An encyclopedic lexicon of the Saho traditional knowledge on beekeeping¹

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SOMMARIO

Il presente articolo raccoglie, in ordine alfabetico, le principali voci collegate al lessico dell'apicoltura, così come sono state raccolte durante vari anni di lavoro sul campo in Eritrea fatto dagli Autori. Nello specifico, per quanto riguarda più propriamente l'apicoltura, investigazioni sono state fatte da tutto il team del progetto *Atlante della Cultura Materiale Tradizionale dei Saho* durante i mesi di gennaio e febbraio 2008 e 2009 in 6 diversi villaggi, con 6 informanti appartenenti a 5 differenti clan, parlanti tre diverse varietà dialettali. Il risultato è un sunto della conoscenza tradizionale dei saho riguardo la vita delle api e delle tecniche, degli strumenti e dei materiali connessi con l'attività dell'apicoltura tradizionale.

General information about the data

Beekeeping is one of the traditional productive activities for which the Saho population is well-known. Even though it is not practiced on a large scale, there still are several people who engage in honey production either for their personal consumption or for commercial purposes.

After independence Eritrea promoted a modernization policy of honey production techniques, with specific local training courses, but Saho beekeeping is still done mainly the traditional way. What an individual beekeper knows about it generally derives from his personal experience, or from what his father taught him. Accordingly, this lexicon documents the traditional terminology and knowledge as they have been told us by our informants. No attempt is made to provide a scientific description of their beekeeping activities, even if what they said was plainly wrong, e.g., the belief of some of them that queen bees are males.

The data in this lexicon are provisional, in the sense that they result from the field work that has been done by till now, covering southern varieties of Northern Saho and the two main varieties of Central Saho. The next field trips in Eritrea by the team of the *Atlas of the Traditional Material Culture of the Saho* project will attempt to elicit data in villages where the other varieties of Saho are spoken.

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Field data have been collected in Eritrea from 1999 to 2009 by Moreno and Roberta Vergari (Ethnorêma). Interviews with the informants mentioned below have been carried out in January and February 2008 and 2009 by Ahmedsaad Mohammed Omer [Axmadsacad Maxammad Cumar] (Eritrean Field Coordinator), Giorgio Banti (University of Naples "L'Orientale"), Giovanni Dore (University of Venice "Ca' Foscari), Moreno Vergari and Roberta Vergari.

The Ministry of Education of the State of Eritrea (MoE) generously provided the project with all the necessary authorizations and logistic support for visiting the towns and villages in the Southern (Debub) Region. The Saho Panel of the Department of General Education of the MoE supported us with their expertise.

Documentary locations (field sites) and main informants

<u>Ciyaago and Safiira</u>. Ciyaago is a small village very close to Safiira. Safiira is the main village on the 32 km² wide Qoxayto plateau, famous for its archaelogical sites, its rock inscriptions and paintings.

The interviews about beekeeping were carried out on the 28th and 29th January 2008, in the house and the apiary of the informant in Ciyaago. The beekeeping wordlist was recorded in Safiira the 1st February 2009.

Region: South [Zooba Debuub]
Sub-Zone (Province): Caddi Qayyix

Coordinates: 14°52' N 39°25' E (Safiira), 14°52' N 39°24'50" E (Ciyaago)

Altitude (approximative): 2630 m

Population: 272 (76 households) (Safiira)².

Main informant: Maxammadnur "Xajji" Axmad "Baska" (MN), a 62 year old beekeeper, of the Faqhat Xarak clan of the Minifire group of the Saho.

<u>Kaaribossa</u>. A village located 7 km. from Safiira (by car). The interviews on beekeeping were carried out on the 6th and 7th February 2008, in the house and the apiary of the informant. The beekeeping wordlist was recorded on the 3rd February 2009.

Region: South [Zooba Debuub] Sub-Zone (Province): Caddi Qayyix Coordinates: 14°55' N 39°25' E Altitude (approximative): 2550 m Population: 374 (80 households)³

Main informant: Maxammadcali Axmad Maxammad (MC), a 66 year old farmer and beekeeper, of the Xasabat Care group of the Saho.

<u>Dhamxina.</u> A village located 27 km. from Safiira (by car). The interviews on beekeeping were carried out the 26th January 2009, in the mosque of Dhamxina.

Region: South [Zooba Debuub] Sub-Zone (Province): Caddi Qayyix

² Source: Population Census 20.04.2006, Adi Keih Administration, Southern Region.

³ Source: Population Census 20.04.2006, Adi Keih Administration, Southern Region.

Coordinates: 15°01' N 39°26' E Altitude (approximative): 2550 m

Population: not available

Main informants: Maxmuud Ibraahim Aboobakar (MI) and Maxmuud Maxammad Ibraahim (MM), respectively 59 and 68 years old, herders, farmers and beekeepers, of the Casaleesan clan of the Casawurta group of the Saho.

<u>Thiisha.</u> A village located a couple of km. northeast of Sancafe. The interviews on beekeeping were carried out the 5th February 2008, in the house and the apiary of the informant.

Region: South [Zooba Debuub] Sub-Zone (Province): Sancafe Coordinates: 14°43' N 39°26' E Altitude (approximative): 2450 m

Population: not available

Main informant: Cumardiin Ibraahim Ismaacil (CI), a ca. 50 year old beekeeper of the Gacaso clan of the Minifire group of the Saho.

<u>Mako.</u> A village on the Amba Soyra plateau. The interviews on beekeeping were carried out on the 29th January 2009, in front of the house of the informant.

Region: South [Debuub] Sub-Zone (Province): Sancafe Coordinates: 14°42' N 39°31' E Altitude (approximative): 2720 m Population: 620 (127 households)⁴

Main informant: Xammad Adam Axmad (XA), an 81 year old farmer, herder and beekeeper of the Dabrimeela clan of the Saho.

Video and audio files

Short videos and audio files regarding beekeeping activities among the Saho are available in our website under the following links (see also the attached folder "Lexicon files"):

Ciyaago_beekeeping.wmv Kaaribossa_beekeeping.wmv Thiisha_beekeeping.wmv chaachun MC_KAA.mp3 chaachun MN_CIY.mp3 saatsun XA_MA.mp3 tsaatsun CI_THI.mp3

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⁴ Source: Administration office in Mako, 29.01.09.

Abbrevations and orthographical notes

AB	^c Afar schoolbooks (see Bibliography)	rel to	related to
Af.	^c Afar	Rein.	Reinisch 1890 (see the Bibliography)
Ar.	Arabic	SB	Saho schoolbooks (see the Bibliography)
cf	compare with	sgtv	singulative
CS	Northern and Southern	SS	Southern Saho (Xazo ~ Xado)
	Central Saho (Minifire)	syn	synonymous
CS1	Northern Central Saho	tr	transitive
	(Northern Minifire)	Ty.	Tigrinya
CS2	Southern Central Saho	UTSE	Useful Trees and Shrubs of Eritrea -
	(Southern Minifire - Dabrimeela)		Bein et al. 1996 (see the Bibliography)
Diario	Mochi's diary, (see Ciruzzi et al.	vI	first class verbs (verbs with prefixes
	in the Bibliography)		and suffixes)
e.g.	for example	vII	second class verbs (verbs with
f	feminine		suffixes)
G.	Ge ^c ez	vIII	third class verbs (stative verbs)
intr	intransitive	vIV	fourth class verbs (compound verbs)
It.	Italian	VV	Vergari&Vergari 2003 (see the
1it	literally		Bibliography)
m	masculine	~	variant
n	noun	\rightarrow	see
NS	Northern Saho (Casawurta	{ }	likely etymologically related words in
	Thaaruuca – Xasabat Care)		other languages ⁵
pl	plural		

See also the abbreviations of the informants' names in the sections about "Main informants" on the previous pages.

All the Saho and 'Afar names are written with the current orthography used in Eritrea (except the names Saho [Saaho] and 'Afar [Qafar]. Notice in particular that $c = [\S]$, $ch = [t\S]$, $\check{c} = [t\S]$, dh = [d] and its allophone rh = [t], gn = [n], j = [d3], kh = [x], q = [k'], qh = [x'], $sh = [\S]$, th = [t'], th = [t'],

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⁵ Unless specified differently, Parker and Hayward (1985) and Parker (2006) have been used for 'Afar; Wehr (1994) for Arabic; Leslau (1987) for Ge^cez; Kane (2000) for Tigrinya. Notice that etymologies are not indicated systematically here.

Sinah tanem tane Baska bathceh tane Xargi xarhak yane Cibna golod tane

There is something for you There is **honey** for making **hydromel** There is a gelded animal tied to a tree There is the bride behind the curtain

(From a traditional xorra song for weddings)

abba nm father, chief, leader $\{Af. \text{ abba}; Ar. \vdash [ab]; Ty. \land n$ ['abba] (only for ecclesiastics) $\} pl$ abbub m.

— zizzaalet abba NS, $CS1 \sim$ didaalet abba $CS2 \sim$ dilaalet abba CS2, SS queen bee; cf ina, nugus, reezanto, shuum.

(For information see under **shuum**).

alaaki nf species of shrub(s) (Psiadia punctulata) sgtv alaakitto m (seed/fruit), alaakittö f - {Ty. አላኺት ['alakit]}.

A plant with yellow flowers, from which bees [zizzaale \rightarrow] collect [eskette] nectar [dhacammucus \rightarrow]. Yellow honey [caaguyin baska \rightarrow baska] is produced from it.



