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## DAMA SETTLEMENT AND SUBSISTENCE ALONG THE UGAB VALLEY, SOUTH WEST AFRICA (NAMIBIA).

BY  
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### INTRODUCTION

The Dama, a Nama-speaking Negroid group, are estimated at 79 500, 8,5% of the total population of South West Africa (Namibia) of roughly 931 000. Ethnographically speaking, these people have attracted attention from a number of scholars. Of these, the work by the late Heinrich Vedder (1923) is still the most comprehensive, notwithstanding its geographical limitations.

The present study was suggested to me by Mr. L. Jacobson, archaeologist of the State Museum, Windhoek. He is actively involved in research into the archaeology of the Brandberg, a large and isolated massif situated on the edge of the Namib desert. As this mountain was inhabited by Dama people up to about 1920, it was argued that ethnographic research along the Ugab River, just to the north of the Brandberg (See Fig. 1a), might provide archaeological analogies (Compare du Pisani 1976). It was subsequently decided to visit some of the Dama settlements along the Ugab River (Fig. 1b). Three of these constituted a unit of general survey, while one of them, "small" Daob-!gaos (21°01'S, 14°37'E), was selected as a unit of personal observation. Most of the people that reside in these villages, moved into the area from southern Kaokoland in 1951 (Köhler & Wagner 1959: 48).

The study deals mainly with aspects of settlement and subsistence. These are discussed with reference to the ecology of the area.

At this juncture, a few remarks concerning the field situation are appropriate. At two of the settlements, genealogical research was impossible, because the people refused to reveal their own names, as well as that of their relatives, to me. Furthermore, the Dama politicize their present position, including such aspects as the lack of water and grazing. Adam Kuper, who did research in Botswana during the period preceding that country's independence, had a similar experience (1970: 103-104; 127). In essence, we are dealing with, what might be called, "pre-independence ethnography."

### ENVIRONMENT AND ECOLOGY

Ecology can be defined as the structuring of adaptations to the environment, as comprised of



FIGURE 1A: Map showing the location of the Brandberg and the Ugab River

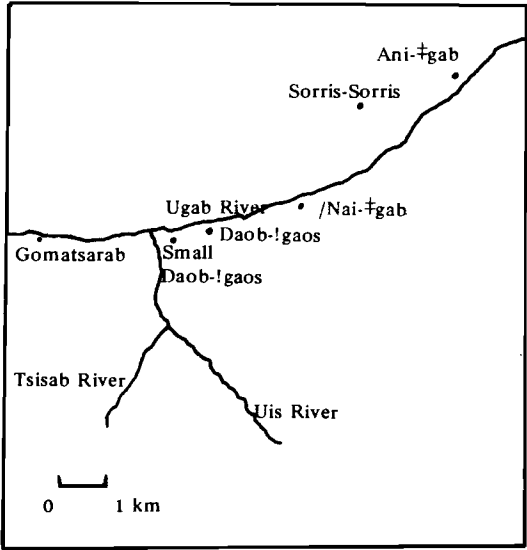


FIGURE 1B: Map showing the location of some Dama settlements along the Ugab River

relationships among the natural habitat and its plant, animal and human populations (Harris 1975: 661).

The ecological niche in which the Dama find themselves also influences their settlement and subsistence. The research area lies beyond the limits of rainfall agriculture, and is essentially pastoralist country. Given the low average annual rainfall, even slight seasonal variation in the precipitation of the research area, as well as in the catchment area of the Ugab River, has significant consequences, especially if this River does not carry water during the rainy season. This not only influences the vegetation, but results in a critical drop of the water table, which in turn engenders the redistribution of both the human and animal population, the former usually on an individual family basis. In a way, river beds such as the Ugab, are the lifelines of human and animal existence in this area. This is also reflected in the location of settlements, nearly 50% of which were situated on dry river beds (Köhler & Wagner 1959: 47). The natural environment includes such interrelated variables as topography, geology, water sources, biota and climate. To these we now briefly turn.

### Topography

The most prominent topographical features of the research area are the Ugab River (21° 10' S), and the Brandberg (2 579 m), just south of the Ugab. The Brandberg (*Dâures*), the highest mountain in South West Africa (Namibia), is a typical 'Inselberg'. As an archaeological site it is world famous. The Ugab River constitutes an important subterranean water source, features dense vegetation in the form of corridor woodland, and facilitates river-bank cultivation. Along the Ugab, a number of rocky outcrops are of topographical interest. These are the result of prolonged erosion (Köhler & Wagner 1959: 12). The surrounding area of desert- and semi-desert plains vary in altitude between 500 and 800 m.s.m. (Nordenstam 1974: 8).

