Hunting: Report of
Ch Handley in his hand
writing and reproduced. Etc

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Notes on Bushman hunting in the /Gam-Gautscha area of South-West Africa — Charles O. Handley, Jr., Dec 1952.

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I. Hunting techniques

A. Standard method (seeking, stalking, and killing)

1. Weapons

a. Initial attack: Normally bow and poisoned arrows; sometimes assegai, clubs, or stones.

b. coup de grace: assegai, knife, clubs, or stones.

(see Section II, on weapons, for details)

c. Note. I did not observe bare hands used for neck breaking, choking or suffocating. In instances where these might have been employed, a blow with stick or stone on the head was used instead, or the animal was allowed to die slowly without assistance. [sends check]

2. Number of participants

a. The most common hunting party apparently consists of a single man, or a man and his son. This refers to the actual hunt. A hunter may be accompanied to the hunting area by his wife and children or a group.

b. Sometimes bands of hunters go out together, as was commonly seen with DeKay, and on the long hunt of /Gwi Hunter. However, during actual hunting these bands normally break up so that no more than two hunters are in contact.

/Ti!Kay

3. Cooperation

a. There is surprisingly little evidence of cooperative hunting effort. The terrain does not favor drives, except in rare instances, but is quite suitable for decoying. However, no use of decoying techniques was observed. (e.g., One hunter distracts game while another stalks, or one hunter frightens game toward a concealed hunter.)

b. Traveling. It seems likely that a hunting band, traveling to a hunting area, might fan out and agree to converge at some point further along the route, thus covering much more ground. However, evidence of this is negative. Bands that we have encountered in transit were usually moving single file, or at least close together.

c. From a camp or truck. It was observed on numerous occasions that a band splits into singles or pairs, which divide the points of the compass among them. Pardners hunt abreast and near enough together to keep contact.

4. Length of hunt.

a. Observations on /Gwi and DeKay (/Ti!Kay) at Gautscha, and on various Bushmen transported to hunting areas by truck, indicate that actual hunting seldom occupies more than a few hours, say two to five, in a day. However, from a permanent camp,

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as at Gaucha, it may require several hours walking to reach and return from a favored hunting area. Technically, the hunter may be said to be hunting from the time he leaves camp in the morning until he returns in the evening, even tho he hunts only a few hours around his objective. [needs further check]

b. Sometimes hunters leave camp soon after daybreak and do not return until after nightfall (3 hours after in one instance with Gao Helmet). More often they leave several hours after sunrise and return in mid-afternoon. The most productive hunting periods (early morning and late afternoon) are thus spent in camp. [whether this is standard operating procedure or a Gaucha aberration needs checking.]

5. Seeking game.

a. Spied. The Bushman hunter proceeds, according to my observation, at a slow and easy pace. He avoids thick places, watches very carefully where he sets each foot when there are thorns (normally does not wear his sandals when hunting), and moves branches out of his path with his hands. He does not force his way thru thickets.

b. Grazing. The hunter is always on the lookout for edibles, and other things he can use (arrow grass, scale insects for arrow gum, pinon beans, etc.). In fact, while hunting, he may spend as much time picking berries, gumballs, roots, etc., as he does actually seeking game.

c. Tracking. As the hunter moves along he is constantly on the lookout for tracks. He would remind one of a bird dog covering a field and scenting game. The Bushman must investigate each set of tracks he comes across. If they are relatively fresh he may follow a little way. If he decides that they are not more than a few hours old, he will probably continue to follow, hoping in this way to come upon the game. The Bushman tracks rapidly, faster than his normal hunting pace I should say. He follows not the individual tracks, but the trail. If tracks temporarily fade because of hard ground or rocks he does not stop, but continues on the general course, presuming to pick up the trail again when the barrier has been passed.

d. ~~Sound~~ Hearing. Sometimes game may be located by ear. Gaucha Hunter told us of locating an eland by hearing it walking and then hearing the noise of its browsing.

e. Sighting. The most important method of locating

game is of course by seeing it. Usually it is necessary for the Bushman to see the game before it sees him if he hopes to have a shot at it. The successful Bushman hunter has very keen eyesight. I found that Bushmen quite regularly saw game before I did, often at distances that required binoculars for me. However, they are not infallible. Occasionally I saw game before they, and, rarely, that they did not see at all.

f. Observation Posts. We were told that Bushmen sometimes climbed the tall baobabs to look out over the veld for game. I am inclined to believe that this is one of the less important methods of game location. It is more important for the Bushman, with his limited horizon and small vistas, to know where game is likely to be and to go there.

6. Stalking

a. When game has been located, then the stalk begins. Occasionally sighting and shooting may be almost simultaneous developments. Probably more often the sighting is followed by a stalk to bring the hunter close enough for a shot.

b. Speed. Bushmen move under cover in approaching game much more rapidly than I could. In this they are favored by their small stature and lack of impediments. They employ the usual crouching and crawling techniques according to the dictates of the cover.

c. Closeness of approach. Of course, the hunter approaches as close as he can reasonably get for his shot but the average shooting distance is about 30 yards, and the maximum about 60 yards.

7. Shooting

a. Position of animal. Presumably the hunter seeks a standing shot whether he often succeeds with a running shot I did not learn.

b. Aiming point. Normally the hunter tries to place his arrow near the heart so the animal will die quickly. However, an arrow embedded anywhere in the body will kill sooner or later, so I suspect that the average shot is intended to hit the animal, not to hit some specific part of it.

c. Small game, such as tortoises, snakes, legwans, badgers, etc. are most often encountered suddenly and unexpectedly and are probably usually dispatched with stones or club.

