"Ethnoveterinary knowledge in Sanaag region, Somaliland (Part I): notes on local descriptions of livestock diseases and parasites"

Andy Catley and Ahmed Aden Mohammed

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Ethnoveterinary knowledge in Sanaag region, Somaliland (Part I): notes on local descriptions of livestock diseases and parasites

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Introduction

Sanaag region is an isolated semi-arid area of Somaliland where pastoralism, in various forms, predominates. Following discussions with community elders in August 1991, VetAid/ACTIONAID established an animal health programme in Sanaag in 1992. From the onset, the involvement of local pastoralists in the design and implementation of the programme was considered a priority. An essential part of this process was for programme staff to understand local perceptions of animal disease and avoid mistranslation of terms used by the pastoralists when sick livestock were described. For this a herders’ dictionary for livestock ailments had to be formulated. The importance of veterinary ethnosemantics when working with pastoral groups is mentioned by Ibrahim et al (1983) for the Fulani, and is described in detail by Fre (1993) working with pastoralists in Eritrea and eastern Sudan. The extensive veterinary knowledge of Dinka cattle owners in south Sudan is described by Schwabe and Kuojok (1981).

Regarding livestock diseases in Somaliland, previous accounts have tended to simplify translations and use Somali words as synonyms for the English or scientific names (Mares 1954; Abdurahman and Bornstein, 1991; Dioli and Stimmelmayr 1992; Heuer 1993). By investigating the literal meaning and use of terms used in Sanaag in more detail, it was hoped that the programme would highlight the local knowledge of Somali herders in the region, and also, collect information relevant to the design of training exercises and extension material. Also, programme staff were aware that a failure to understand local knowledge on animal disease could contribute towards the recommendation of inappropriate disease control measures. The VetAid/ACTIONAID programme aimed to prioritise animal health problems from the herders’ viewpoint and develop the programme according to their needs and abilities.

The information presented in the notes was collected during visits to 21 sites in Sanaag region between March 1993 and January 1994, as part of the wider activities of the animal health programme during that period. Data were collected using informal semi-structured interviews and a variety of participatory rural appraisal techniques, including disease ranking exercises. Frequently, local descriptions of animal disease were compared with clinical and post mortem examinations of sick livestock at the vari-
uous sites, and basic laboratory tests were used when necessary. The notes also review some of the existing literature on animal disease in Somaliland and diseases of camels, and relate this information to herders’ knowledge in Sanaag.

Information was also collected on local treatments for livestock disease and disease control strategies, including the use of herbal remedies. It is hoped that these data will be presented in a separate paper.

Notes on diseases

The Somali terms and words used to describe livestock illnesses are listed in alphabetical order, with a literal meaning. If no literal translation is provided, then that term or word was used only in relation to sick animals. A summary of terms is provided in Table I.

Table I: Summary of terms used to describe livestock diseases and parasites by pastoralists in Sanaag.

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respiratory problems
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calacuul
laxawgal
dhugato
oofmud
jibaax
sambab
sambab faraq
sangaale
hargab
dugub
udder problems
candhoole
amda hanun
candhobarbar
carar
parasites
gooryan
dhahijo
dhuug
dibeeche
dulan
faradheer
gabaarey
garabcad
garangoori
injir
shilin
shilincas
takar
qafane
qanyn
shilin madow
skin problems
cadho
cambaar
carro
dhabijo
dhalceco
dibeeche
furuq
injir
ka bixid
shilin
xaqqiito
eye problems
indo hanun
indojebiyey
nervous problems
muglo
gubdo
shimber
dabaqdaq
foot problems
boog
cabbeeb
raaf dilaac
ragat
reproductive problems
dhalmo
dhicin
dhulwas
gale
godo welech
jabti
shadeedyo
mandheer noqyo
faraarti
mandheer dheey
poor body condition
aadad
ashi
caal
dhukaan
gendi
suuqiye

aadad: A word used to describe camels showing signs such as abdominal discomfort, regurgitation, diarrhoea, weight loss or poor body condition. Aadadh was associated with ingestion of the plants yiboodac, qudhuume, and badanti, and with worm infestation.

ah: This was an onomatopoeic word used to describe a coughing camel.

af-bakhti (literally, dead mouth): This term was used to describe a camel with unilateral paralysis of the facial nerve.
The lips on one side of the face were non-functional and food had accumulated in the mouth on the same side.