### Geomorphology

The drainage systems of the Ugab, Omaruru, Khan and Swakop Rivers are fairly similar. On these Mabbutt comments as follows: "Despite their achievement in erosion, these streams are typical South West African 'Riviere', coming down only after heavy rain, progressively becoming lost in and choked by their infilling of sand, and reaching the sea only once or twice in a decade. Otherwise they appear as shallow, braiding channels, often a few hundred yards in width and filled to varying depths with gravel, grit and sand. Their gradients are steep compared with those of perennial streams. The Swakop River falls 1 307 metres in 307 kilometres, and the measured gradients of the Ugab River are similarly between 1 and 200 and 1 and 300---" (1952: 334-335).

Within the area drained by the Ugab, and trending at right angles to its course, four morphological divisions can be distinguished. They are the Namib Coastal Plain, the Transitional Plains, the Central Hereroland Plateau, and the Watershed (Mabbutt 1952: 335-337). Of these, the second division is relevant for our discussion.

The Transitional Plains are physically connected with the Namib Coastal Plain. Overwhelming is the geologically youthful Brandberg, which rises above them. Jeppe summarizes this mountain's topographical uniqueness as follows: "The normal shape of a mountain formed from a granite plug is complicated here by the encircling Karroo hills which are integrated with

the main mass and by the circular zone of metamorphic rocks at the Karroo-Brandberg granite contact” (1952: 35).

The Brandberg is positioned within the heart of the Ugab Valley. According to Mabbutt, the locality of this mountain is indicative of the small part played by these scattered residuals in the delimitation of drainage systems (1952: 335). The drainage from the Brandberg itself is radical, with several deep gorges having cut into the granite surface (Jeppe 1952: 21). To the west and north-west of the Brandberg, the Ugab Valley assumes a true gorge form, while the erosion surface south of the Ugab is continued northwards in the summit plane of highly dissected schist hills. Approximately a 100 m below this level, the River cuts down a broad valley-floor plain (*Trogfläche*). Between Sorris-Sorris and the Brandberg, across granite formations, the main valley is less deeply entrenched, while the *Trogfläche* is here represented by rock-terrace remnants 150 metres above the river bed (Mabbutt 1952: 336).

### Water sources

Water sources are limited to the Ugab and its tributaries, the Tsisab and Uis Rivers, all with intermittent and periodic flow, rainfall, and underground sources. The latter are utilized by means of shallow wells in the Ugab's river-bed, and a few boreholes. The Dama refer to a place with adequate water as *//gamxa*. Numerous springs in the Ugab provide surface water, for example at Gomatsarab.\* However, these have the tendency to turn salty during dry periods. Generally these springs are situated at positions where synclinally folded sediments are cut by deep transverse streams (Jeppe 1952: 4).

After rains, water accumulates in pans and solution cavities in granite and marble. Pans can be classified in wind-scoured pans, barrier basins, and animal formed pans. This last type are saucer shaped depressions, about 2 metres in diameter and as much as 0,7 metres in depth, and are probably made by zebra (Jeppe 1952: 19-20).

### Climate

The prevailing wind is from the south-west, and blows the sea mist up to 80 km or more inland (Jeppe 1952: 3). The east wind (*ai-#oab*) blows for a few days per year, and often results in a sharp rise in temperatures. Informants further distinguished the south wind (*!kawagab*), and the north wind (*//awa-#oab*), which tends to blow from February to April. This wind they regarded as the rain wind.

The mean annual rainfall of the research area is between 50 - 75mm. Rain (*//awib*) falls during the month of January to March. On average, the Brandberg receives more rain than the surrounding plains. The mountain also has different temperatures and vegetation compared with the surrounding areas. Also of interest is the fact, that the western side of the mountain is relatively drier than the eastern side. The mountain's higher night temperatures are attributed to the radiation from the stone masses. The daily summer maximum is estimated between + 30° and 35°C, with a night minimum of approximately + 15°C (Nordenstam 1974: 9).

Vegetation is influenced by variables such as climatic range, rainfall and soil types. The soil of

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\* Literally “place where cattle raise dust.”

the surrounding plains can be classified as desert detritus, and has a low organic content, which makes it unsuitable for agricultural purposes. The alluvial deposits in the Ugab River constitute the best available soils, and is utilized in the form of river-bank cultivation (Gordon 1972: 21).

## Biota

The Brandberg lies within the Karroo-Namib floristic region, and boasts an endemic element consisting of 11 taxa (Nordenstam 1974: 3). Jeppe attributes the mountain's vegetational pattern to the factors of higher rainfall and lower temperatures, isolation from the larger species of grazing game, and the nature of the soil derived from the Brandberg granite (1952: 4).