8. Killing

a. If the arrow has hit near the heart and there is evidence that the animal will die quickly, the

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hunter may give immediate chase and kill the animal with his assegai if he can overtake it.

b. Otherwise, he will let the animal go, for it will probably lie down and die sooner if not pursued. The speed of action of the poison depends to some extent on the location of the arrow in the body. However, on the average small bucks (steenbok, etc.) may die in two or three hours, medium bucks (wildebeest, etc.) in three or four hours to a day, large bucks (elands, etc.) in a day to two days, and a giraffe in three or four days to a week. Human beings are said to perish in an hour or two.

c. After the wounding the hunter returns to the werft, or wherever his base may be, and waits till sometime later, usually the next morning, before taking up the trail.

d. The hunter may pray: "Oh God, please make this animal die quickly so it will not run far." The name of the god may not be mentioned, except on special occasions, for fear of retribution from him.

e. When a hunter has shot an animal he does not mention the name of it, for fear the tracks will disappear, and he will be unable to find it. When he returns to the werft after the shooting he says nothing. The next morning, if he wishes anyone to accompany him, he says he has shot an animal. He still does not mention the name. His confederates will see soon enough from the tracks what it is. When the animal has been found dead, then it is alright to speak its name. [This may be only theoretically true. When DeKay shot the Gemsbok, I was told immediately afterward that he had shot a gemsbok. I was not with the group at the moment of his return. There were tracks around. He could have pointed to them. When /Qui found the dying wildebeest, I was told he had found a wildebeest again I was not present at the moment of his return.]

f. When an inexperienced hunter has shot his first buck, he says nothing about it when he returns to the werft. The next morning he goes out and follows the spore alone, having told no one of his good fortune.

g. Tracking proceeds rapidly. Often several hunters cooperate. Proceeding abreast, the one nearest the trail points to it. If the trail is temporarily lost by one, it will be likely picked up immediately by another, and the pace continues unbroken. The value of cooperation of several

trackers is particularly apparent where there are patches of stony or hard ground.

h. Usually the stricken animal, when it lies down to die, seeks shade. Bearing this in mind, the Bushman can estimate the time of the animal's death.

i. An animal with a Bushman arrow in it is supposed to be inevitably doomed to die. Thus, it is bound to be found at the end of its tracks. However, there is some evidence that despite the Bushman's skill in tracking mortally wounded game occasionally is not found. The reason given for this is that the tracks may become confused and lost where the wounded individual mingles with a herd. Possibly this is most likely to occur with a successful hunting party that has meat in camp and other game wounded simultaneously.

9. Use of dogs. Our group did not use dogs, but knew of the use from observation of hunting methods of nearby native tribes. Some visitors to the Gaucha group were training dogs for natives.

B. Blinds

1. Weapons

a. Initial attack. Bow and poisoned arrow.

b. Coup de grace. Assegai, knife, club, or stone.

2. Location. As far as I could determine, blinds are constructed only at waterholes. There are blinds at four waterholes at Gaucha, and well preserved ones at Gura and Coucha. They are placed within five or ten yards of a waterhole or at a nearby approach path. Usually two or three are strategically located around each waterhole. Wurfts are normally located far enough away from waterholes so that smoke and noise will not disturb the game that normally come to drink. Three or four hundred yards seems to be the usual distance, although some are closer.

3. Construction. If the ground is soft enough, a circular hole three or four feet in diameter is dug out deep enough so that a Bushman can be concealed in a kneeling or squatting position when stones have been piled up to a height of about a foot around the hole. If soil is shallow, then concealment may be afforded mostly or entirely by the ring of stones, and the hunter may have to hide in a reclining position.

4. Use. Blinds are apparently used only at night, most particularly on moonlight nights. Evidently this is the only type of hunting done at night. Lions

at night too, the Bushmen say. However, they consider two or more Bushmen together to be relatively safe from lion attack. Some, particularly the more successful young hunters, regard use of blinds as a rather poor way to hunt. They allude to the possibility of sitting up all thru the night and not getting a shot till dawn, or worse yet, not getting a shot at all. What could be more futile, they say.

6. Shooting and recovery technique. Same as described in section IA7-8.

6. Game. No class of game is more successfully hunted thru the use of the blind, than with the standard daylight method already described. Kudu, wildebeest and hartebeest are said to the the most frequent victims.

7. Camouflage. We have no evidence of the use of cut vegetation or animal skins for camouflage or disguise.

C. Rundown

1. This technique is employed only by strong young hunters. It is said that almost all Bushmen have run down bucks at some time.

2. It is a test not so much of speed as of endurance. The hunter must keep doggedly after the buck until it collapses, never giving it a chance to rest. The Kalahari savannah favors the hunter in this sort of pursuit. The buck does not run wildly away, but seeks cover for resting and is continually and repeatedly routed by the hunter.

3. Rundowns fall into two classes.
   a. Rainy season, when ground is soft. The plunging buck sinks deep at each bound. It eventually collapses from fatigue or splaying apart of the hoofs.
   b. Hottest, driest days of winter. Whether the chase in this instance produces heat prostration or just what is not clear.

4. Antelopes are the only class of game that are run down. Among them the only exceptions are the springbok and hartebeest, which sprint straight away (and are too fast even to be run down on horseback, according to Hereros). Ease with which an animal may be run down is related to its physical condition (fat or lean, stomach full or empty, etc.). In general it is said that the small bucks are run down more quickly than the large, and of the latter the bulls are more easily run down than the cows. For duikers and steenboks the chase usually

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requires three or four hours and ten to twelve miles; for an eland twelve hours or more and forty miles or more.

5. when a buck has been run down it is usually killed by stabbing with assegai or knife.

D. Capture in burrows.

1. A derivation of the run-down technique is used for steenboks and hares.
   a. Steenboks when hard-pressed sometimes take refuge in aardvark burrows. The hunter either follows it into the hole, or clubs it when it tries to come out.
   b. The desert hares do not normally resort to burrows but when pursued closely sometimes take to those made by springhares or aardvarks for refuge. However, they do not go far beyond the entrance. The hunter sharpens the forked ends of a pole into points and prods this into the burrow until it touches the hare. The pole is then twisted to engage the fur, and the animal is pulled out.
2. Springhares are nocturnal and spend the day in deep burrows. Bushmen say summer is the season to hunt them, for they are more numerous then. To capture them the Bushman splices together four or five long flexible poles and applies a hook of iron or wire at the end. Best results are had if two hunters cooperate. One prods the long pole into the burrow while the other listens carefully for the protest of the springhare. If the burrow is occupied, an effort is made to hook the springhare in the chest, so that it cannot escape into a branch tunnel. If the tunnel is not deep the springhare may be pulled out directly. Otherwise, one hunter holds it fast with the hooked pole while the other digs out the burrow till the animal is reached.
3. Aardvark. The hunter keeps on the lookout for fresh diggings. The entrances of these examines for tracks. Finding one at which the tracks lead only in, he builds a smoky fire at the mouth, presumably smothering the aardvark. Then the hunter crawls down the burrow and extricates the beast. As a variation of this, after the animal has been smothered to prevent its escape by burrowing away, the hunter may dig it out. [Doke should have additional details.]