*af-burur* (literally, mouth pustules): This term may be used to describe lesions such as those caused by orf, camel pox or sheep and goat pox (see *af-ruur* and *boog*).

*af-carro* (literally, mouth to the ground/sand): *Af-carro* was considered by Mares (1954) to be a sign of trypanosomiasis in camels, when the head of a sick camel dropped to the ground. In Sanaag, *af-carro* was used to describe camels with oral lesions similar to those caused by orf, camelpox, or camel papillomatosis. Herders stated these lesions were as if sand has been rubbed into lips of affected animals (see also *af ruur*).

*af ruur* literally, mouth papillomas/granulomas: The word *ruur* referred to lesions resembling papillomas and granulomas, and its use was restricted to camels. The prefix *af* meant mouth. The lesions were said to be small, raised and numerous, and consisted of many small pieces. Such lesions can occur in camel pox, orf and camel papillomatosis, and are discussed in more detail under *furuq*.

*amda hanun* literally, breast pain: *Amda hanun* is one term which was used to describe animals with mastitis (see also *cardhobarbar, cardhoole and carar*).

*ashi* literally, home sickness: Used to describe non-specific ill health in animals which were being grazed in an unfamiliar area.

*baallalo*: This term referred to a digestive disturbance in animals and man, characterised by abdominal discomfort. Mares (1954) used *baallalo* as a synonym for rumenal tympany. Around Erigavo town, *baallalo* was used to describe a digestive disturbance in goats and cattle which was sometimes fatal and followed ingestion of *boqondhow* (sorghum regrowth). The plant *shuna shuna* (*Solanum nigrum*) was also reported to cause *baallalo*.

*baargariish* literally, shivering lamp: A disease of camels involving fever and rapid death. Mares (1954) thought that *baargariish* was either trypanosomiasis or anthrax.

*boog* literally, a (skin) wound on a human or animal which takes a very long time to heal. The term *boog* was used to describe a variety of conditions causing abscessation or pus formation, as suggested by VetAid (1992). In particular, *boog* was used to describe footrot, abscessation of the foot and necrotic stomatitis. In small stock *boog* affecting the mouth was sometimes called *cabeeb* (see later). In camels the terms *af-carro* or *af-burur* were sometimes used to mean "boog affecting the mouth". *Boog* was also used to describe lameness in sheep and goats caused by infestation with *Hyalomma* ticks around the coronary band and between the claws. This form of lameness did not always involve a wound or abscess, and therefore another interpretation of *boog* could be "lameness in sheep and goats". In lameness cases it seemed that the lesions were one of three types:

- Well-defined abscesses on or around the coronary band, probably due to thorn injuries, though may also be secondary to tick attachment or injury.
- Moist diptheritic lesions between the claws, similar to lesions caused by *Bacteroides nodosus* and *Fusiformis necrophorum* infections.
- A cellulitis around the coronary band, sometimes extending proximally towards the knee and associated with tick attachment.

*boog aool* literally, "boog" of the stomach/abdomen: *Boog aool* described abscessation of abdominal viscera, such
as that caused by necrobacillosis.

caal literally, mucus: Although the literal meaning of caal was mucus, the word had a similar usage to the English description “wormy”. Many herders recognised gastrointestinal worms during post mortem examinations conducted in the field and related these to caal. Animals with caal may show signs such as diarrhoea, weight loss, poor growth, submandibular oedema, or death. Sometimes the word aadadh was used to describe “wormy” camels. The word gooryan was used to describe both roundworms and tapeworms.

cabeeb: This term was used to describe foot and mouth disease.

cadro: This term referred to a skin condition in camels with a clinical appearance identical to that caused by sarcopptic mange. All skin conditions in sheep and goats were called cambaar (see later).