(Psiadia punctulata. UTSE, 324)

amo nf 1. head 2. chief 3. top $\{Af. \text{ amo}\}\ pl \text{ amom } \sim \text{amum } m$.

— zizzaalet amo NS, $CS1 \sim$ didaalet amo $CS2 \sim$ dilaalet amo CS2, SS a bee's head; also CS2 dilaalet xangal (CI).

On its head a bee [zizzaale \rightarrow] has its eyes [intit, pl of inti], its mouth [af] and its antennas [gawus \rightarrow gashsha].

amoodasse nm bee pupa; pl amoodassit, m; cf dhanqacalla, xanane.

A phase in the development of bees [**zizzaale** \rightarrow], after the stage of larva [**xanane** \rightarrow]. When the bee reaches its 25th day of life (MN, MC), it is ready to get out of its cell [**curum** \rightarrow]. (According to CI the time for developing from larva to adult bee changes according to the climate.) An **amoodasse** has a black head and a white or yellow body (MC), and it is already a fully formed bee with its wings [**gale** \rightarrow] and its antennas [**gashsha** \rightarrow], but it cannots fly yet.

It is called **puppa** in SB 3.

are vII to bite $\{Af. \text{ are}\}\ rel\ to\ \text{arnan}\ \text{biting},\ \text{arriime}\ vI$ to be bitten, arriimeena nm someone who used to gnaw, to bite, arrishime 1. to cause to be bitten 2. to quarrel, arrite vI to be bitten, arro nf bite, arum nm biting.

Bee [**zizzaale** \rightarrow] bites, made with the sting [**iko** \rightarrow] they have at the bottom [**ceerho**] of their abdomen, are regarded as poisonous. After biting, the bee dies because its sting remains in the victim's skins together with a part of its abdomen [**gabbe** \rightarrow]. Drones [**canjur** \rightarrow] have no stings.

askhamar nm NS, CS1 ~ askamar CS2, SS fermentation {Ar. نصر [hamr]} rel to ikhmire NS, CS1 ~ ikmire CS2, SS to be fermented, iskhimire NS, CS1 ~ iskimire CS2, SS to cause fermentation (of a substance) (tr.), khamre NS, CS1 ~ kamre CS2, SS alcoholic drink.

Moslem Sahos prepare a beverage from milk [xan], water [lay] and, at times, buttermilk $[xangazza \rightarrow]$. Yet they don't let it ferment, and drink it before it develops an alcohol content. Cfbathce, birze, malab, mees, Xaliima macar.

balasa nm prickly pears(s), Indian fig(s) (Opuntia ficus-indica) { Ty. በለስ [bäläs]} sgtv balasso m (fruit), balassö f.

A plant from which bees [zizzaale \rightarrow] collect [eskette] nectar [dhacammucus \rightarrow] and produce red honey [casa baska \rightarrow baska].



(Opuntia ficus-indica. UTSE, 289)

baska nf honey; sgtv baskatto f NS ~ baskayto CS, SS; pl baskak m; rel to basaaka nf sweetness, basak-erhxe ~ basak-e vIV to be sweet, basak-ishe to sweeten; cfbukke, inti, lanle.

— caaguyin baska yellow honey (from caaguyna *vIII* 'to be yellow'). Honey collected in May [gimbot].



A common meal of white honey [cado baska], barley [cadeelaw] bread and clarified butter [subax]. Kaaribossa.

— **cado baska** white honey (from **cado** *vIII* 'to be white').

Honey produced in September [maskarram] and October [thiqqimti]. A couple of days after being harvested it crystallizes. It is regarded as the best quality of honey.

— casa baska red honey (from casa *vIII* 'to be red').

Honey produced particularly from prickly pears [balasa →], collected in May [gimbot] and June [sayne]. Red honey remains liquid and doesn't crystallize. It is believed to have particular curative virtues, and is used

by non-Muslim Eritreans for producing **mees** $[\rightarrow]$. Sometimes they add it to **malab** $[\rightarrow]$.

— dat baska black honey (from data *vIII* 'to be black').

Honey obtained from old honeycombs [ganra \rightarrow].

- **dhamxin baska** honey that has been collected from some time, coagulated honey (from **dhamxina** *vIII* 'to be cold').
- intit baska pure honey, liquid honey (from inti nf eye).

Also called simply **inti** $[\rightarrow]$; *cf* **lanle**.

- lacin baska fresh honey, honey that has just been collected (from lacina vIII to be hot').
- musannac kin baska artificial honey (from musannac nm 'artificial thing').

Honey mixed with sugar [shokkar], bananas [banaana or muuz] or other things for commercial purposes. Saho's do not produce it.

— tsideenat baska NS, $CS1 \sim$ chideenat baska CS2 honey producted by mining bees [tsideena \rightarrow].

This kind of honey is rather rare and difficult to harvest, because mining bees produce it underground. When it is collected [eskette], if fetches a very high price: the amount of a coffee [buun] cup can sell for 700 nakfas, ca. 35 euros at the exchange rate of February 2009. The area where it is produced lies to the west of Caddi Qayyix (Adi Keih), where mining bees are more frequent.

(Rein.) baská plur. básōk subst. fem. honig 1, 21; 2, 24; 8, 1. dībi baská wüstenhonig, Marc. 1, 6. çidánā baská erdbinenhonig, kākōyti baská »rabenhonig« name einer pflanzensorte, momordica morkorra A. Rich., s. Bil. s. v. má'rō.

Bees don't produce any honey from October to March. The first harvest is made in April [maaziya] and May [gimbot]. After August [naxaasi], during the highland rainy season [karma], all the honey has to be removed from the smaller beehives [qafo \rightarrow], in order to make room for the new honey that is produced abundantly in that period of time.

During the dry season [xagaa] the little amount of honey that is produced is usually left in the honeycombs [samfe, xabaza \rightarrow] for the bees. During particularly dry seasons the beekeeper [zizzaalet zan abatiya \rightarrow zizzaale] has to supplement the bees' diet with a mixture of sugar and water, usually 1 kg. of sugar for 1 lt. of water.

Honey is extracted from honeycombs by squeezing them after they are taken out of the hives $[\mathbf{qafo} \rightarrow]$ (see under \mathbf{xabaza} for more details). Since what is thus obtained is rather impure, it is left in a container for some time. In this manner the wax $[\mathbf{shimca} \rightarrow]$ gathers on the surface while liquid and purer honey $[\mathbf{intit} \ \mathbf{baska} \rightarrow \mathbf{baska}]$ remains below it. However, this honey never is wholly pure. Sometimes a piece is cut off a honeycomb, and it is eaten in a mouthful $[\mathbf{dhacto} \ \mathrm{NS}, \mathrm{CS1} \sim \mathbf{daaroyta} \ \mathrm{CS2}]$ of wax and honey.

Honey has different colours and qualities according to the plants from which it is produced. The main ones are: alaaki $[\rightarrow]$, cawun $[\rightarrow]$, gargeera $[\rightarrow]$, gaaxunrhe $[\rightarrow]$, gelgel mesqel $[\rightarrow]$, kusura $[\rightarrow]$, muxumwaaxe $[\rightarrow]$, qalaaminthos $[\rightarrow]$, saraw $[\rightarrow]$, tabab $[\rightarrow]$. MC classifies the different qualities of honey according not only to their taste but also to the price they fetch with merchants: the best one is white honey (120 nakfa/kg = ca. 6 euro), then the red one (100 nakfa/kg = ca. 5 euro), the yellow one (80/90 nakfa/kg = 4/4,50 euro), the black one (60 nakfa/kg = ca. 3 euro), and finally the bukke $[\rightarrow]$ (40/50 nakfa/kg = 2/2,50 euro). The last one is generally not eaten by the Saho's, who also don't eat honey from plants such as siraaceera $[\rightarrow]$, mazba $[\rightarrow]$, olaal $[\rightarrow]$, sucuda $[\rightarrow]$ or timbaako $[\rightarrow]$. The best areas in the Saho lands for honey production (according to MN) are Amba Soyra, Sarwa, Dhaalo, Mudxulo, Dhamxina and Xaalay.

prepared with honey and water, unfermented hydromel {Ar. بتغ [bit^c]; Ty. በትዔ [bät^ce] to stir up, to muddy (water), to dissolve honey in water} rel to abthac nm NS, CS1 ~ abtac CS2, SS kneading, mixing the honey, ibthice vI NS, CS1 ~ ibtice CS2, SS to knead, to mix the honey, imbithice vI NS, CS1 ~ imbitice CS2, SS to be kneaded, to be mixed (of honey), iybithice vI NS, CS1 ~ iybitice CS2, SS to

cause to knead, to mix the honey, **ombothoothoce** vI NS, CS1 ~ **ombotootoce** CS2, SS to be dirty with mud, to be soiled with mud; cf birze, malab, mees, Xalima macar.

Bathce is usually prepared and drunk after a short while, before its fermentation [askhamar \rightarrow]. It is used on special occasions such as weddings [marca] or religious ceremonies [tahliil]. The honey-water ratio is variable and depends on several factors as well as on the experience of the person (always a man) who is preparing the hydromel. It is served only to men by pouring it from a skin bag [idrotta \rightarrow] or another container.

Sometimes the word **bathce** is used as a synonim of **birze** $[\rightarrow]$ or **Xaliima macar** $[\rightarrow]$.