4. Hornbills. Among the edible birds, apparently only the hornbill is obtained by a special technique. All others are either shot with arrows or snared. The hornbill nests in hollows in trees. The nest entrance is watched until the hornbill has gone inside. The entrance is then blocked and the bird secured.

E. Ostrich. I have heard, but not from Bushmen, that they kill ostriches by sticking a poisoned arrow upright among the eggs in a nest, so that the bird impales itself when it squats down to brood. I am skeptical of this. Also, I have heard that the hunter disguises himself in an ostrich skin, and with the head and neck held aloft with a stick, is able to approach live ostriches close enough for a shot. However, !Gau and Boncha Bushman said they had no means of killing ostriches. One that was shot with the assistance of a truck ran for more than six miles with poisoned arrows in it and was finally killed with an arrow thru the heart.

F. Traps. The only traps known to me are snares, with which a variety of small game including sandgrouse, guinea fowl, springhare, hares, and dukers are caught. [This subject should be pursued further. Sketches of snares should be made. The possibility of the use of pits, deadfalls, and nets should be checked.]

G. Vultures and eagles. The successful Bushman hunter grasps every opportunity to secure game, and does not disdain taking it away from other animal hunters.

1. I saw !Qua hunter observe the flight of vultures and then walk thru three miles of brush directly to a dying wildebeest, using the vultures as guides. In this region vultures normally fly too high to be noticed by the naked eye, except where they congregate about waterholes and dead or dying animals. Thus, the presence of vultures where there is no water is a rather sure indication of downed game. Even if the animal has been dead for several days it is still regarded as edible by the undiscriminating Bushman.

2. There are several species of large eagles in this region that include young antelopes and even the adults of steenboks and dukers among their prey. Not infrequently the animal they kill is too heavy for them carry away and must be eaten on

the spot. a Bushman happening upon such a scene is thus furnished with fresh meat. Several told me they had secured steenboks and duikers in this manner.

H. Magic. Certain customs connected with hunting may be loosely connected under the heading of magic. [My observations on this subject are superficial, and the entire problem should be examined more closely.]

1. Ointment is applied to the body on certain occasions to ensure hunting success. My impression was that this was sort a last ditch measure. [John has notes.]

2. Horns of duikers or steenboks are worn around the neck or waist to bring luck in hunting. For this they are mostly worn by old men. Children wear them for pleasure. Great hunters do not need them.

3. The name of a wounded animal may not be mentioned for fear the tracks will fade away, making it impossible to follow. [See section I 18c]

4. Oracle discs may be rolled by medicine men in an effort to locate game or predict hunting success. Discs are made of skin [and perhaps bone].

5. Dances. Thanks to God for success in hunting is possibly offered up thru dances. We have noted that dances often follow successful hunts. Petitions for success may be put thru the same medium.

6. Prayer either by the hunter himself or thru the intermediary medicine man may have some importance in hunting. [See sect. I 18d]

7. Ceremonial scarification.

8. Charmed arrows, according to my information do not exist. Each arrow in the quiver is as good as the next, and none is regarded with special favor. an arrow that has killed an animal has no special value attached to it. ["Testing" of arrows by skilled hunter, or "passing" of arrow from one person to another may have some connection here.]

I. Miscellaneous notes.

1. Age and the hunter. It is obvious that with such strenuous and exacting hunting methods as those employed by Bushmen that the aged hunter could not be as successful or efficient as the hunter in his prime. To hunters of all ages I repeatedly put the questions: "Do old hunters use methods not generally employed by the young?" and "Do old hunters seek certain classes of game more persistently than young hunters would?" Always the answers were the same: "No!" However, it appears to me that the older hunters must be

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more constant users of blinds, more persistent diggers of springhare, and more conscientious users of snares than the hunter in his prime. That is to say, that while the prime hunter would employ these methods mostly in times of big game shortage, the old hunter would use them at all times.

2. Choice of game. All hunters use all methods known to them in securing game, and it is said that there is no choice of game. A hunter does not set out specifically to get a kudu, or specifically to get a duiker, but rather takes whatever he can find that is edible. It is not beneath the dignity of even the greatest hunter to bring back a tortoise or a badger instead of a gemsbok, tho certainly it is the hunter who consistently brings in the big game, that has the biggest name in the band.

3. Special weapons. We saw no evidence of and questioning did not reveal the existence of any special weapons for specific classes of game. In other words, a standard bow, a standard arrow, and a standard assegai are used on all occasions for all types of game.

4. Trophies. [The following came from /Gwi Hunter thru Thoria and Epson. I am extremely skeptical of the veracity of it. It should be checked.] Bushmen don't count very far, so they can't tell how many bucks they have killed. Therefore they save the tail of every buck they kill and keep it in a pile. The height of the pile shows what sort of a hunter the man is. When the hunter moves his place of residence the tails go along with him. After his death his children are shown the tails so that they will see that their father was a good hunter and thus be inspired to try harder themselves. /Gwi hunter is supposed to have the largest pile of all, including tails of all the bucks he has killed since the first eland when he was a small boy - a pile about 2 ft. high.

II. Weapons.

A. General statement

1. Weapons used in this area include bow and arrow, assegai, knife, club, stone, springhare stick, and hare stick. While digging sticks and adzes cannot be properly classed as weapons, their potentialities should not be

overlooked.

2. Among the hundreds of these weapons seen there was remarkably little variation from type. Hunters that were questioned had never seen Bushmen with weapons of other types, regardless of how far their travels had carried them. Bows they said were just the same everywhere, arrows just the same, etc. [a series of physical measurements of weapons would be worthwhile.]
3. In this section the outline has been broken down into minute categories to assist in photographic summary. [It will be observed that many of the headings remain to be filled in. Some of the missing information has already been gathered but is not in my possession.]

B. Bow and arrow.

1. Bow

a. Gathering-materials

(1) Wood. The bow is a simple and crude affair, and it is said that any wood will do for its construction. However, it is obvious that some kinds would last much longer than others. /Qui Hunter pointed out a bush in the Gautsha camp which is used when available. Bows made of this, he said, last up to four years. Other types sometimes don't last thru a single season.

(2) string.

(3) metal ornaments. I have seen a portion of the metal base of a shotgun shell used for decoration of a bow.

b. Preparation of materials

(1) Wood. The wood is cut green; is usually seasoned for two or three days after shaping.

(2) string. Seasoning plant fibre.

c. Construction

(1) Shaping wood. The piece of wood chosen for the bow is a branch about the diameter of the finished bow. Not much shaping is required, except for removing the knots and tapering the ends. Either an adz or a knife is used for this purpose.