cag salah literally, rubbing the foot: This term described camels which pawed or stamped the ground during a severe and fatal illness of rapid onset. Informants claimed that the condition which gave rise to the sign of cag salah had not been seen in the Sanaag for many years. Mares (1954) mentioned the expression ag ku suulleh and related the term specifically to trypanosomiasis. Hadrill (1992) related the term to camels with swollen feet.

calaacul literally, leech: These parasites attached to the oral cavity and proximal oesophagus of livestock.

cambaar literally, a bad sign: Cambaar was used to describe any skin condition of sheep and goats. In camels the word referred to lesions identical to those caused by ringworm. “Ringworm” is given as the English translation of cambaar by Abdurahman and Bornstein (1991) and Mares (1954). However, Mares also describes cambaar cad used for “almost sub clinical” sarcopptic mange in sheep and cambaar madow, an undiagnosed skin disease in sheep. For ringworm in camels Dioli and Stimmelmayr (1992) use the word robi. It is possible that in cases of ringworm, dermatophilosis and mange, lesions could arise which herders will call cambaar. In addition, cambaar was also used to describe a skin condition of sheep in which the hair on the back became dirty and encrusted.

candhobarbar literally, swollen udder: Candhobarbar was used to describe a hot, swollen udder such as that caused by acute mastitis.

candhoole literally, shrunken udder: Candhoole referred to an udder which was permanently damaged and unable to provide good quantities of milk. The term suggested chronicity and dysfunction.

carar: This was a burst abscess or infected wound on the udder.

carro: This referred to a condition in which numerous small lumps or nodules appeared suddenly on the skin of camels. The condition was similar to urticarial reactions in cattle described by Mares (1954).

cifasho: This described frothy bloat in livestock. Herders thought that the condition occurred when stock grazed grass with dew in the early morning.

cudum cuud literally, disabled forelegs: Cudum cuud was said to affect cattle only and caused a stiff gait, inappetance and sometimes recumbency. All cases recovered spontaneously after three to six days and herders responded to the problem by moving animals to a different area. The descriptions of this disease are suggestive of ephemeral fever (see also galab isboor).

daab: This term described diarrhoea in young ruminants and two forms were recognised. Daab canood referred to di-
arrhoea caused by over-ingestion of milk. Daab geedood referred to diarrhoea which occurred at the time when young stock began to graze.

dabagdabaq: This word was used to describe a staggering or high-stepping gait. The British Veterinary Team (1972) mentioned the word dabadaba in association with heartwater, though the absence of Amsiyoma ticks on livestock in Sanaag would prevent transmission of the disease in this area.

dabadhiig literally, bloody tail: The English translation of dabadhiig is dysentery (see also hardhiig).

dabahawiiye literally, opening of the tail: This word was used to describe non-specific diarrhoea in camels.

dabakariaab: Herders used this term to mean rinderpest.

dafac: This term was used to describe any sickness in horses or donkeys.

darato: This was a condition of sheep and goats which resulted in diarrhoea, bloat, and sometimes death. Ingestion of new growth of certain grasses was said to cause the condition (see also cifasho).

dhabiijo literally, mites: Refer to cadho and camaab for descriptions of mange.

dhaleecoo literally, negative propaganda: Dhaleecoo was used to describe a skin condition of camels involving open wounds, pus and localised skin swellings. Herders recognised that the disease was contagious, and dhaleecoo meant camels with the condition would give their owner a bad name if they were allowed to mix with other camels. Peck (1939) used the word dahehau to describe contagious skin necrosis, a condition confirmed in Somaliland by Edelston and Pegram (1974).

Skin wounds similar to those of dhaleecoo but which are not contagious were called wagglal, or less frequently, goosato. The synonyms for contagious skin necrosis maco (Abdurahman and Bornstein, 1991) and maho (Dioli and Stimmelmayr, 1992) were not used in Sanaag.

dhalmo literally, delivery/parturition: When applied to sick livestock dhalmo referred to illnesses such as endometritis which occurred within a few days post partum. See also mandheernaqosho.

dhicis literally, abortion: See also mandheer dhiig.

dhiigla’aan literally, empty blood: A descriptive term applied to animals with pale mucus membranes, or to pale carcases with watery blood. In English such cases would be described as anaemic.