(Rein.) Bata' I v. 1 in i ('Af. bét'i, Ar. ¿¬, Ti. ¬¬, mit wasser verdünnter honig als getränke) honig ins wasser geben um ein süsses getränke zu bereiten, subj. abtá'ō, impf. á-, pf. i-bti'a, imprt. ibti' plur. ibti'ā und ibtá'ā! 38, 23. neg. mabta'in! inf. ábti', nom. act. abti'nán, subst. m. bít'e honigwasser.

y-bata' caus. ein solches getränke bereiten lassen, subj. aybatá'ō, pf. áybiti'a imprt. ey-, ī-biti'l u. s. w. m-bata' pass., subj. ambatá'ō, pf. ímbiti'a.

birze nm NS, CS1 ~ birde CS2, SS unfermented or barely fermented beverage prepared with honey, water and (sometimes) buttermilk; hydromel; mead { Ty. ACH. [bərzi] or ACH. [bärzi]} pl birzit m NS, CS1 ~ birdit CS2, SS; rel to ibrize vI NS, CS1 ~ ibride CS2, SS to make something sour, to prepare birze, imbirrize vI NS, CS1 ~ imbirride CS2, SS to be made sour, iybirize vI NS, CS1 ~ iybiride CS2, SS to cause to become sour; cf bathce, malab, mees, Xaliima macar.

One or two days after it has been prepared **bathce** $[\rightarrow]$ begins to ferment [**askhamar** \rightarrow]. Its fermentation is sped up by adding buttermilk [**xangazza** \rightarrow]. Moslem Saho's drink it before it developes an alcohol content.

Sometims birze is used as a synonym of bathce $[\rightarrow]$ or Xaliima macar $[\rightarrow]$.

bukke *nm* bitter red/brown honey mixed with pollen, beebread; *pl* **bukkit** *nm*; *sgtv* **bukketta** *fNS* ~ **bukkeyta** *CS*, *SS*.

When bees [zizzaale \rightarrow] deposit pollen [xawo \rightarrow] in the cells [curum \rightarrow], it forms with the honey [baska \rightarrow] a semifluid mixture [cagun]. After some time this mixture becomes bukke. Because of its bad taste, bukke is generally left in the honeycomb [samfe, xabaza \rightarrow] for the bees to feed on, especially during the dry season [xagaa]. When a beekeeper extracts honey from a honeycomb that contains also some bukke, he usually puts it apart. It is either discarded, kept for the bees for dry periods, or sold on the marked if there is a considerable amount of it. Non-Moslems employ also this kind of honey for the fermentation [askhamar \rightarrow] of mees [\rightarrow] (XA). Saho's don't usually eat it.

Some beekeepers maintain that **bukke** is produced from the pollen of plants (e.g. **mulxuuxuna** or **xaaxot**) that cannot yield honey of good quality.

(Rein.) Bûke plur. buk-it, indiv. buke-ytā subst. m. (cf. bakŭ) leere wachsscheibe in deren löchern weder honig noch brut sich befindet,

bulac nm small insect(s) that produces high quality honey; sgtv **bulacto** m; cf **tsideena**, uxun, ziiza.

It is found in tree holes or among rocks (MC).

cafur nm kind of lizard $\{Af. \text{ cafur}\}\ pl$ cafuura f.

One of the enemies [caduu] of bees [zizzaale \rightarrow] that can attack their hives [qafo \rightarrow]. MN believes that this lizard gets its poison [xinze \rightarrow] from the bees, and that snakes [caroora] gets their poison from it.

cako nf spider pl cakok m.

One of the enemies [caduu] of bees [zizzaale \rightarrow] that can attack their hives [qafo \rightarrow]. MN states that spiders construct their webs [thaqhar] inside hives and kill many bees.

canjur nm NS, $CS \sim \text{xunjur } NS \sim \text{candur } SS$, male bee(s), drone(s) { Ty. 67116- [conzora]} sgtv canjurta m NS, $CS \sim \text{candurta } SS$.

Male bee [zizzaale \rightarrow], bigger than the worker bees [shaqqaala \rightarrow]. It doesn't bite [are \rightarrow]. Bees kill the drones between the end of September [maskarram] and the beginning of October [thiqqimti] at the maatot [\rightarrow] when the male bees return to the hives [qafo \rightarrow] (normally they go outside during the first afternoon [zuhre]). Drones are commonly believed by the Saho's to fetch water (e.g. CI), but expert beekeepers know that this is not true and that their only function is reproduction.

(Rein.) Anzar-ā plur. -it, indiv. anzārā-ytō plur. -ytit subst. m. (Ty.

cangel nm syn of mascashala $[\rightarrow]$ (CI).

caretto nf NS ~ carayto CS1, CS2, SS seasonal natural beehive; pl carettot m NS ~ caraytot CS1, CS2, SS; rel to care nm house or cara nf place; cf gaxseena, murhcumse, mascashalä, qafo.

This kind of natural beehives are found in hollow trees (sometimes also in holes made by a woodpecker [har-harat]) or in rock cavities, where bees [zizzaale \rightarrow] generally remain for one season. They are easy to reach, and bees frequently come back the following years.

Such hives can be spotted by looking for the bees' faeces [thacal \rightarrow], or with the help of an indicator bird [irir \rightarrow].

In order to catch the swarm [cishle \rightarrow] of an caretto it is dislodged with some smoke [tika]. It then flees on a tree branch and the honey can be harvested from the hive. The swarm is shaken off from the branch and falls on a cloth or a bed sheet [ansoola o natsala]. Water is sprinkled on it for preventing the bees from flying away, and the queen [abba, ina, nugus, reezanto, shuum \rightarrow] is catched and closed in a special small cage [chaachun \rightarrow]. This chaachun is then put within a bundle of branches [mascashala \rightarrow] and the bees gather around it. At this point it is wrapped in a cloth with a piece of it sticking out for transporting it.

The beekeeper leaves a possession mark [tuumar \rightarrow] outside the beehive until he is able to carry the swarm away.

The corresponding term for CI is **gaxseena** $[\rightarrow]$.

cawun *nm* species of plant(s) (Sarcostemma viminale or Sarcostemma andongense) sgtv cawunto m (seed/flower), cawuntö f.

A plant from which bees collect [eskette] nectar [dhacammucus →].

chaachun nm NS, CS1 ~ tsaatsun CS2 ~ saatsun CS2 queen bee cage(s) { Ty. ሳጹ-ን [saṣun]} sgtv chaachunto m



Queen cage made of split bamboo (Fougères, 1902) NS, CS1 ~ tsaatsunto CS2 ~ saatsunto CS2; pl chaachuuna f NS, CS1 ~ tsaatsuuna CS2 ~ saatsuuna CS2.

A small cage use for transporting the queen bee [abba, ina, nugus, reezanto, shuum \rightarrow] from one hive [qafo \rightarrow] to another.

Chaachun



Type A



Type B



Type C



Type D



Type E

There are several types of **chaachun**, some of them traditional and some modern. The traditional ones are of two types: one of them consists of a folded piece of leather (anada or rado) closed by removable small pieces of wood or thorns (usually from Acacia Abyssinica siica). These form a small cage of ca. 8 cm. (type A, see picture). Another traditional type consists of a segment of maize cane (ca. 12-13 cm. in length), with a number of holes for enabling the queen to breathe. The open end of the cane segment is closed by wooden plug (type B, see picture). One of the modern types consists in a small rectangular wooden box (ca. 13 cm. circa in length) closed by a wire netting. On one side it has a hole for introducing the queen bee, that is plugged with a wooden cap (type C, see picture). This type has been devised in order to improve the ventilation of the cage, and makes it possible to transport queens even in the hot lowlands or over long distances.

Other modern types are prepared according to the beekeeper's whim (*types D and E, see pictures*).

The queen bee cannot be kept in a **chaachun** for more than 8 days, before putting it together with its (old or new) swarm.

cishle nm NS, CS1, CS2 ~ cisle CS2 swarm, bee's colony {Ty. bìn ['əslä] or bìn. ['əsli]} pl cishlit NS, CS1, CS2 ~ cislit CS2, m rel to icshile vI NS, CS1, CS2 ~ icsile CS2 to form a swarm (of insects), to swarm (intr), iscishile vI NS, CS1, CS2 ~ iscisile CS2 to collect a swarm in a specific place, issicishshile vI NS, CS1, CS2 ~ issicissile CS2 to cause to collect a swarm in a specific place, mascashala [→], mascashalā [→]; cf dabaa, haadayto, xagaz, xawaz, zizzaaletta.

A swarm consists of the queen bee [abba, ina, nugus, reezanto, shuum \rightarrow], the drones [canjur \rightarrow] and the other bees [zizzaale \rightarrow].

There are both small [cindha cishle] and big swarms [naba cishle or dabaa \rightarrow or xagaz \rightarrow].

XA calls **bokhre** (a Tigrinya word: Pho [bokri] 'eldest') the first swarm that is born in a hive, **daagim** (a Tigrinya word: \$2.9° [dägim] 'wence, therefore, again') the second one, and **millax** the following ones. Since a swarm 'gives birth' to other swarms, the originary one is also called 'mother' **ina** [\rightarrow].

A general term used for bee swarms is 'family' **xawaz** $[\rightarrow]$, while **zizzaaletta** $[\rightarrow]$ is used as a synonym.