(2) Making string [Does wife ever contribute this, or must the hunter himself do it?]

(3) Fastening string to bow - knotting, etc.

(4) applying ornaments to bow.

(5) String bindings.

d. Carrying methods.

(1) In Hand. It has been my impression that the bow is usually carried in the hand only when

the Bushman is actually hunting.
(2) In sack. When traveling, or when proceeding to a hunting area, the bow is usually carried in a sack slung across the shoulder.

e. Methods of use.
(1) Testing bow before hunt. The hunter almost invariably tests his bow by drawing it several times just before he commences to hunt. This takes two forms, with and without an arrow. Adjustment is made to the bowstring if necessary.
(2) Repair. The hunter frequently examines his bow in camp and always before the hunt, catching up frayed ends of bindings, etc.
(3) Attack. [Various shooting attitudes, type of release, etc.]
(4) Defense. Arrows are said to be sometimes shot in defense, but owing to the slow action of the poison and the fact that the arrow is not designed to kill from its own impact, the assegai and the knife are much more used for this purpose. I have seen the bow itself used as a warding weapon.

f. Disposition when not in use.
(1) In werft. Day and night the bow and arrows are usually hung together in a tree near the skerm, or on the skerm.
(2) In hunting and traveling camps. Hung on tree or bush by day; kept close beside hunter at night, presumably ready for instant use.

g. When visiting foreign werfts. [Under what conditions and on what occasions is it left outside the werft, and how far?] On the one occasion that I saw weapons left outside of the werft, they were hung in bushes about a mile away.

2. Arrow
a. Gathering materials
(1) Metal for point. Traded from natives.
(2) Bone shaft.
(3) Grass shaft. At least two types of grass stems are used in this area. One is the tall reed found at Shinthuma and Kai-Kai; the other is the tall grass commonly found on the sand plains. Wood is not used, for the hunting technique requires that the shaft be fragile and easily broken. The poisoned point section must remain embedded in the flesh of the victim, rather than being pulled out by passage of the animal thru the brush.
(4) Gum. A scale insect.
(5) Poison. Our observations indicate that these Bushmen use only one type of poison: a combination of a beetle pupa, a bean, and juice from the inner bark of a tree. [The possibility of other types

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should not be overlooked. Use of Euphorbia juices and snake venome have been mentioned in literature.] Sources of poison elements are said to be communal property and not claimed by any individual. Bushmen say that the beetle pupae, which are found only around the bases of certain trees (we know of three in the Caucha area), can be dug up at any season [which I doubt]. If a man fails in his digging to find any, he asks at the craft if anyone will give him some. If none are available, he asks for directions to other trees where pupae may be sought. [With this line of questioning I tried to turn up a substitute poison but had no success.] If a man secures many pupae, he may distribute them among all who need them in the craft, or he may allow others to share the poison mixture he makes.

(4) String binding.

b. Preparation of materials

(1) Shaping point. Most shaping is accomplished by pounding with metal against metal, but I have seen also a file used in the final stages.

(2) Shaping of bone shaft.

(3) grass shaft. notching and application of fiber binding

(4) gum. Scale insects are crushed in stone and kneaded between the fingers. The resulting black gum is heated and twisted onto a stick.

(5) poison [Elizabeth has details of preparation]

(6) string.

c. Construction

(1) assembly of component parts.

(2) poisoning [Elizabeth has details.]

d. carrying methods. Arrows are normally carried in the quiver, some head up some head down, and are only removed when game is sighted. Sometimes, however, the hunter removes three or four from his quiver at the beginning of a hunt and carries them loose in his hand, leaving the quiver behind. If the quiver is not full of arrows, slack space is filled with sticks and unprepaired arrow shaft grass.

e. methods of use.

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(1) Testing before use. The hunter frequently tests his arrows, both in camp and just before the hunt. He examines them for straightness and for unity of component parts. Holding the arrow by the notched end he snaps it vigorously in the air to set it in vibration. He moistens frayed ends of fiber bindings and twists them tight again.

(2) Repair. The hunter is very conservative with his arrows. He recovers a large percentage of those he shoots and reuses undamaged parts in construction of new arrows. Normally the grass shaft is broken when the arrow is imbedded in a buck, but usually the point and bone shaft can be used again and again with very little repair. The average hunter carries a full set of repair materials with him everywhere he goes in his shoulder bag. The poison will remain effective indefinitely, as long as the arrow is kept dry. However, since the poison is water soluble, the arrow must be re-poisoned after each successful use.

(3) Attack. [Type of release, etc.] Bushmen say that the poisoned arrow is their only power; it is their offense and defence. Again: God gave the Herero cattle; he gave the Bushmen poison.

(4) Defense.

f. Disposition when not in use. See section II B 1f.

g. When visiting foreign wpft. See section II B 1g.

3. Quiver [Use same outline as for bow and arrow.]

C. Assegai [Use same outline as for bow and arrow.] The assegai is looked upon chiefly as a coup de grace weapon and as a defensive weapon. It does not bear nearly as much importance as the bow and arrow, and, indeed, some of the best hunters are not equipped with an assegai. Apparently assegais are rarely poisoned. They are typically thrown, but are used also for slashing and jabbing. [Jolen should have good observations on use.]

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D. Knife [Use same outline as for bow and arrow.] Bushmen do not make their own knives, but trade them from marginal native tribes. Most are very similar in construction, the variable in length. Some are in possession of pocket knives, and very crude butcher knife-like things. All the blades are soft metal and are never really sharp. Sharpening is accomplished by rubbing the blade against and against an assegai or hatchet head, against a stone, or over sand scattered on a board. The knife is used for the coup de grace or for defense, and is not carried by all hunters. For coup de grace the knife is stabbed into the heart. In this way the blood is saved. The easier method of throat slashing is frowned upon because of its wastefulness.

E. Club and Stone. While these primitive weapons are used principally as a use of the moment expedient, their importance should not be under-estimated. Their use is frequent and widespread.