In terms of vegetation, the research area falls within the "Semi-desert and Savanna Transition area", with the exception of the Ugab River, which is classified as Riverine Woodland (Giess 1971). The open plains are covered with annual white desert grasses, especially *Stipagrostis* species, such as *S. obtusa* and *S. ciliatana*. *Eragrostis nindensis*, a perennial grass, covers the more stony, gravelly and limestone areas (Giess 1971: 7). The grazing are of high nutritive quality, and the vegetation in general recovers miraculously after only a few mm of rain. Other typical plants are *Aloe asperifolia*, *A. namibensis*, *Celosia spathulifolia*, *Euphorbia phylloclada*, and *Hoodia currorii* (Giess 1971: 8).

The vegetation along the Ugab River includes *Acacia giraffae*, *A. albidae*, *A. tortilis subsp. heteracantha*, *Combretum imberbe*, *Tamarix usneoides*, *Euclea pseudebenus*, *Ficus sycomorus*, and *Salvadora persica* (Giess 1971: 14), and stands in marked contrast to the barrenness of the surrounding area. Logan aptly describes stream beds such as the Ugab, as "... completely different worlds from the surrounding desert flats. Shady, cooler, filled with food bearing plants, they provide a much more genial habitat for both man and beast than the surrounding country" (1960: 131).

Of special interest is the fact, that the larger wild life, and some of the small mammals such as the ground squirrel (*Xerus inauris*), is essentially migratory, and that their numbers vary in amount with the available grazing. This applies to springbok, gemsbok, zebra and ostriches (Jeppe 1952: 4. Köhler and Wagner 1959: 15; Stuart 1976: 64). Local Dama were familiar with this phenomenon.

The present day fauna includes herbivorous grazers such as gemsbok (*Oryx gazella*), springbok (*Antidorcas marsupialis*), kudu (*Tragelaphus strepsiceros*), steenbok (*Raphicerus campestris*), duiker (*Sylvicapra grimmia*), klipspringer (*Oreotragus oreotragus*), zebra (*Equus hartmanni*), and hares (*Lepus spp.*). Smaller rodents, and also carnivores such as cheetah (*Acinonyx jubatus*), leopard (*Panthera pardus*), and wild cats (*Felis libyca*), occur. The dog family includes the black-backed jackal (*Canis mesomelas*), Cape fox (*Vulpes chama*), and brown hyena (*Hyaena brunnea*). Burrowing carnivores such as the ground squirrel (*Xerus inauris*), hyraxes (*Procavia capensis*), avifauna such as the ostrich (*Struthio camelus*) and Ludwig's bustard (*Otis ludwigii*), and numerous insects, especially Tenebrionidae, are of faunal interest as well.

## SETTLEMENT

A settlement refers to the characteristic grouping of a human population, and consists of occupance units as well as other man-made physical structures. Settlements vary in size and complexity.

### The Village

Dama reside in scattered villages along both the southern and northern banks of the Ugab River (see Fig. 1b). In essence, a village comprises a number of huts, kraals, and a communal drawing-well.

The choice of a suitable building site relates to both ecological and social variables, such as the availability of water, food resources, prior experience with a specific area, availability of building material, and the proximity of other occupied and deserted settlements. The locality of deserted settlements is important, for people utilize available building material from them. On the other hand, the size of their herds, especially goats, functionally space existing settlements in order that every residential group may utilize a basic subsistence area. This contains at least one water point and adequate pasture, especially in the form of *Acacia* pods. Some people also prefer not to stay with relatives or friends (Gordon 1972: 38).

The villages are all situated on the banks overlooking the Ugab. Within the selected locality, the placement of huts and kraals depends on such factors as the distance from the well, topography, availability of firewood, presence of termites or ticks, and the locality of shady trees, around which kraals are normally constructed. In practice, most villages are within walking distance (1 - 10 km) from each other. This not only results in regular visits between people, but facilitates the gathering of animals, especially cattle, from different settlements at permanent wells or springs during the drier periods. The settlement pattern of Dama along the Ugab therefore has both short- and long-term objectives.

After a suitable site has been selected, construction can begin. This is normally done in a specific order. First the menfolk dig a shallow well in the river-bed, after which they start building the kraals for the small stock. If cattle are kept, separate kraals for them are usually erected. The few donkeys are normally kept with the goats and sheep in the same kraal, although they occasionally have their own enclosures. After the kraals have been completed, the houses can be built. Meanwhile, the inhabitants use temporary housing such as a few sheets of corrugated iron that are arranged in a rectangular fashion. This ensures some privacy, and gives protection against the elements.