dhobin gooyo literally, joint cut: Dhobin gooyo was used to describe animals with swollen joints (see also mal).

dhugato: This was a respiratory disease in camels which resulted in prolonged debilitation and required an extended recovery period. Dioli and Schwartz (1992) associated dhugato with severe production losses and abortion in camels. Dhugato has been translated as bronchitis (Hadrill, 1992) and pneumonia (Abdurahman and Bornstein, 1991).

dhukaan literally, chronically emaciated camel (Applied idiomatically to other animals or man): The English translation of dhukaan is usually given as trypanosomiasis due to Trypanosoma evansi (surra). Mares (1954) describes dhukaancad (literally, white dhukaan) and dhukaan madow (literally, black dhukaan) to signify mild and acute forms of the disease, although these terms were not in use in Sanaag. Other Somali words associated with trypanosomiasis were gol (Abdurahman and Bornstein, 1991; Heuer 1993), gosha (Heuer 1993) and for trypanosomiasis due to Trypanosoma congoense (tsetse-transmitted), korbarbar (Schwartz and Dioli, 1992). Tsetse-trans-
mitten trypanosomiasis does not occur in Somaliland. See also gendi and sunqy.

dhulwas literally, mating the ground: Dhulwas was used to describe male animals with enlarged testes. Brucellosis is a possible cause of dhulwas in sheep and goats.

dhuug literally, fly or insect

dibechee literally, lice: Dibeche was used to describe severe lice infestations in young lambs and kids. The condition was associated with dhiigla'aan (see above).

dooobarbar literally, swelling of the soft palate: Doobarbar was used to describe injuries or disease of the soft palate of male camels. Abdurahman and Bornstein (1991) mention this term and propose that the problem is most likely to occur during rutting.

dulan literally, ectoparasite: Dulan was used to describe newly emerged tick larvae before they attached to a host.

faraati: This was used to describe the condition of vaginal and uterine prolapses.

faradheere literally, long fingoured: Faradheere was the name used to describe long-legged ticks with a patterned body. These ticks were identified as Amblyomma species.

fin: This word was used to describe the small wounds caused by biting insects or tick attachment.

furug: This word was used to describe conditions of camels, sheep and goats, the clinical appearances of which were similar to camel pox, and sheep and goat pox. For furug in camels, the differential diagnoses would be camel pox, camel contagious eczema (orf) or camel papillomatosis. For furug affecting sheep and goats, orf was the main differential diagnosis in Sanaag. Herders considered furug to be prevented by vaccination and animals with the disease were not allowed to move near a well or mix with healthy animals.

fuure: This was a descriptive word meaning distension of the stomach or abdomen.

gafane literally, engorged adult female ticks of all species.

galab isboor literally, bending in the evening: This term referred to the hunched up appearance of sick cattle and was used as an alternative for cudum cuud.

garabcad literally, white shoulder: Garabcad was used to describe an adult tick with white shoulders. These ticks were identified as Rhipicephalus pulchellus.

garabciiid literally, shoulder cut.

garabgoye literally, disease of the fore-quarter: Garabgoye and garabciiid were used to describe sickness in cattle affecting one limb. The British Veterinary Team (1972) associated the term with the clostridial disease, blackquarter.

garangoori literally, unengorged ticks with striped legs and plain bodies: The name garangoori was used to describe adult Hyalomma ticks. The British Veterinary Team (1972) used the word garangor to mean both streptothricosis, Amblyomma ticks and Hyalomma ticks.

garbo beel literally, sickness at the withers: Camels with deep-seated draining abscesses at the withers were described as suffering from garbo beel.

gees literally, the horn of a goat or cow: Gees was used to describe injuries or infections at the base of the horns, which were often secondary to tick infection.

gendi literally, tsetse fly: In Sanaag, gendi was used as an alternative term to dhuukaan. Tsetse flies are not found in Somaliland.
godowaleh literally, inside widening: Godowaleh was used to describe enlargement of the scrotum and testes in male goats. The condition was thought to be most prevalent in the coastal areas of Sanaag. The British Veterinary Team (1972) used the term godo welech as a synonym for orchitis in goats. Brucellosis is the most likely cause of godowaleh (see also dhiltwas).