F. Springhare and Hare sticks. See sections I D and I E.

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UNITED STATES GOVERNMENT

Memorandum

TO : Dr. James Peters JMP
Division of Reptiles and Amphibians

DATE: March 30, 1965

FROM : Charles O. Handley, Jr. COHh
Division of Mammals

SUBJECT: Information for reply

Mrs. L. K. Marshall of Cambridge, Mass., is working on food habits of the Kalahari Bushmen, South-West Africa. She asks for the most approximate scientific names of various Bushman foods, including the following reptiles and amphibians:

python PYTHON SEBAE

mamba DENDROASPIS POLYLEPIS

puff adder BITIS ARIETANS

iguana AGAMA HISPIDA

chameleon CHAMELEO DILEPIS

tortoise, large GEOCHELONE PARDALIS

tortoise, small " "

bull frog RANA ADSPERSA

Would you note scientific names on this memo and return to me?

list of mammals collected near Gautscha Pan, SW Africa 1952

295149-163	Elephant shrew Elephantulus intufi
295164-168	Elephant shrew Nasilio brachyrynchus
295169-173	Elephantulus intufi
295174-183	Lesser white-toothed shrew Crocidura bicolor
295184-190	Desert musk shrew Crocidura deserti
295191	Leafnosed bat Phyllorhina commersoni
295192	House bat Scotophilus herero
295193-4	Brown bat Eptesicus capensis
295195	Free-tailed bat Mops midas
295196-213	Tree squirrel Paraxerus cepapi
295214-224	Ground squirrel Geosciurus inauris
295225-239	Hare Lepus
295239-258	Spring-hare Pedetes ~~caffer~~ capensis
295259-340	Lesser gerbil Gerbillus paeba
295341-357	Greater gerbil Tatera brantsi
295358-518	Greater gerbil Tatera schinzi
295519-535	single-striped grass rat Lemniscomys griselda
295536-553	Four-striped rat Rhabdomys pumilio
295554-572	Veld rat Aethomys chrysophilus
295573-690	Long-tailed rat Aethomys namaquensis
295700-702	Black-tailed tree rat Thallomys nigricauda
295703-829	multimammate rat Mastomys coucha
295830-831	gray desert rat Ochromys woosnami
~~295832-3~~	~~House mouse~~ ~~Mus musculus~~
295834-842	Leggada sp.
295843-947	Dwarf mouse Leggada minutoides

295948-965	Pouched mouse Saccostomus campestris
295966-~~6029~~ 5975	climbing mouse Dendromus melanotis
295976-296029	Fat mouse Steatomys pratensis
~~296030~~	~~Otomys irroratus~~
296031-9	Forest dormouse Claviglis murinus
296040	porcupine Hystrix africaeaustralis
296041-090	Mole rat Cryptomys damarensis
296091-100	Black-backed jackal Thos mesomelas
296101-3	Cape fox Vulpes chama
296104-5	Hunting dog Lycaon pictus
296106-7	Ratel or Honey-badger Mellivora capensis
296108-111	Genet Genetta felina
296112-130	Brown mongoose Myonax cauui
296131-133	yellow mongoose Cynictis penicillata
296134-135	Brown Hyaena Hyaena brunnea
296136-140	Wild cat Felis lybica
296141-142	Leopard Felis pardus
~~296143-144~~	~~Procavia capensis~~ ~~Hyrax~~
296145	Giraffe Giraffa camelopardalis
296146-150	Greater Kudu Strepsiceros strepsiceros
296151-153	gray Dricker Sylvicapra grimmia
296154	Gemsbok Oryx gazella
296155	Hartebeest Alcelaphus caama
296156-159	Blue wildebeest Gorgon taurinus
296160-169	Steinbok sp.? Rapicerus campestris

Steenbok or steinbuck

Animals which the !Kung say they avoid

lions Felis leo
leopards Felis pardus
hyenas, brown Hyaena brunnea
hyenas, spotted Crocuta crocuta [I did not observe this, tho the Bushmen apparently knew of it.]
wild dogs Lycaon pictus
aardvaarks Orycteropus afer
meerkats — any one of the mongooses (several genera) of the subfamily Herpestinae
squirrels, mice, rats — many genera — order Rodentia

I was told how the Bushmen hunt aardvarks. If not to eat, why hunt them?

I understood that women eat rats (also children)

Animals which the !Kung eat

pythons
mambas
puff adders
tortoises, big
tortoises, little
a long non-poisonous snake - ǃkhu

Animals which some avoid, some eat

spring hares Pedetes capensis
mongooses — several genera. Herpestes most common.
jackals Canis mesomelas
wildcats Felis lybica
armadillos (do they find them at Gautscha?)
iguanas
badgers Mellivora capensis

Manis temminckii - pangolin, scaly anteater - rare, but well known

Other things the !Kung mention eating or avoiding. (You may have no information on these but if you do would you jot it down)

I don't know about any of these, but was told that the large beetle grubs that live in dead wood are eaten.

chameleons
caterpillars with hairs on them
spiders that live in the ground
bullfrogs
locusts
the pupa from the cocoons of the dance rattle

Note: I am omitting many birds, including ostriches, and the antelopes, giraffe, and buffalo.

others that would be edible:
Primates (bushbabies, monkeys, baboons) Galago Cercopithecus Papio
elephant shrews (Elephantulus, Macroscelis)
Hedgehog (Erinaceus)
Hyrax (Procavia)
Warthog (Phacochoerus)
Porcupine (Hystrix)

15)

III. Bushman animal names.

A. Notes

1. Spelling is by Epson, except names in parentheses, which are mine.
2. Symbols: vowel sounds - (^) = nasal, (-) = long. clicks - (/) = #1, (//) = #2, (!) = #3, (‡) = #4, (c) = umbetomised number. 136 172
3. Every animal has but one name and males and females are called the same. Young are called the same, or the suffix "-ma" may be added to denote young. Thus, !ni = hare, while !ni-ma = young hare; po = baboon, poma = young baboon.
4. Basic name lists were obtained by showing representative pictures ~~to Bushmen~~, together with verbal descriptions of appearance and characteristic habits, to Bushmen. The mammals names were extensively checked in the field and with specimens. Check on the bird names was more limited, and some inaccuracies are likely to appear in the bird list. However, ~~the~~ names of food and game species may be assumed to be correct.
5. Numbers accompanying mammal names refer to pages in Roberts' "Mammals of South Africa". Those accompanying bird names refer to systematic numbers in Roberts' "Birds of South Africa".
6. Sources of mammal names were /Qui Hunter, Gao Helmet, and miscellaneous. Sources of bird names were Young Gao and /Gunda of Gao Helmets' group, ~~and~~ Samcoe of ~~De Kay's~~ /Ti!Kay's Group, and miscellaneous.