Building material includes items such as dry wood and bark, mostly obtained from the *ana* tree (*Acacia albida*), mud, dung, wire, nails, and sheets of corrugated iron. Nowadays stone, although readily available, is rarely used. Bark and wood has definite advantages in such an arid climate, and houses built from these materials are much cooler than the increasing number of square structures made of corrugated iron. Hut construction and settlement size is not only an indication of new cultural innovations, but possibly also relates to economic and social variables, such as the integration in a money economy, and the breakdown of traditional kinship groupings.

Generally-speaking, men are responsible for supplying the material, while both men and women are involved in the actual building operation. People from different villages render one another assistance. To construct a hut takes approximately ten days, depending on its size and the availability of labour. The demolition of old dwellings, and the building of new ones, seems to occur continuously in all the villages.

In terms of residential layout, the different Dama villages that were visited displayed similar structural features. For this reason, it was decided to concentrate on the physical layout of one of these villages, namely Daob-Igaos along the southern bank of the Ugab. To avoid confusion

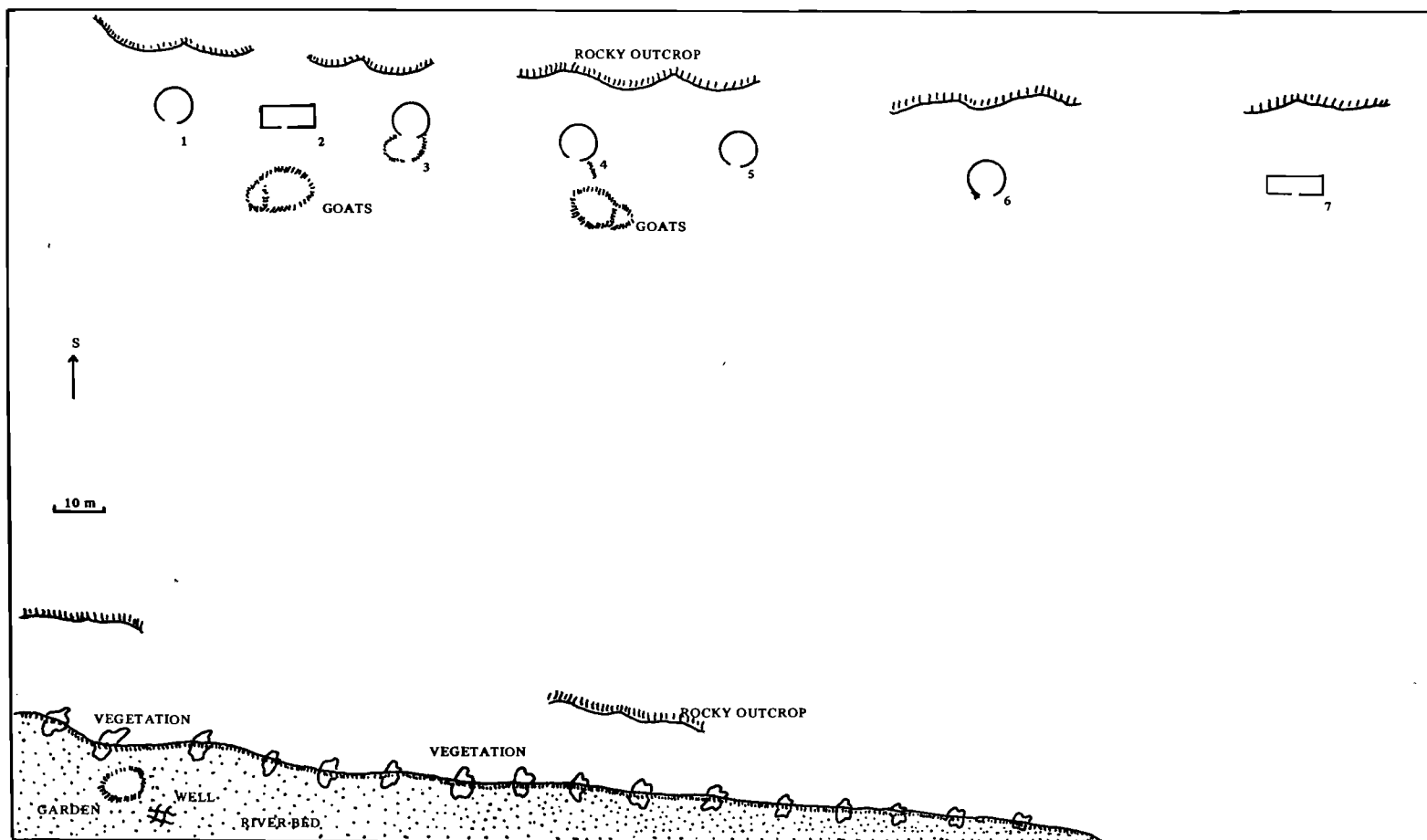


FIGURE 2: RESIDENTIAL LAYOUT OF SMALL DAOB-IGAOS

with the bigger village close by, which is also called Daob-!gaos, we shall refer to it as “small” Daob-!gaos (see Fig. 1b). The subsequent ethnographic description covers the period June 1976 to June 1977, during which the study area was visited three times. Towards the end of July 1977, most of the inhabitants had left the village, and moved closer towards Gomatsarab (21°01' S, 14°36' E).