gooryaan literally, roundworms or tapeworms: See caal.

guudan: This term was used to describe a twisted neck in camels (see shimber). Peck (1939) used the word guudan as a synonym for arthritis in camels.

hargab: In Sanaag hargab was used to describe mild respiratory disease, equivalent to a human cold, in all species. The word erghiib was given as the Somali name for pneumonia or influenza in camels by Dioli and Stimmelmayr (1992) though this term was not recorded in Sanaag.

hardhiig literally, bloody faeces: Hardhiig was used to describe dysentery in animals (see also dabadhiiig).

humbul literally, huddle together: The word humbul was used to describe a tick-borne disease in sheep and goats which caused high mortality and morbidity. A tick fever complex called hulume or shillin was described by the British Veterinary Team (1972), and Edelston (1975) attributed most cases to Nairobi sheep disease.

indo hanun literally, painful eyes: Indo hanun was used to describe any eye problem, such as conjunctivitis, corneal lesions, or injury to the eyelids.

indo jebiye literally, closed eyes: This term had a similar usage to indo hanun.

injir literally, lice: Similar usage to dibheeche.

jabti: This term was used to describe gonorrhea in man, though it was also used to describe genital diseases in rams. The condition ulcerative balanoposthitis was described by the British Veterinary Team (1972) and has some similarities to jabti (see also shadeedyo).

jaqle literally, sudden death or sudden cry of an animal before death: Jaqle was used to describe any disease causing sudden death in small ruminants. Likely causes of sudden death include anthrax, pasteurellosis, clostridial disease and plant poisoning (see also kud).

jibaaax: This was a respiratory disease which caused coughing, particularly in young horned species. The condition was associated with cold and wet weather. The meaning of the word jibaaax was explained by describing a person passing through a large, tightly packed crowd. When the person pushes the first member of the crowd, this has the effect of moving other people in the crowd, so eventually the entire group is affected. The word jibaaax described the spread of disease in a similar fashion through a group of animals.

kaadi dhiig literally, blood urine: Herders used this term to describe the clinical sign of haematuria or haemoglobinuria.

ka bixid: This term meant an insect or tick which bites an animal and remains attached to the body, for example, Hippoboscid flies (see takar).