B. Mammal names.

4 vervet monkey — //gua
136 9 chacma baboon — po
15 night-ape — //dore
31 elephant shrew — /guma-!go, /guma-!go-!nores
38 hedge-hog — //dam
45 Crocidura shrews — !kutche, /guma-!goma
53 bats in general — //doa-//goma, //doa-//doama
130 small spotted genet — tsoa
142 slender-lesser mongoose — tsounisa
150 yellow mongoose — chî, (now-o), !didoroxa
161 banded mongoose } { !didoroxa
163 suricate } { !di
167 brown hyaena — !gau
170 spotted hyaena — /dui
172 aard wolf — /gi
174 wild cat — /nõa
177 black-footed cat — /nõa-gotsozi
178 serval cat — !gui-!dão
181 cheetah — !gao
183 leopard — !num
187 red cat — ‡nui
188 lion — !ni
~ domestic dog — ‡dûi
195 wild dog — /xu
196 black-backed jackal — /gi-di

16)

	199	silver fox	/du
	201	long-eared fox	!nu, !ũ
	202	honey badger	//nao
	203	polecat	dǂ̃, (goã)
	233	elephant	!go
	237	scaly anteater	/nui, (//hui)
—	239	aardvark	!dû, [/hû - Joe Brew, /Gam]
	242	blackthinoceros	/gi, [/nõ - " "]
	247	Burchell's zebra	/goe
	—	horse	/goe
	253	pony	hi-hi
	264	hippopotamus	!gao
—	267	warthog	/nôa
	270	giraffe	ǂgoa
	273	buffalo	/gao
	279	wildebeest	!di
	281	hartebeest	ntso
	297	gemsbok	//goe, [!goe - Joe Brew, /Gam]
	300	koan antelope	/no
	304	eland	!, [!nâ - Joe Brew, /Gam]
	307	Kudu	!ôã
	316	springbox	ǂgei
—	325	duiker	/nau
	339	steenbok	/nû
	345	porcupine	!num, [!ôn - Joe Brew, /Gam]
	350	springhare	/nom [ǂgob - " "]
	357	ground squirrel	!nao
	362	tree squirrel	!nôasa
	384	mole-rat	!nû
	-	large mice	/nûi
	-	small mice	/nûi-ma, (wishe)
	-	striped mice	!nugu-!du
	506	hare	!ni, [!hui - Joe Brew, /Gam]

c. Bird names

—	1	ostrich	tsu
	6	grebe	tãm-ta-tu rusa
×	54	gray heron	!nu-//goa
×	55	black-headed heron	gâ
	59	little egret	ǂde
	61	cattle egret	!nu-//goa
×	73-80	storks	//nou-//noa
×	78	white-bellied stork	tsâ-!gao
—	86	flamingo	uh-ara
—	88-104	ducks + geese	/na-vite
—	89	Egyptian goose	gâ
×	105	secretary bird	ǂda-kwe
—	106-110	vultures	txu
	113-126	falcons	ǂma, !goa-ra
	129	Kite	!goa-ra
	133-149	eagles	//gao-ha
	151	bateleur	//dau-!ga, //dau-acthe, //nou-ǂnoa
	156-165	accipiters	!goa-ra
×	154	steppe buzzard	!nom-!nom

162	gabar goshawk	ǂnma
165	chanting goshawk	!nai-!garisa
+ 173-180	partridges (?)	!gu
182-185	francolins	!go-vo
185	Swainson's francolin	!go-ama
+ 192	guinea fowl	ar-re, ar-i
− 196	button quail	!gei, !go-so
− 217	giant bustard	!gui
+ 226	white-quilled koran	nam
+ 227	long-legged koran	!ga
228-272	shorebirds + waterbirds	!du-tsama
283-298	plovers	ǁnei-ǁnei
288-304	gulls + terns	uh-ara
309-310	sandgrouse	tsaû-tsaû
315-317	turtle thaughing dove	ǂgi-ǂgivi
318	Namaqua dove	ǁdôna-ǂgau
339	gray lourie	gô-ache, (gwy-n-she)
+ 359-362	small or horaless owls	/nao, !nu-gudumi
+ 367-369	large or horned owls	/guisa
371-376	nightjar	!go-ara, (cgani)
380	black swift	(cgo-cgora)
407	carmine bee-eater	u-hana
415	roller (?)	txu
418	common hoopoe	ǂnu-ǂdoa-ǁgave-si-ǁgae, hoo-hoo
421	scimitar-billed hoopoe	/gama
− 426	hornbill	chu
446-451	woodpeckers	!nôu-!nôu
517	fork-tailed drongo	ǂnô-ara
530	penduline tit	(kôa)
544	red-eyed bulbul	!du-!duni
582	scrub robin	/gam-ma
614	barred warbler	/num-/garisa
628	bush warbler	/kei-/keni
630	grass warbler	!noro
650	prinia	/kei-/kani
711	crimson-br. shrike	!dou-!gana-gei
737	glossy starling	(cgo-goni)
751-774	sunbirds	/gam
789	scaly-feathered finch	ǁkari
804	thick-billed weaver(?)	ǁgno-ha
830	melba finch	/num-/noresa
847	shaft-tailed widowbird	ǁgei-/koa
852	paradise widowbird	dā-tsama
857-866	yellow canaries	!da-!naru
−	small birds	!gei

D. miscellaneous names

snuch millepede	(zwuma)
hunting spider	(!koochi-!geeci)
butterfly	(tan-tama)
frog	(cnam)
toad	(cno-ha)
thread snake	!ganu
sand snake	(cgani)

spitting cobra	(Iki-Iki)
small tortoise	(zim)
mangetti	(cga)
thunder	(cga)
fog	(ckuri-de)
sun	Igam

IV. Game animals

[lists should be made under each of the following headings giving hunting technique, by whom eaten, and how prepared for eating. Ideally it would be desirable to know how every part of every animal is utilized.]

A. Mammals
B. Birds
C. Reptiles
D. Amphibians
E. Insects
F. Miscellaneous (snails, scorpions, centipedes, millepedes)

Birds collected in SWA July - Dec 1952: (total - 80)

European swallow	1	sabota lark	4
flamingo	2	tit-babbler	1
crowned cormorant	2	violet-eared waxbill	1
white-br. cormorant	2	red-headed finch	9
Hartlaub's gull	1	black-thr. canary	1
prinia	3	double-banded sandgrouse	3
giant bustard	2	gabar goshawk	1
scrub warbler	2	sparrow weaver	1
scrub robin	4	ostrich	1
red-eyed bulbul	1	ground hornbill	1
marico sunbird	1	long-legged koran	1
button quail	4	glossy starling	1
melba finch	2	laughing dove	1
red-winged shrike	3	yellow seed-eater	1
scaly-feathered finch	2	Shaft-t. widow-bird	3
rufous-naped lark	3	red-headed weaver	1
ashy tit	2	avocet	6
crimson-br. shrike	3	red-billed teal	1
gray lourie	1	goatsucker	1

Got all boxes on "African Moon" at very last minute. Sailed 18 Dec and landed NY 5 Jan. Will tell all in later letter.

