birr 150 to the owner (Birr 150 x 4 = 600). This would add up to Birr 1,200 per annum.
- 12 It is important to emphasize that the data on cash income for the Afar are estimates because one is not in a position to know the details. Maybe it is a topic worth looking into in the future. But the important thing to draw from this activity is that here again it is the camel that generates income and supports the household.

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