A swarm that is found and collected in the wild is called **haadayto** $[\rightarrow]$.

congoffe nm wax (MC), prickly pear skin; pl congoffit m; cf shimca.

(For details see under shimca).

curum *nf* small hole(s); *sgtv* **curumto** *f*, *rel to* **curmuse** *vII* to do a hole.

A general term that is also used for the cells in a honeycomb [samfe, xabaza \rightarrow]; cfinti. In SB 4 the cells are called xashaakul.

cuure nf aloe(s) (Aloe macrocarpa) {Af. cadcuure; Ty. % [cerä], % C[cero], b C[cero]} sgtv cuuretta m (seed) NS ~ cuureyta CS1, CS2, SS, cuurettä f NS ~ cuureytä CS1, CS2, SS.

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees.

(Aloe macrocarpa. UTSE, 67)



dabaa nm big bee colony, big swarm; cf cishle, haadayto, xagaz, xawaz, zizzaaletta.

A term used by MC as a synonym of **xagaz** $[\rightarrow]$.

dacmur nm propolis.

A dark mixture that is collected by bees [**zizzaale** \rightarrow] and employed by them for closing the entrance [**maatot** \rightarrow] of the beehive [**qafo** \rightarrow], in order to shelter it against the winds and the enemies [**caduu**].

CI states that it is collected by the drones [canjur \rightarrow] and the worker bees [shaqqaala \rightarrow]. MC instead believes that it may derive from wax [shimca \rightarrow], while MN says it is a sort of pollen [xawo \rightarrow].

Saho's don't use propolis, even though recent courses organized by the government have shown Eritrean beekeepers how it is used in other parts of the world.

dagge nf fence, enclosure, pen {Af.
dagge} pl daggeg m.

- cishli dagge NS, CS1, CS2 ~ cisli dagge CS2 enclosure with beehives, apiary.
- zizzaalet dagge NS, CS1 ~ didaalet dagge CS2 ~ dilaalet dagge CS2, SS enclosure with beehives, apiary.

dhacammucus *nm* sugary fluid secreted by plants, nectar.

Nectar is usually called just 'water' [lay, laye]. Bees [zizzaale →] suck it up from



An apiary [cishli dagge] with traditional and modern beehives [qafof]. Ciyaago.

flowers and regurgutate it in the honeycomb [samfe, xabaza \rightarrow]. CI specifies that it is the working bees [shaqqaala \rightarrow] who perform this job, whereas other informants believe that the drones [canjur \rightarrow] do it. MN and XA don't know any special term for the nectar collecting bees.

dhangacalla *nf* pupa of the queen bee; *cf* amoodasse.

MC says that it is a stage in the development of a queen bee [abba, ina, nugus, reezanto, shuum \rightarrow]. Its body is still white, and its wings [gale \rightarrow] are not completely formed yet.

dhawrheena nm guard(s), watchman (-men); f **dhawrheenä**; pl **dhawrheenit** m; rel to **dhawrhe** vII to take care, to keep, to guard, to defende, **dhawrhite** vII to take care, ecc., for one's own benefit, **dhawrho** nf guard, difense; cf maxaarho, wardiya.

A general term used by some beekeepers for the guardian bees.

dhuurhe nf ant(s) {Af. dhuune} sgtv dhuuretta NS ~ dhurheyta CS, SS m; dhuurettä NS ~ dhurheytä CS, SS f.

One of the enemies [caduu] of bees [zizzaale \rightarrow] that can attack their hives [qafo \rightarrow].

folotta nf NS ~ foloyta CS, SS 1. piece of bread, food 2. honeycomb with honey; sgtv of folo nf bread, food syn xabaza; cf ganra, lanle, lubud, samfe, sidda, takaro, xananeyta.

The singulative form of the collective **folo**. It is used in beekeeping for indicating the honeycomb filled with honey, as a synonym of $xabaza \rightarrow (MI, MM)$.

gaaxunrhe nm plant of the family Acanthaceae.

A plant whose nectar [dhacammucus \rightarrow] is harvested by bees [zizzaale \rightarrow].

gabbe nm abdomen, lower part of the body.

This term is used only for bees [zizzaale →] and other insects [awwaaxa], e.g., flies [qaca]. Bees store in their gabbe the nectar [dhacammucus →] they collect from flowers (MN).

gadca var of gidac $[\rightarrow]$.

galadda nm wooden bowl {Af. galadda} pl galaddit m; syn koora $[\rightarrow]$; cf safxa, shaxan.

The **galadda** is a wooden bowl with a base [**lak** 'foot/leg'] and one or two handles [**cokkak** ~ **aytit** 'ears']. One of its uses is carrying the honey from the beehive [**qafo** →] to the home, where it is stored into another container.

Like all other wooden objects, the **galadda** is carved by men, preferably by using tamarisk wood [**saagan**]. Nowadays it is increasingly rare, as it is replaced by plastic or metal bowls.

gale nm wing {Af. gali} pl galil m.

A general term used for any kind of flying bird [kimbir] or insect [awwaaxa].



Wooden bowl [galadda/koora]. Kaaribossa.



Koora (from *Diario Mochi*, pag. 97. (with permission).

gamad *nm* lid {Af. **gamad** buttock, end, rear} pl **gamud** m.

A general term used in beekeeping also for the lids that seal the open ends of traditional hives [caadat qafo \rightarrow qafo].

The **gamad** can be made of different materials, e.g., wood, animal dung, stones, etc.

ganra nm ~ garra old empty honeycomb(s), broodcomb(s) {G. 96. [gera]; Ty. 205 [garna]} pl ganrit ~ garrit m; sgtv ganrayto ~ garrayto f; cf folotta, lanle, lubud, samfe, sidda, takaro, xabaza, xananeyta.

A **ganra** comb is an old and blackish broodcomb, that is usually discarded after the swarm has abandoned it.

Even though it not a proper honeycomb [samfe, xabaza \rightarrow], it may contain some honey [baska \rightarrow]. At first this tends to be red, but it becomes darker after it has been used for several breeding cycles.



Old honeycomb [ganra]. Ciyaago.

CI calls broodcombs **xananeyta** $[\rightarrow]$ generally, and **ganra** the old ones.

gargeera *nf* a kind of tree with white flowers (MN).

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees [**zizzaale** \rightarrow].

gashsha nm NS, $CS1 \sim$ gaysha $CS2 \sim$ gaysa SS horn {Af. gaysa} pl gawus \sim gashshush m NS, $CS1 \sim$ gayshush CS2.

A general term used in beekeeping for the antennas of bees [zizzaale \rightarrow]. (XA).

gaxseena nf CS2 seasonal natural beehive; pl gaxseenit m; rel to gaxe vII to return; cf caretto, murhcumse, qafo.

(For more details see under caretto).

gelgel mesqel nm herbaceous plant of the family of the Asteraceae (Coreopsis macrantha; Bidens macroptera) {Ty. ገል ገል መስቀል [gäl gäl mäsqäl]}.

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees (CI).

gidac nm ~ gadca animal dung, manure {Af. gudaace} sgtv gidacto ~ gadcayto f.

— gidacto ~ gadcayto beehive made with animal dung; cf caadat qafo [\rightarrow qafo].

gota nf kind of tree(s); sgtv gotatto NS ~ gotayto CS, SS.

One of the trees whose trunks are used for carving out traditional wooden beehives [caadat $qafo \rightarrow qafo$].

haadayto *nm* term used for indicating a swarm found and captured in the wild (XA); rel to haade vI to run away, to take away, to fly; cf cishle.

idrotta nf NS ~ idroyta CS, SS water bag made with a goat or sheep skin; pl idrottit NS ~ idroytit CS, SS, m; cf sibbarh.

A water bag, slightly bigger than a **sibbarh** $[\rightarrow]$, used for transporting several kinds of liquids and also honey [**baska** \rightarrow]. (Now plastic [**gomma**] or metal containers [**macdanto** \rightarrow] are more frequently used to this purpose).

If an **idrotta** or **sibbarh** filled with honey are closed properly and stored in a box or suitcase [**sanduqh**], the honey can last even for 10 years (MN). After some time the honey in the bag solidifies, and in order to take it out it can be necessary to cut the bag that is then discarded.

Skin containers are prepared by women.

iko nf tooth; pl ikok m.

— **zizzaalet-iko** (or simply **iko**) the sting of a bee.

(For details see under are).

ina nf mother $\{Af.$ ina $\}$ pl inon m..

— zizzaalet ina NS, CS1 ~ didaalet ina CS2 ~ dilaalet ina CS2, SS queen bee; 'mother swarm'; cfabba, nugus, reezanto, shuum.

(For details see under **shuum**).

indacaaro nm species of fig tree(s) (Ficus vasta) { Ty. Aba [da oro]} sgtv indacarto m (fruit), indacarto f.



One of the trees whose trunks are used for carving out traditional wooden beehives [caadat qafo \rightarrow qafo].

(Ficus vasta. UTSE, 217)

inti nf eye $\{Af.$ inti $\}$ pl intit m.

Saho's call honey 'eye' when it is liquid and pure (see **intit baska** [\rightarrow **baska**]), especially when it is still in the cells [**curum** \rightarrow]. Such cells are themselves called **inti** when they contain honey and before they are sealed with wax [**shimca** \rightarrow], because they have the shape of an eye. Liquid hioney is also called **lalle** or **lanle** [\rightarrow] (XA).

irir *nf* bird that guides humans to the nests of honey bees, honeyguide, indicator bird (*Indicator indicator? Indicator minor?*).