kud literally, arrive suddenly: Kud was used to describe diseases which killed animals suddenly. Although anthrax is usually given as the English translation of kud, the term could be applied to any sudden death case. In camels differential diagnoses include haemorrhagic septicaemia (British Veterinary Team, 1972), clostridial disease and Bacillus cereus septicaemia (Wernery et al 1992). In sheep and goats pasteurellosis and clostridial disease are common causes of sudden death (see also jaqle).
‘Sudden lagle was causing illness. Likely anthrax, disease in the blood and wet jibax person packed the first aid effect, so affected. Three of the herd’s clinical signs of injury. A sedentary and remains ample, ad was killed. Hraxis is siltation to any diphtheretic Team, acillus 1992). S and uses of lxaawgal: This term was used to describe a mild respiratory disease in camels.
mal: Animals with septic arthritis (joint-ill) were said to be suffering from mal. Herders thought that the problem was caused by poor blood supply to the affected limb or limbs.
mhandheer dhiiqg literally, bloody after-birth: Mandheer dhiiqg was an alternative term to dihics, and meant abortion.
mhandheer noqosho literally, retained after-birth: This term was used to describe the problem of retained placenta, particularly in camels.
mud, dilaac literally, body crack: This term was used to describe abdominal herniation.
muglo literally, drunken/stagger: Muglo was used to describe a condition in camels which caused clinical signs similar to those of tick paralysis. Mares (1954) used the term as a synonym for tick paralysis in sheep and goats, and Hadrill (1993) also mentions muglo and describes the clinical signs of the disease.
offmud literally, side puncture: The word off described the area of the body wall of an animal just caudal to the axilla. The sambab (literally, lungs) were believed to lie beneath this area, which if punctured, offmud, would give rise to respiratory problems. In Sanaag, the term was confined to disease in sheep. Abdurahman and Bornstein (1991) mention oof as a synonym for pneumonia in camels (see also jibax and dhugato).
qaniiyo: This term was used to describe an insect which bites an animal but then does not remain attached to it.
qanjoloe literally, lymph node disease: Qanjoolo described enlargement of superficial lymph tissue, and was mentioned in association with jod, dhuukaan and other diseases.
qanayn literally, immature ticks.
qanjobarar literally, lymph node swelling: Qanjobarar was used by some herdsmen in a similar way to qanjoole. Abdurahman and Bornstein (1991) used the words qanjobarar and qerebarar as synonyms for a condition in camels described as lymphadenitis, involving abscessation of the prepectoral or other superficial lymph nodes. In Sanaag, the word wagal (see below) was preferred when superficial lymph tissue became abscessated.
raaf dilaac literally, hoof crack: This term was used to describe injuries to the wall of the hoof.
rugat: This term described injuries to the sole of the foot, such as those caused by thorns.
ruqur literally, knot: The word ruqur was used to describe hydatid cysts in lungs or liver.
sambab literally, lungs: The word sambab was used to describe serious respiratory disease in sheep, goats and cattle. Contagious caprine pleuropneumonia and contagious bovine pleuropneumonia have been used as synonyms for sambab (British Veterinary Team, 1972; Hadrill 1992). Herders recognised that some lung disease resulted in sambab faraq. The term faraq implied that the lung was not able to move freely and was restricted by white bands of tissue. Therefore sambab faraq could describe the chronic adheresions associated with pleuropneumonia.
sangaale literally, enter the nose: The word sangaale was used to describe infestation of the nose and pharynx with nasal bots. The larvae of nasal bots were called sangal (Cephalopina titillator or Oestrus ovis in camels, O. ovis only in other species).
seed xooran literally, lost tendon: This term was used to describe a damaged limb tendon which contracted and caused lameness.
shadeedyo: This was the name given to a disease of rams which caused kaadi caso (literally, red urine), kaadi qabad (literally, difficult urination), and lesions on the penis, sheath, or skin around the genitals. Similar signs in ewes were called kaadi caso only. The word jabti was also used to describe these features. Hadrill (1992) used shadeedyo as a synonym for balanoposthitis in sheep. Herders associated shadeedyo with ingestion of the plants esal bukeye (literally, sickness of ram penis) and gacade (literally, white chin/beard). According to Mares (1954) the plant Cleome brachycarpa is called esal bukeye by Somali and it exudes an irritant oil which causes ulceration of the tip of the penis and sheath of rams. However, Cleome brachycarpa is described by Miller and Morris (1988) as possessing a “delicious, refreshing strong leomy, perfume”, which was rubbed over the body (iiuman) as a perfume and deodorant. It is not clear whether the same plant also produces the irritant oil mentioned by Mares.

shaf-daloo lo literally, hole in pedestal pad: Shaf is the Somali word for the pedestal pad of camels. Daloolo means “hole”. Therefore shaf daloolo refers to injuries to the pedestal pad, particularly burst abscesses or sinuses.

shilin: In Sanaag this word was used to describe tick(s), tick infestation and tick borne disease. Herders recognised different tick species but considered these to be distinct stages in the life cycle of a single tick “shilin”. A typical tick life cycle described by herders is illustrated in Figure 1.

Figure 1: Tick life cycle described by pastoralists in Sanaag.
The first stage of the life cycle was called dulan, the newly hatched tick larvae when it was still on the ground. Once dulan attached itself to a host and began to feed it was known as qanayn. It was thought that if qanayn received an adequate blood meal, it would change directly into an adult female engorged tick called qafane. If qanayn was unable to feed sufficiently well, it would change to shilincas (Rh. everesi eversti). If shilincas fed well it too would change directly into qafane, but if it did not feed it would change into garabcad (Rh. pulchellus). This pattern of development was repeated, with garabcad changing into garangoori (Hyalomma species) and then faradheere (Amblyomma species) depending on the blood meal each stage in the life cycle received.

shilincas literally, red tick: These ticks were identified as Rh. everesi eversti.

shilin madaw literally, black tick: These ticks were identified as belonging to the Rh. simus group.