19)

Mammals collected in SWA July-Dec 1952 (total - 1023)

Brush rat	16
rock mouse	130
hartebeest	1
bushy-t. tree mouse	9
white-toothed shrew	7
least shrew	10
mole-rat	51
yellow mierkat	3
black-eared grass-e. mouse	10
elephant shrew	25
wild cat	5
leopard	2
small spotted genet	4
ground squirrel	11
small gerbil	82
giraffe	1
wildebeest	4
brown hyaena	2
porcupine	1
white back-sided dwarf mouse	9
dwarf mouse	105
single striped mouse	17
desert hare	15
wild dog	2
multimammate mouse	127
honey badger	2
house mouse	2
slender-lesser mongoose	19
pallid desert rat	2
gemsbok	1
free-tailed bat	1
water rat	1
tree squirrel	18
springhare	19
cony	2
steenbok	10
four-striped mouse	18
pouched mouse	18
brown bat	2
large brown bat	1
fat mouse	54
kudu	5
duiker	3
pallid large gerbil	3
large gerbil	175
pencil-t. tree mouse	3
black-b. jackal	10
silver fox	3
undetermined bat	1

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C. 20560

March 30, 1965

Mrs. L. K. Marshall
4 Bryant Street
Cambridge 38, Mass.

Dear Lorna:

I am enclosing a list of the mammals taken at Gautscha Pan, and have annotated the list of animals eaten or rejected that you sent to me. I'll ask the Division of Reptiles and Amphibians to send names of snakes, etc.

As I explained over the phone, there are two kinds of squirrels in the vicinity of Gautscha: the tree squirrel (Paraxerus cepapi), and the ground squirrel (Geosciurus inauris). The name G. capensis is a synonym of the latter, its first usage dating 12 years later. "capensis" means living near the cape.

Included in the food of flamingos is a wide variety of foods: organic ooze, mollusks, crustaceans, insects, and small vertebrates. I cannot say for sure, but it is entirely possible that the flamingos at Gautscha were eating snails and small frogs.

I have not heard of gemsboks eating ostrich eggs, and have not been able to find mention of it in the mammal literature.

The stereos arrived several weeks ago. I appreciate them very much. I do enjoy looking back over them. I enjoyed seeing John's movie, "The hunters," again recently too.

Except that we are all too busy, all goes well with my family. Our best to you.

Sincerely,

Charles

Charles O. Handley, Jr.
Acting Curator-in-charge
Division of Mammals

Enc.

Bushman bird names.
number is reference in Roberts' "Birds of South Africa."
Spelling is by Epson, except names in parentheses, which are mine.
prefixed "c" = undetermined click.

1	ostrich	tsu
6	grebe	tam-ta-turusa
54	gray heron	!nu-ǁgoa
55	black-headed heron	gâ
59	little egret	ǂde
61	cattle egret	!nu ǁgoa
73-80	storks	ǁnou-ǁnoa
78	white-bellied stork	tsâ-!gao
86	flamingo	uh-ara
88-104	ducks & geese	!na-vite
89	Egyptian goose	gâ
105	secretary bird	ǂda-kwe
106-110	vultures	t-xu
113-126	falcons	ǂma, ǂnma, (ǂnuma) !goa-ra
129	kite	!goa-ra, (!gua-da)
133-147	eagles	ǁgao-ha
151	bateleur	ǁdau-!ga, ǁdau-acthe, ǁnou-ǂnoa
154	steppe buzzard	!nom-!nom
158-165	accipiters	!goa-ra
162	gabar goshawk	ǂnma
165	chanting goshawk	!nai !garisa

Bushman bird names (2).

173-180	partridges (?)	!ga
182-185	francolins	!go-vo
185	Swainson's francolin	!go-ana
192	guinea	ar-re, ar-i
196	button quail	!gei, !go-vo
217	bustard	!gui
226	white-quilled koran	nam
227	long-legged koran	!ga
228-272	shorebirds & waterbirds	!du-tsama (!da-tsama)
233-248	plovers	//nei-//nei
288-304	gulls + terns	uh-ara
307-310	sandgrouse	tsaâ-tsaâ
315-317	turtle & laughing doves	≠gi-≠givi
318	Namaqua dove	//dôna-≠gau
339	lourie	gô-ack, (guy-n-she)
359-362	small or hornless owls	/mao, !nu-guduni
367-369	large or horned owls	/guisa
371-376	nightjar	!go-ara, (e-gani)
380	black swift	(e-go-e-gora)
407	carmine bee-eater	u-hana
415	roller (?)	txu
418	common hoopoe	≠nu-≠dao-//gave-si-[illegible] (//gae)
~~424~~	~~scimitar-billed h~~	hoo-hoo
421	scimitar-billed hoopoe	/gama
426	hornbill	ĉhu
446-451	woodpeckers	!nôu-!nôu
517	fork-tailed drongo	≠nô-ara
530	penduline tit	(Kôa)
544	red-eyed bulbul	!du-!duni
586	scrub robin	/gam-ma

Bushman bird names (3).

614	barred warbler	/num-/gurisa
628	bush warbler	/kei-/keni
630	grass warbler	!norem
650	prinia	/kei-/keni
711	crimson-br. shrike	!dou-!gana-gei
737	glossy starling	(e-go-goni)
751-771	sunbirds	/gam
789	scaly-feathered finch	//kari
830	melba finch	/num-/moresa
847	shaft-t. widow bird	//gei-/koa
852	paradise widow bird	datesama dä-tsama
857-866	yellow canaries	!da-!nanu
	small birds	!gei
804	thick-billed weaver(?)	//gao-ha

The bird names are not so accurate as the mammal names, for they mostly have not been checked in the field, or with specimens. Sources are young Gao and Gunda of Gao Helmet's group, Samere of Tekaye group, and miscellaneous.