MC provided a detailed descrition of how this bird guides humans to a natural beehive [caretto \rightarrow]. After spotting it and seeing a person, the **irir** lands on a tree near that person and utters its typical call for attracting his attention. The man answers by uttering '*irriii*' when he recognise it. The **irir** then flies to another tree and utters again its call for guiding him. This sequence is repeated until the location of the bees is reached. The bird now utters a feebler call, flies a short stretch beyond the hive and then flies back, in order to show that the location has been reached. Sometimes it also lands on a tree near the bees [**zizzaale** \rightarrow]. and flaps [**gifgifite**] its wings a couple of times against the tree. At this point the man collects the honey [**baska** \rightarrow] and the **irir** remains nearby in order to eat the larvae [**xanane** \rightarrow] that fall to the ground while it is being collected, or the honeycomb [**samfe**, **xabaza** \rightarrow] pieces that he leaves for it. If the person approached by the **irir** doesn't collect the honey, it flies away looking for somebody else.

Usually it is men, not women, who recognise an **irir**'s call and collect the honey. This is also due to the fact that seasonal beehives are frequently located in rather inaccessible places.

MC also mentioned another bird, with black wings, called **alago** (*Ty.* አላጎ [alago]), that indicates the presence of wild animals, snakes, and even bees.

(Rein.) Irir plur. -á, indiv. irir-tā plur. -tit subst. m. vogel, benannt nach seinem ruf irir, den er stets hören lässt, der honigkukuk (?), das was Bil. firfirá.

isqithire *vI NS, CS1* ~ **ihillile** *CS2, SS* to buzz; to swarm around the beehive, making noise.

koora *nf* wooden bowl; *pl* **koorar** *m*; *syn* **galadda** $[\rightarrow]$ *cf* **safxa**, **shaxan**.

(For more details see under galadda).

kusura *nm* jujube (*Ziziphus spina-christi*) {*Af.* **kusra**} *sgtv* **kusurto** *m* (seed/fruit), **kusurtö** *f* .

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees [**zizzaale** \rightarrow].



(Ziziphus spina-christi. UTSE, 413)

lanle nf ~ lalle 1. pure honey, liquid honey (XA) 2. the honeycomb when it has been removed from the hive, before the extraction of its honey (MI, MM); cf 1. inti, intit baska [→ baska] 2. folotta, ganra, lubud, samfe, sidda, takaro, xabaza, xananeyta.

lashshab nf NS, $CS1 \sim$ layshab $CS2 \sim$ laysab SS bat (animal); pl lashshabub m NS, $CS1 \sim$ layshabub $CS2 \sim$ laysabub SS; sgtv lashshabto NS, $CS1 \sim$ layshabto $CS2 \sim$ laysabto SS.

Bats are regarded as one of the enemies [caduu] of bees, that they eat.

lubud *nm* closed/completed/finished thing { Ty. ልቡድ [ləbud] blocked, plugged up} rel to ilbide vI to close, to complete, to finish; to put the traditional millstone on its support.

The term **lubud kin xabaza** 'closed honeycomb', or simply **lubud**, is used for honeycombs that have ben sealed by bees with wax after they have been filled with honey $[baska \rightarrow] cf$ folotta, ganra, lanle, samfe, sidda, takaro, xabaza, xananeyta.



Traditional beehive with its small entrance [maatot]. *Thiisha*.

maatot *nm* small entrance in a beehive used by bees for getting in and out of it; *pl* **maatooti**, *f*.

This rather small hole (a few cms.) is made by the beekeeper with the help of a sharp pointed metal tool [mandal] and a hammer [martello].

macdanto *nm* container with a lid, made of tin or another metal; *pl* **macdantit**, *m*.

Container also used for preserving and transporting honey $[baska \rightarrow]$.

malab nm fermented beverage, 'beer'; pl malob m {Af. malab honey} cf bathce, birze, mees, Xaliima macar.

MC says that non-Muslims sometimes add red honey [casa baska \rightarrow baska] to malab [\rightarrow]. Today the most of the Sahos use the word malab for indicating the traditional beer suwaa.

(Rein.) Maláb plur. máláb subst. m. ('Af. So. id.) honig mit wasser vermengt, honigwasser zum trinken; die christlichen Saho (Irob) nennen so auch die merisa, das bier von der negerhirse wenn sie in dasselbe etwas honig geben 8, 22. 25; 270, 2 ff.; 278, 22; 279, 13. 19 u. a.

mascashala nm NS, $CS1 \sim$ mascasala CS2 bundle of branches used to capture and transport a swarm { Ty. $\sigma D O A$. [mä säli] } pl mascashalit m; rel to cishle [\rightarrow].

A mascashala is usually made of alaaki $[\rightarrow]$ branches. CI calls it canqel $[\rightarrow]$. For further informations see caretto.

mascashalä nf NS, $CS1 \sim$ mascasalä CS2 traditional beehive (of different kinds) { Ty. $\sigma b h h$. [mä säli]} pl mascashalit m; rel to cishle [\rightarrow]; cf qafo.

CI says that it is a hive placed by a beekeeper in a remote area, in order to entice bees $[zizzaale \rightarrow]$ to settle in it.

maxaarho nm 1. troop, army, warriors 2. spear {Af. maxarhu} pl maxaarhit m; cf dhawrheena, wardiya.

CI calls **maxaarho** (or **casaakir** 'soldiers') both the guardian bees [**wardiya** \rightarrow] and the workers [**shaqqaala** \rightarrow], especially when they are inside the beehive [**qafo** \rightarrow].

mazba nf NS, CS1 ~ madba CS2, SS specie(s) of euphorbia (Euphorbia polyacantha) {Ty. orange [mäzba]} sgtv mazbatto m NS ~ mazbayto CS1 ~ madbayto CS2, SS (seed/fruit), mazbattö f. NS ~ mazbaytö CS1 ~ madbaytö CS2, SS.



Plant from which bees [**zizzaale** \rightarrow] produce a low quality of honey [**baska** \rightarrow] that is not consumed by the Saho's (MN).

(Euphorbia polyacantha. UTSE, 201)

mees nm fermented beverage made with honey, water and geeso (Rhamnus prinoides), hydromel, mead, honey wine {Ty. ሜስ [mes]}; cf bathce, birze, malab. Xaliima macar.

(Rein.) Mēz plur. -á subst. m. Ti. (s. Bil. mīd I) honigwein, hydromel 6, 19 ff.; 7, 1 ff.; A. m f.:

murhcumse nm ~ murhcunse permanent natural beehive; pl murhcumsit ~ murhcunsit, m; cf caretto, gaxseena, qafo.

Natural beehives of this kind are generally to be found in rock cavities [galba] and in inaccesible locations such as sheer cliffs [bol]. Bees [zizzaale \rightarrow] live permanently in such hives, even for long periods of time (10, 20 years or more).

For reaching them, one has to use ropes for climbing down, and the following procedure is used. At first, the entrance of the beehive is smoked and sealed with stones and small branches. Bees must not be allowed to get out of it. The entrance remains sealed for two or three days, while the bees eat the honey $[baska \rightarrow]$ they have. After this time has elapsed, the hive is opened and smoked again. The swarm is so hungry, thirsty and disturbed by the smoke [tika] that it exits the hive and gathers on a nearby branch. At this point it is captured with the same method that is used for a **caretto** $[\rightarrow]$.

muxumwaaxe $nm \sim muxunwaaxe$ herbaceous plant with white flowers (*Phaulopsis imbricata*); sgtv muxumwaaxettä $fNS \sim muxumwaaxeyt$ ä CS, SS; syn of waxamwaaxe $[\rightarrow]$.

A plant whose nectar [dhacammucus \rightarrow] is harvested by bees [zizzaale \rightarrow]. The Tigrinya call it $real_{\mathcal{F}}$ [gurbiya] or $real_{\mathcal{F}}$ [gərbiya].

nugus nm king {Ty. 31-P [nəguś]} pl nuguusa f.

— dilaalet nugus SS queen bee (XA); cfabba, ina, reezanto, shuum.

oolac nm olive tree(s), African wild olive (Olea africana, Olea chrysophylla) sgtv oolacto m (seed, fruit), oolactö f.

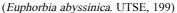
Branches of wild olive trees are used for producing the smoke [tika] needed by beekeepers when they want to operate within a hive [qafo \rightarrow]. Their smoke is believed not to harm the bees [zizzaale \rightarrow]. Cf waybo, zagaxo.



(Olea africana. UTSE, 285)

oolal *nm* specie(s) of euphorbia (*Euphorbia abyssinica*); *sgtv* **olalto** *m* (seed/fruit), **olaltö** *f*.

Plant from which bees [zizzaale \rightarrow] produce a low quality of honey [baska \rightarrow] that is not consumed by the Saho's.





qafo nf NS, CS1, CS2 ~ kafo CS2, SS 1. beehive 2. large container made of clay and animal dung used as granary, normally place in traditional houses [naxsa] also for dividing a room {Ty. & [qofo] or & [qwafo] or & [qafo]} pl qafof, m cf caretto, gaxseena, gidacto, murhcumse, mascashalä.

— **caadat qafo** traditional beehive made of animal dung or of a carved tree trunk.



Work in progress: traditional beehives [gidacto] drying on the roof of a naxsa. *Kaaribossa*.



Empty gidacto in Dhamxina.