shimber literally, bird. In Sanaag the word shimber was used to describe madness or bizarre behaviour in an animal. The British Veterinary Team (1972) related shimbir to the neurological signs of the disease heartwater, although Dioli and Stimmelmayr (1992) use shimber as a synonym for wry-neck syndrome in camels. This condition was called shimbir madax by Abdurahman and Bornstein (1991), who also mention the term shimbir calool and translated it as “colic like symptoms”.

shuban literally, diarrhoea: A non-specific term which was described diarrhoea in both livestock and man.

suqiiye: This term was used to describe camels which gradually lost body condition and became emaciated, despite continuing to graze and show no other signs of disease. In camels in Sanaag, trypanosomiasis due to Tevanssi was probably the main cause of suqiiye.

takar: This was the name given to Hippoboscid flies. Hippoboscidae are mentioned as possible vectors of Tevanssi by Pegram and Higgins (1992), and Dioli and Stimmelmayr (1992).

waglal: This was the name given to infected skin wounds and abscesses which did not transmit to other animals. Frequently, these lesions were associated with abscession of superficial lymph nodes, particularly the popliteal nodes.

xaglo literally, angle (as in mathematics): Xaglo described a congenital deformity of camel calves involving over extension of the carpal joints. The term was also mentioned by Mares (1954), and a number of congenital abnormalities in camels were described by Schwartz and Dioli (1992), including hyperflexion of the fetlocks, undershot knees and severe bilateral deviation of the carpal joints.

xaqiqaqato: This term described lesions on the skin of the ventral thorax or pedestal pad which arose from friction between this area and the forelimbs. The problem was associated with enlargement of the pudendal pad, such as may occur in shaf daloolo, or in camels with a narrow chest conformation.

Discussion

The range of livestock illnesses, signs of ill-health and behavioural changes described by pastoralists in Sanaag indicated a detailed knowledge of animal disease, including the infectious nature of some conditions and the role of arthropod vectors. For example, herders distinguished between the transmissible dhaleeco and the non-transmissible condition waglal, and recognised the role of ticks and flies in the spread of disease.
The understanding of the contagious nature of some diseases enabled pastoralists to develop rules which helped to limit spread of disease on the range, such as that which prevents a herder watering sick animals at a well where healthy stock are present. In addition, herders were also able to provide information on the epidemiology and pathology of some diseases which was of considerable diagnostic value to programme staff.

In terms of the design and planning of the VetAid/ACTIONAID animal health programme, the type of information presented in the notes assisted programme staff to work with pastoralists to prioritise livestock diseases, particularly when the data were incorporated into disease ranking exercises. Subsequently, the limited resources available to the programme were directed towards the most important diseases as agreed by both the pastoralists and programme staff. Of note in Sanaag, was that pastoralists were more interested in treating and controlling common problems such as footrot and parasite infestation, than for the programme to establish extensive vaccination schemes.

When comparing these notes with previous accounts of livestock disease in Somaliland and Somalia, a number of discrepancies and similarities came to light which could not be discussed in detail. The notes refer specifically to Sanaag and it was assumed that pastoralists in different regions of the country could use alternative terms for some diseases. Also, it was recognised that the notes are incomplete and much more information remains to be gathered. However, it is hoped that they will be of value to those involved in animal health work throughout Somaliland and Somalia, and will encourage them to formulate livestock dictionaries for local use.

References


Notes
(1) Somaliland refers to the area of north west Somalia which declared independence in May, 1991 and which geographically is identical to the former British Protectorate of Somaliland.

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Résumé
La participation active des pastoralistes faisait partie intégrale de la conception et de l’application du programme vétérinaire VetAid / ACTIONAID dans la région de Sanaag en Somalie. Ce processus consistait, entre autres, dans la compilation d’un dictionnaire du vocabulaire que les pastoralistes employaient pour les maladies du bétail et leur traitement. Une partie de ce vocabulaire est présentée dans cette étude.

Resumen
Una parte vital del programa sanitario animal VetAid/ ACTIONAID en la región Sanaag de Somaliland fue la participación activa de pastores locales en el diseño y la implementación del programa. Un elemento en este proceso fue la redacción de un diccionario pastoril sobre hierbas.
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