~~(c = undetermined click)~~

miscellaneous Bushman names:

3	butterfly	(Tantama)
6	thread snake	!ganu
4	frog	(cnam)
1	8" millipede	(zwuma)
11	thunder	(cga)
9	small tortoise	(zim)
10	mangetti	(cga)
7	sand snake	(cgani)
8	spitting cobra	(!ki-!ki)
5	toad	(cno-ha)
12	fog	(ckwi-de)
2	hunting spider	(!koochi-!geeci)
13	sun	!gan

those in parentheses are my names, others are from Epson. Prefix "c-" indicates undetermined click.

---

vowel sounds:
^ = long vowel
— = long
clicks:
! = 1
‼ = 2
ǃ = 3
≠ = 4

Bushman - zoology - food

gum

31 Jul 1952 gave 2 spring hare carcasses to bushmen. They baked them by burying with coals. Were dug up and tested by head man while others squatted and waited. Having decided that they were OK, he began to divide them by tearing them apart without any utensil. He portioned them out to 37 people by giving to the heads of groups. These in turn subdivided, so that everyone had some. Even two men from another group were given pieces. The individuals in some instances subdivided such as hind legs by chopping with a rock picked up nearby. Bones were thrown away. The headman kept the lower back for himself. Even children of nursing age were given pieces.

---

gum

31 Jul 52. Bushmen requested the carcass of a wild cat (Felis lybica) that I had.

Gaucha 7 Sep 1952 Women eat mice, but not men. Women search for them, catch them in stumps

plugging all holes but one and poking into that with sticks, catching mice in hands as they run out. No one eats squirrels, everyone eats rabbits. Ground squirrels eaten by few. Tree squirrels all around. Buffalo here sometimes. Roan antelopes near Omra. Pangolin rare; it is lucky man that finds one - good to eat. No rhinoceros, elephants, or zebras. Catch aardvarks by digging at holes where tracks lead only in.

Bushman Zoology - hunting

Gun
31 Jul 1952 - when walking from our camp to their own water a mile & a half away a group of bushmen split and took four paths rather than one, presumably to increase chance of finding food.

Bushman zoology - dancing

Gaum
30 Jul 1952. At a dance in the Herero compound I saw two zoological items used in connection with the dance. - cocoon rattles on the legs of several dancers and a wildebeest tail used as a tail or hand waved by a male dancer, one which later went into a trance.

Bushman mammal names. (1)

Page in Roberts	Common name	Gao Helmet's names	Que Tkanderkal's names	Que Hunter's names	miscellaneous sources (the way they sound to us)	Joe Bear /Gam
4	vervet monkey	//gae				
9	Chacma baboon	po				
15	Night-ape	//dore				
31	Elephant shrew	{/guma-!go /guma-!go-!nores	/gama-!go	/guma-!go	(/Toma-!ko) (/Koma-!ko)	
38	Hedge-hog	//dam		//dam	(//gum)	
45	Crocidura shrews	!Kutche		/guma-!go	(/toma-!Kuma)	
53	Bats in general	{//doa-//goma //doa-//goama	//doa-//goma	//doa-//goma	(//go-//goma)	
130	small-spotted genet	Tsoa	Tsoa			
142	slender-lesser mongoose	Tsounisa		Tsounisa	(gonisa)	
150	yellow mongoose	chê		(nou-o)	(!glig-doora-ka)	
161	banded mongoose }	{!didoroxa	!didoroxa	} !didoroxa	(!lig-dora-ka)	
163	suricate }	{!di				
167	brown hyaena	!gau	!gau			
170	spotted hyaena	/dui	/du			
172	aard-wolf	/gi	/gi	/gi	(/Klee)	
174	wild cat	/nôa	/nôa		(/quwa) (/hoa)	
177	black-footed cat	/nôa-gatsoui				
178	Serval cat	!gui-!dâo				
181	Cheetah	!gao	!gao			
183	leopard	/num	!num	!num	(!kum)	
187	red cat	≠nui	≠nui			
189	lion	!ni	!ni		(!ni)	
195	wild dog	/xu	/xu	/xu	(/tsu)	
196	black-backed jackal	/gi-di	/gi-di	/gi-di	(/guee-dee)	
199	silver fox	/du	/du			
201	long-eared fox	!nu	!nu	!nu	(!oo)(!gao)	!ū
202	honey badger	//nao	//nao	//nao	(//cow)	
–	dog	≠Jûi			(≠guee)	

wart-hog

Bushman ~~mammal~~ names (2).

Page in Roberts	Common name	Gao Helmets names	Quee Neanderthals names	Quee Hunters names	(they spoke to the) misc. sources	Joe Drew /Gam
203	Polecat	dā		(zowa)		
233	Elephant	!go	!go	!go	(ko)	
237	scaly anteater	/nui	/nui	/nui	(/hai)	
239	Aard-vark	!dû	!dû	/hâ	(/ha)	/hâ
242	Black rhino	!gi				/nō
-	Horse	/goe				
247	Burchell's zebra	/goe	/goe			
253	Cony or Hyrax	hi-hi				
264	Hippopotamus	!gao				
267	warthog	/nêa	/nôa	/nôa	(/twa)	/hôa
270	giraffe	‡goa	‡goa	‡goa	‡koa	‡goa
273	buffalo	/gao				/gao (matt. Cho)
279	wildebeest	!di	!di	!di	(!glee)	!gi
281	Hartebeest	ntso	ntso	ntso	(itzoo)	tso
297	Gemsbok	//doe		//doe	(//gwee)	!goe
300	Roan antelope	/no				/no (Loucks)
304	Eland	!		!	(!uh)(!na)	!nî
307	Kudu	!ôa		!ôa	!uh-wēa	!Hoa
316	Springbok	‡gei				‡gni
325	Duiker	/nau		/nau	(/ow)	/au
339	steenbok	/nû				/hê
345	porcupine	!num cf !ōn Jan 13 '52	!num	!ⁿum	(!um)	!ôn
350	spring hare	/nom		/nom	(/num)	‡gob
357	ground squirrel	!nao		!nao	(!now)	
362	tree squirrel	!nôasa		!nôasa	(!twasa)	
372	dormouse			!nao	(!now)	
384	mole-rat	!nû		(! [illegible]-kuh)		
	large mice in general	/nûi		/nûi	(uh/whee)	
	small mice in general	/nûi-ma		/nûi-ma	(/whe-ma) (wishe)	
	striped mice	!nugu-/da				
50	Hare	! ni		‡ni	(! Klea)(/kae)	!hai

Hunting's Report of
Ch Handley in his hand
writing and reproduced. Etc
(xeroxed)