Beehives made of animal dung are also called **gidacto** \sim **gadcayto** $[\rightarrow]$; cow, goat or sheep dung $[\mathbf{gidac} \rightarrow]$ is used to this purpose. They are usually prepared by women, who use dung they collect during the rainy season, when there is more grass and the animals produce it more abundantly.

PREPARATION: First of all the dung is mixed with ashes [gomboz], red earth casa buure], barley [cadeelaw xasar], dry grass [kafin cashsho] and some water. The hive is built vertically by placing successive layers of this mixture upon each other, so as to form a sort of cylinder, ca. 100-150 cm. in length, with bottom and top openings of ca. 25-30 cm. After laying one layer it is left to dry before laying the following ones. While building the hive and letting it dry up, it is usually kept on the roof of a naxsa, the traditional dwelling of the Saho's in the highlands, so as to prevent animals

from damaging it [see picture]. The whole procedure lasts ca. 15-20 days. After building the main body of he hive, the two lateral round lids are prepared, with animal dung or flat stones (that are later sealed with animal dung). A small hole [maatot \rightarrow] is also made at the center of the long side of the hive, as an entrance for the bees. After laying it in a horizontal

position in the apiary $[\mathbf{dagge} \rightarrow]$, it is protected from atmospheric agents – or other accidental causes of damage to its structure – by means of different layers of rags $[\mathbf{durruca}]$ covered by flat stones or corrugated zinc sheets $[\mathbf{zingo}]$ [see picture]. (In the past old skin carpets $[\mathbf{sido}]$ or \mathbf{warhxo} were also used to this purpose). Some beekeepers cover the upper stones with a layer of earth like the roofs of the \mathbf{naxsa} 's [see picture]. This kind of beehive is regarded as the best one for the bees, that may also consume some of the animal dung, but it doesn't last more than 6 or 7 years, even if it is well protected.





Protective covering for traditional beehives. Ciyaago and Kaaribossa

Traditional wooden hives are built by carving pieces of tree trunks, preferably from sycomores or similar trees [indacaaro →, subula → or gota →], because they provide a higher inner temperature. The trunk is cut with an axe [faas] or a saw [magaaz] into a piece of the length of three cubits [xuluf 'cubit'], i.e., ca. 150 cms. It is then shaped by means of a large chisel [mishar] in its inner and outer sides, practicing two lateral openings [see picture below]. An awl [mandal] is then used for opening a lateral hole that the bees will use as their door [maatot \rightarrow], when going to harvest pollen and coming back. Even though these hives are much more resistant than the animal dung ones, they are provided with protective coverings of different kinds. These two traditional hives may yield up to 30 kg. of honey.

«I see here [in Mako] for the first time some beehives obtained from cylindrical tree trunks, by carving them out and giving them a tubolar shape,

whose two openings are closed by two tiles made of animal dung and earth. At the middle of the cylinder there is a hole allowing bees to enter. The wooden cylinder is placed horizontally on a heap of stones, and covered with pieces of tree bark.» (Aldobrandino Mochi - Translated from Diario, pag. 121).





Empty wooden beehives. Kaaribossa and Thiisha.



Modern beehive [xokomat qafo]. Ciyaago.

— **xokomat qafo** modern beehives with removable frames (*lit* 'government hive').

The Eritrean government has organised several courses for beekeepers and provided them with modern hives with removable frames [see picture]. These are frequently used together with the traditional ones. However, some people still prefer the old system, both because it yields higher amounts of honey (a modern hive may contain not more than 10 - 20 kg. of honey), and because bees seem to prefer the traditional qafo, especially those made of cow dung.

(Rein.) Qafó, seltener qaffó plur. qáfōf subst. fem. ('Af. id., s. Bil. s. v.)

1) der binenstock 254, 27. 2) grosses binenstockartiges gefäss aus thon oder auch aus den blättern der dumpalme geflochten, für aufbewarung von getreide 123, 5 ff.; 124, 2 u. a.

qalaaminthos nm ~ qalaminthoos NS, CS1 ~ kalaamintos CS2, SS eucalyptus (different species) (Eucalyptus camaldulensis, E. cladocalyx, E. globulus, E. rudis) {Ty. ቀሴምንጦስ [qäleməntos] or ቀሳሚ ጦስ [qälamitos]} sgtv qalaaminthossa m ~ qalaminthoossa (seed/fruit), qalaaminthossä f ~ qalaminthoossä.



(Eucalyptus rudis. UTSE, 195)

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees [**zizzaale** \rightarrow].

reezanto nm NS, CS1 ~ reedanto CS2, SS chief, leader {Af. reedantu} pl reezon m NS, CS1 ~ reedon CS2, SS; rel to reeza nf pride, position of power, reeze vII to be proud, to get a position of power, reezeena/ä nm proud person (male/female), reezishe vII to cause to be proud, to give a position of power.

— zizzaalet reezanto NS, $CS \sim$ didaalet reedanto $SS \sim$ dilaalet reedanto SS queen bee [ape regina] cf abba, ina, nugus, shuum.

For further informations see **shuum**.

safxa nf large plate, platter {Ar. صفحة [ṣafḥa] surface, page, sheet, or وهنات [ṣafiḥ] surface, metal sheet or plate; Ty. ጻፊሕ [ṣäffiḥ] flat, level, plane, or المنظم [säffiḥ] broad, wide, of big dimension} pl safaaxi, m cf galadda, koora, shaxan.

Normally used to serve the **thaabita** - a kind of bread - it is also used for carrying the honey $[baska \rightarrow]$ from the beehive $[qafo \rightarrow]$ to the house, where it is put into another container.

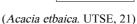
samfe nm ~ sanfe new empty honeycomb(s) { Ty. 44 [safa]} pl samfit ~ sanfit, m; sgtv samfetta ~ sanfetta NS ~ samfeyta ~ sanfeyta CS, SS f, cf folotta, ganra, lanle, lubud, sidda, takaro, xabaza, xananeyta.

The honeycomb is built by the bees. But if a beekeeper wants to have a new colony in one of his hives $[qafo \rightarrow]$ he positions in it a piece of a honeycomb – empty or containing some honey $[xabaza \rightarrow]$ – supporting it by means of Y-shaped sticks. This new comb is called

takaro $[\rightarrow]$. It makes it easier for the bees to build the remaining part of the new comb. XA points out that the Dabrimeela say **sidda** rather than **samfe**.

saraw nm specie(s) of acacia (Acacia etbaica) { Ty. ሥራው [säraw]} sgtv sarawto m (seed/fruit), sarawtö f.

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees [**zizzaale** \rightarrow].



saxdad nm catlike animal(s), genet (Genetta Abyssinica); sgtv saxdaddo m, saxdaddö f.

One of the enemies [caduu] of bees [zizzaale \rightarrow] that can attack their hives [qafo \rightarrow].

shaqqaala nf NS, CS1 ~ CS2, SS sakkaala worker(s) {Ar. شغالة [šaġġāla]; Ty. آهِم. [šäqqali] or آهِم (قغرية قغرية قغرية

MC uses this word for the worker bees, i.e., for those that harvest food. But there is an obvious influence of the new official terminology, different from the traditional one that generally distinguishes only the queen bees and the drones from the other bees.

In SB 2 e SB 3 the worker bees are called **kaddaam** ~ **khaddaam**, an Arabic loanword meaning 'worker, servant'.

shaxan nm NS, CS1 ~ saxan CS2, SS dish, plate {Af. saxni; Ar. ܩܩܩܪ [ṣaḥn]; Ty. ፕሬት [šaḥan] or ፕሬቲ [šaḥani] or ፕሬቲ [šaḥani], etc.} pl shaxun m NS, CS1 ~ saxun CS2, SS; cf galadda, koora, safxa.

A usually metallic container that can be also used for carrying the honey $[baska \rightarrow]$ from the beehive $[qafo \rightarrow]$ to the house, where it is stored in another container.

shimca nf NS, CS1 ~ shimce ~ chimce ~ simca CS2, SS wax, candle(s), {Af. samci; Ar. شمعة [šamʿa] or شمعة [šamʿ], etc.; Ty. أَهُ عَلَى [sämʿi] or المُعَامِينَ [šamʿa]} sgtv shimcatto m NS ~ shimcayto CS1 ~ simcayto CS2, SS; cf congoffe.

Wax is produced by bees [zizzaale \rightarrow] for building honeycombs [samfe, xabaza \rightarrow]. Some people believe that they produce it from pollen [xawo \rightarrow].

Usually the Saho don't use the wax that remains after the honey [baska →] has been taken out, and discard it. Other groups use it for the traditional candles [thuwaaf, from Tigrinya TPF [təwaf], obtained by soaking a strip of cloth in wax]. Some Saho's use wax instead as a cleanser [mafaawaza] and lubricant of the gasa, the clay (or iron) griddle employed for cooking thaabita, a pancake-like bread.

Look under baska and xabaza for how wax is separated from honey.

shuum nm NS, $CS \sim \text{suum}$ SS chief, leader $\{Af. \text{ suum } (AB \ 1); Ty. \ 7.9 \text{ [sum]}\}$ pl shuuma fNS, $CS \sim \text{suuma}$ $SS \sim \text{shuumom}$ mNS, $CS \sim \text{suumom}$ SS.

— zizzaalet shuum NS, $CS1 \sim$ didaalet shuum $CS2 \sim$ dilaalet shuum CS2, SS queen bee; cf abba, ina, nugus, reezanto.

MN says that many people call **abba** $[\rightarrow]$ 'father' the queen bee, even though it should rather be called **ina** $[\rightarrow]$ 'mother' because it is a female. CI states that the queen bee is a male that injects its semen [**shahwa**] into the honeycomb [**samfe**, **xabaza** \rightarrow]. However, he is aware that the queen bee also lays [CI used **irhiggile** 'to milk'] eggs [**ubub** \rightarrow], but maintains that it is able to do this even though it is a male. XA – who calls the queen bee **nugus** $[\rightarrow]$ 'king' – says instead that it is not possible to distinguish male from female bees, but adds that his people regard the queen bee as a male and the broodcomb [**ganra** \rightarrow] as a female.

According to MC it is the queen bee who builds it 'home' in the honeycomb [$xabaza \rightarrow$]. It is easy to distinguish from the other ones because it is bigger and has a projection that looks like a nipple.

According to CI the queen bee organizes all the work that is made by the colony [cishle \rightarrow].

(Rein.) didale sum die binenkönigin,

sibbarh *nm* water bag made with a goat or sheep skin, normally used as a churn for preparing butter, smaller than **idrotta**; *pl* **sibborh** *m*; *cf* **idrotta**.

sidda *nf* name used for **samfe** $[\rightarrow]$ among the Dabrimeela (XA).

siraaceera nf kind of aloe (from siraa 'poison' and ceera 'aloe' {Ty. bc. ['ərä] or %c. ['erä]. In Saho normally cuure}) sgtv siraacerto f.

Plant (also simply **ceera**) from which bees [**zizzaale** \rightarrow] produce a low quality of honey [**baska** \rightarrow] that is not consumed by the Saho's.

subula *nm* sycamore fig(s) (*Ficus sycomorus*) {*Af.* **subla**} *sgtv* **subulto** *m* (fruit), **subultö** *f.*

One of the trees whose trunks are used for carving out traditional wooden beehives [caadat qafo \rightarrow qafo].

(Ficus sycomorus. UTSE, 213)

sucuda nm very leaf evergreen bush (Adhatoda schimperiana) {Ty. ስውዳ [səʿuda]} sgtv sucuddo f.

Plant from which bees [zizzaale \rightarrow] produce a low quality of honey [baska \rightarrow] that is not consumed by the Saho's.

tabab nm aromatic plant(s) (Becium grandiflorum; Ocimum filamentosum) {Ty. ተព-ា [täbäb]} sgtv tababto m (seed/fruit), tababtö f.

A plant whose nectar [**dhacammucus** \rightarrow] is harvested by bees [**zizzaale** \rightarrow].

 $(\textit{Becium grandiflorum}.~UTSE,\,85)$

takaro *nf* 1. hanging, suspending 2. name of the new honeycomb hanged in the beehive {Af. takar} pl takaror m; rel to takare vII to hang, to suspend; cf folotta, ganra, lanle, lubud, samfe, sidda, xabaza, xananeyta. (For more details see under samfe).

thacal nm NS, CS1 ~ tacal CS2, SS faeces of the bees; sgtv thacalto m NS, CS1 ~ tacalto CS2. SS.

According to MC the colour of the bee faeces changes according to the honey they produce: they are white if it is white, red if it is red, etc.

Natural beehives [caretto→] can be spotted also by looking for the bee faeces.

timbaako nf tobacco (Nicotiana tabacum) {Af. timmaako; Ar. ፲፱፱፱ [tumbāk]; Ty. ትምባኾ [təmbako] or ቶምባኾ [təmbako]} sgtv timbaakotta f NS ~ timbaakoyta CS2. SS.

Plant from which bees [zizzaale \rightarrow] produce a low quality of honey [baska \rightarrow] that is not consumed by the Saho's.

tsideena nf NS, CS1 ~ chideena CS2 mining bee, soil-dwelling bee, digger bee (Andrena sp.) {Ty. \$25\$ [sədänay] or \$25\$ [sədena] or \$25\$ [čədänay]} pl tsideenit m NS, CS1 ~ chideenit CS2; cf bulac, uxun, ziiza, zizzaale.

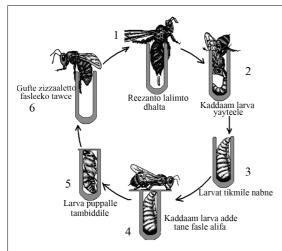
(For details about the honey produced by this insect see **tsideenat baska** under **baska**).

(Rein.) Cidánā plur. it subst. m. (s. Bil. s. v.) die erdbine, A. maray genannt, çidaniti baská erdbinenhonig.

tuumar nm ~ toomar mark, sign, signal, note, identifying message, indication { Ty. ትአምርቲ [tə³mərti]} rel to tuumaare ~ toomaare vII to make a sign, to mark; tuumaarime ~ toomaarime vII to be marked, to be indicated.

This mark consists in a small leafy branch with a stone over it. It is left where a seasonal natural beehive [caretto \rightarrow] has been found. It indicates to other people that the hive has already been found and its swarm will be carried away by its legitimate owner.

It is not necessary to place a mark near a permanent natural hive [murhcumse \rightarrow], because the bees never leave it for ever.



The bee's life cycle. SB 3, pag. 20

- 1. The queen bee lays the egg.
- 2. The worker bee feeds the larva.
- 3. The growth of the larva is completed.
- 4. The worker bee closes the cell containing the larva.
- 5. The larva transforms into a pupa.
- 6. The grown up bee gets out from the cell.

ubub nm egg(s) (biology), larvae of insects {Ty. አበብ [əbbub] or አበብ [əbbub] fly larvae, maggot} sgtv ububta m; cfamoodasse, xanane.

Beekeepers have different opinions about how bees [zizzaale →] have their offspring [emxeerese 'to reproduce'] and about their life cycle [rooxi maklalo in SB 3], from when their eggs (called by CI and XA also with the generic term lalim) are laid to when the stage of adult insects is reached.

According to MN the eggs are laid in the broodcomb [ganra \rightarrow] by the queen bee, that he calls shuum (yet see also abba, ina, nugus, reezanto). The bees feed the eggs with droplets of a white substance, and keep the eggs warm by closing the cells [curum \rightarrow] with wax [shimca \rightarrow]. The eggs grow inside this white fluid. After three days, if the queen bee is removed from

the colony [cishle \rightarrow] the egg that has been fed in a special way for becoming a queen will develop into a queen bee. If the queen dies, the egg develops into a drone [canjur \rightarrow]. The other thousands of eggs become ordinary bees.

Three days after they have been laid the eggs start to bend, but later they stretch out lengthwise. On the 15.th day it is possible to recognize their heads. Larvae are called **xanane** [→] at this stage. The Saho's sometimes eat **xanane** larvae because they regard them as a medicine against malaria and other diseases. XA points out that when the larvae still have a bent position they are colled **gurah gaxe xanane** (lit. 'leftwards bent **xanane**').

After 25 days the bee is fully formed, with its black head and its wings, but it cannot fly yet. At this stage it is called **amoodasse** $[\rightarrow]$, and it is ready for getting out of the honeycomb. After ca. 30 days the bee has reached its full maturity and is able to fly.

According to MC and CI there is no difference between **ubub** and **xanane**, whereas according to XA the stage of **ubub** lasts ca. 4-5 days. MC claims that drones, although they are regarded as males, generate their own **xanane**, called **canjur xanane**. Also the queen bee generates a **xanane** that will become a queen, inside a special 'house' that is built for it within the honeycomb [**xabaza**] and that is easy to recognize (for further details see **shuum**). Bees reproduce when there is a suitable weather, with enough rainfall and, consequently, plenty of nourishment for them.

On the other hand, CI and XA say that bees mature [**igmirhe**] in ca. 15 days, but that this period can change according to the weather. In cold areas it can take 20-25 days for bees to reach maturity.

Climate can also 'burn' [xararishe 'cause to burn'] the larvae, especially misty weather [awaa or budbud] that prevents the sunbeams to reach the ground.

According to MC normal bees live ca. 5-6 months, whereas a queen bee may even live for 5-6 years.

uxun nm wasp(s); sgtv uxunta ~ xuunta m; cf bulac, tsideena, ziiza, zizzaale.

An insect that produces honey [baska \rightarrow], that is different from what is produced by zizzaale [\rightarrow].

wardiya nf guard(s), watchman(-men) {It. guardia; Ty. PCAS [wardiya]} sgtv wardiyatto m NS ~ wardiyayto CS, SS; wardiyattö f NS ~ wardiyaytö CS, SS; cf dhawrheena, maxaarho.

A general term used by some beekeepers for the guardian bees.

waxamwaaxe $nm \sim waxanwaaxe$ herbaceous plant with white flowers (*Phaulopsis imbricata*); syn of muxumwaaxe $[\rightarrow]$.

(For more details see under muxumwaaxe).

waybo nf type of tree(s) (Terminalia brownii) {Af. waybu; Ty. ወይባ [wäyba]} sgtv wayboyta m (seme/frutto), wayboytä f.

Branches of this tree are used for producing the smoke [tika] needed by beekeepers for operating inside a hive [qafo \rightarrow]. Cfoolac, zagaxo.



(Terminalia brownii. UTSE, 385)

xabaza nf SS, CS1 ~ xabada CS2, SS 1. type of bread 2. honeycomb that contains honey {Af. xabda bread} sgtv xabazatto m NS ~ xabazayto CS1 ~ xabadayto CS2, SS; pl xabuz m NS, CS1 ~ xabud CS2, SS; cf folotta, ganra, lanle, lubud, samfe, sidda, takaro, xananeyta.

The empty comb [samfe \rightarrow] becomes a xabaza after it has been filled with honey or eggs [ubub \rightarrow]. This name is connected to a type of bread because of its shape and because it serves as food (cf folotta). When the cells [curum \rightarrow] are closed the honeycomb is called lubud [\rightarrow], while after it has been used as a broodcomb it is usually called ganra [\rightarrow]. For collecting the honey the comb has to be removed from the hive [qafo \rightarrow]. Approximately one third of it is cut out [zage \rightarrow] from one of the two lateral openings, and another third from the opposite opening. Its central part is left inside the hive for the bees. (See baska and shimca for further details about how honey is extracted and separated from wax).

(Rein.) Habadá, habadá, habadá plur. hábūd subst. fem. ('Af. id., s. d.)
1) eine sorte von brod in form einer runden, dünnen scheibe.
2) honigwabe, so benannt nach der form des eben beschribenen brodes.

xagaz nm NS, CS1 ~ xagad CS2, SS big bee colony, big swarm; cf cishle, dabaa, haadayto, xawaz, zizzaaletta.

A term used as a synonym of **dabaa** $[\rightarrow]$.

Xaliima macar *nf* (lit. 'Halima's honey' with the Tigrinya word macar = Ty. **PAC** [mäcar] or **PAC** [mäcar] honey) hydromel, mead; cf bathce, birze, malab, mees.

Sometimes used as a synonim of birze $[\rightarrow]$ or bathce $[\rightarrow]$.

The entry in Reinisch's dictionary hints at a folk-etymological change from **xaliib** into **Xaliima**.

(Rein.) Halib plur. -á subst. m. (Ti. G. المراح بكر بكليب) lac, succus) honigsegen, reichliches erträgniss von honig 24, 6.

halibō-ma'ár getränke aus milch und honig (G. عمر) bereitet, honig in milch aufgelöst 253, 10. 15.

xanane nm bee larva; sgtv **xananetta** m NS ~ **xananeyta** CS, SS; rel to **ixinnine** vI to generate, to initiate, **imxinnine** vI to be generated, to be initiated; cf amoodasse, dhanqacalla, ubub.

A phase in the development of bees [**zizzaale** \rightarrow], after the stage of eggs [**ubub** \rightarrow]. It is called **larva** in *SB 3*. For further details about life cycle of bees see under **ubub**.

xananeytä nf broodcomb (CI); cf folotta, ganra, lanle, lubud, samfe, sidda, takaro, xabaza, xananeyta.

(Rein.) Hanán, hanáne plur. hánōn subst. m., indiv. hānōn-t-tā plur. -tit ('Af. id.) löcher in den wachsscheiben worin sich der honig oder die binenbrut befindet.

xangazza nf NS, CS1 ~ xangadda CS2, SS buttermilk.

According to MN it is added to honey and water for obtaining the mead [birze \rightarrow].

xawaz nm NS, CS1 ~ xawad CS2, SS family(ies) {Ty. ፋዋዝ [ḥawwaz]} sgtv xawazzo m ~ xawaddo CS2, SS; cf cishle, dabaa, haadayto, xagaz, zizzaaletta.

Used in SB 4 as synonym of swarm [cishle \rightarrow].

xawo nm ~ xawwo flower pollen {? Ty. ሓዎ [hawo] red flower}.

Bees collect and lump pollen on their legs for carrying it inside their hive, where they use it as food. According to XA it is carried inside the cells where it is mixed with liquid honey [lanle \rightarrow]. CI, who calles 'troop, army' [maxaarho \rightarrow] the bees who harvest pollen, says that its color varies from white to deep yellow (or almost red) according to the flowers it is collected from.

(Rein.) Háwō subst. coll. m., plur. háw-it, indiv. hawō-ytā plur. -ytit (cf.

xinze nm NS, CS1 ~ xinde CS2, SS poison (of animals); pl xinzit m NS, CS1 ~ xindit CS2, SS.

MN believes that lizard [cafur \rightarrow] gets its poison from the bees [zizzaale \rightarrow], and that snakes [caroora] gets their poison from it. See also under are for further details.

zagaxo nf kind of tree(s) (Combretaceae?); sgtv zagaxotta f. NS ~ zagaxoyta CS.

Branches of this tree are used for producing the smoke [tika] needed by beekeepers for operating within a hive [qafo \rightarrow]; cf oolac, waybo.

- **zage** *vII NS*, *CS1* ~ **dage** *CS2* 1. to cut 2. to take out {*Af.* **dage** to dig, to make a hole, to pluck} *rel to* **zagite** *vI NS*, *CS1* ~ **daye** *CS2* to cut, **zagnan** *nm NS*, *CS1* ~ **daynan** *CS2* cutting, **zagum** *nm* cut.
 - baska zage NS, $CS1 \sim$ baska dage CS2 to remove a honeycomb from the hive, to collect honey.

Since it is a dangerous procedure, it is always men who collect honey from traditional and natural beehives. The removable frames of modern hives, instead, can also be taken out by women

CI used the verb daye instead of zage. For further details see under xabaza.

ziiza nm ~ ziizza NS, CS1 ~ diida ~ diidda CS2, SS beetle, coleoptera, dungroller beetle {Af. diida} pl ziizit ~ ziizzit m NS, CS1 ~ diidit ~ diiddit; cf bulac, tsideena, uxun, zizzaale.

Insect that produces honey in hollow trees (MC), especially in aloe [cuure \rightarrow] branches (CI). It is also one of the enemies [caadu] of bees [zizzaale \rightarrow].

- zizzaale nf NS, $CS1 \sim$ didaale $CS2 \sim$ dilaale CS2, SS honeybee(s) {Af. diidaale} sgtv zizzaaletta f $NS \sim$ zizzaaleyta $CS1 \sim$ didaaleyta $CS2 \sim$ dilaaleyta CS2, SS.
 - zizzaalet zan abatiya NS, CS1 ~ didaalet (or dilaalet) dan abatiya CS2, SS beekeeper (lit. 'the one who performs the taking care of bees').

MN distinguishes two kinds of bees: red bees [casa zizzaale] and black bees [dat zizzaale]. They can live together in the same hive [qafo →].

Another insect similar to bees is called **okoli zizzaale** (lit. 'donkey bee'). It is a mining bee, like the **tsideena** $[\rightarrow]$, but doesn't produce honey.

According to Dag and Weiss (see Bibliography) and other literature, there are three types of honeybees in Eritrea: *Apis mellifera monticola*, *Apis mellifera scutellata* and *Apis mellifera yemenitica*.

For informations about the life cycle of bees see under **ubub**.

zizzaaletta nm NS ~ zizzaaleyta CS1 ~ didaaleyta CS2 ~ dilaaleyta CS2, SS swarm; cfcishle, dabaa, haadayto xagaz, xawaz.

For further details see under **cishle**.

ENGLISH-SAHO INDEX

This is just a general reference list. More specific terms can be found under the main entries.

Activities and products of the bees

honey baska honey (pure and liquid) inti, lanle honey (mixed, beebread) bukke

nectar dhacammucus

poison xinze pollen xawo propolis dacmur

wax congoffe, shimca

Beehive and apiary

beehive qafo

beehive (natural) caretto, gaxseena, murhcumse beehive (traditional) gidacto (→ gidac), mascashalä

entrance (of the beehive) maatot lid (of the beehive) gamad fence, apiary dagge

Bees life cycle and swarm

bee **zizzaale**

guardian bee dhawrheena, maxaarho, wardiya

worker bee shaqqaala

bite a

bundle of branches used for capturing the swarm canqel, mascashala to buzz (of a swarm) isqithire

drone, male bee canjur egg ubub larva xanane

pupa amoodasse, dhanqacalla queen bee abba, ina, nugus, reezanto,

shuum

swarm cishle, dabaa, haadayto, xagaz,

xawaz, zizzaaletta

Enemies of the bees and other bee-related animals

ant dhuurhe bat lashshab beetle ziiza genet saxdad honeyguide bird dhuurhe lashshab

honeyguide bird trir (kind of) insect bulac lizard cafur

Moreno Vergari and Roberta Vergari

mining bee okoli zizzaale (→ zizzaale),

spider cako wasp uxun

Harvesting and usage of the honey

fermentation askhamar to harvest zage

mead, hydromel, honeywine bathce, birze, malab, mees,

Xaliima macar

Honeycomb

honeycomb (closed) lubud

honeycomb (new and empty) samfe, takaro

honeycomb (filled) folotta, ganra, xabaza, xananeyta

honeycomb (old and empty) ganra honeycomb's cell curum

Morphology of the bee

abdomen gabbe antenna gashsha head amo, xangal

sting wing iko gale

Plants, shrubs and trees alaaki, balasa, cawun, cuure,

gaaxunrhe, gargeera, gelgel mesqel, gota, indacaaro, kusura, mazba, muxumwaaxe, oolac, oolal, qalaaminthos, saraw,

siraaceera, sucuda, tabab,

timbaako, waxamwaaxe, waybo,

zagaxo

Tools and accessories

containers galadda, idrotta, koora,

macdanto, safxa, shaxan, sibbarh

cage for the queen bee chaachun