The village consisted of seven huts (*omti*), of which three were uninhabited, two goat kraals (*piri-!haran*), a drawing-well (*tsaub*), and a communal graveyard (*//kho-!hanab*), situated half a kilometre from the settlement. At one stage one of the inhabitants, Aron Kaseb, had a small tobacco garden close to his hut. The huts were arranged in a linear fashion along the river bank, varying in distance between 12,6 metres and 52,5 metres from each other.

Huts differed markedly in shape and size, the latter varying in accordance with the amount of occupants. Five of them were conical in shape, while the remaining two were square. Of the huts, five were constructed mainly from wood and bark, while the other two were structures of corrugated iron. Even the shape of their roofs differed, four of them were round shaped, one had a pointed roof, while the rest had flat roofs. Two of the roofs were smeared with a mixture of goat's dung and soft sand. All the huts faced towards the north. This not only assured a clear view of the Ugab River, but also prevented the prevailing wind from blowing into the huts.

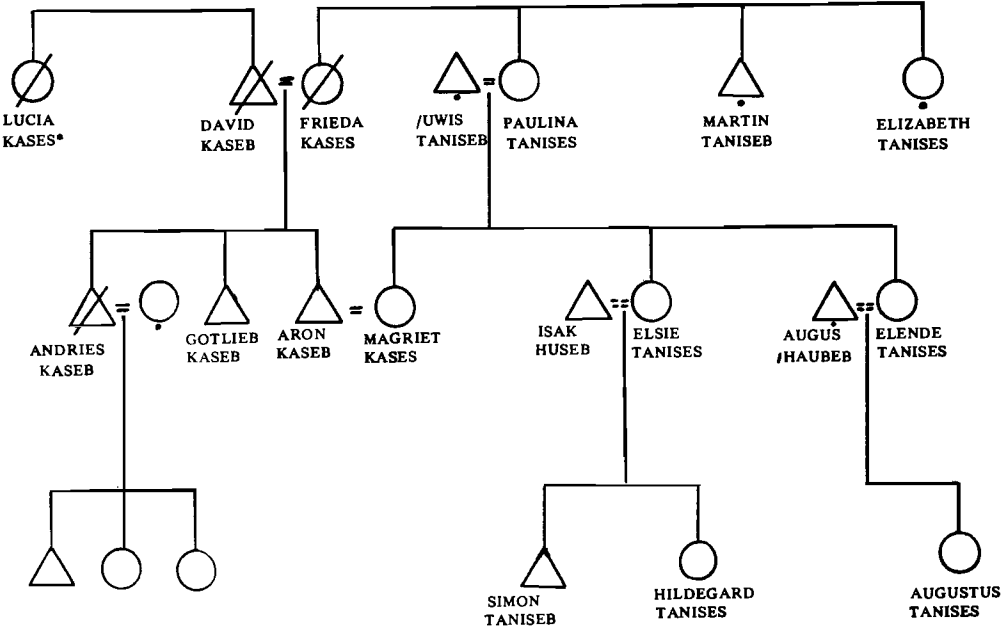
A typical hut (*oms*) displays the following features: a door (*daos*), walls (*!namgu*), window (*mu-!ui daos*) and, in some cases, an emergency exit (*!khoini-daos*), which is located at the back. This opening is covered when not in use, and was possibly taken over from the Nama (Vedder 1923: 14). The interior of a house (*om-!nāb*) is utilized as storage space, as well as sleeping quarters.

Five of the huts consisted of a single room, while the other two were bigger structures, one of which comprised a bedroom, storage room, and airy lean-to which was used as a living room. Two huts had a circular wooden palisade (*ho-hein*) attached to them. The entrance to this structure is referred to as *ho-ams* or *hos di ams*. Directly in front of the hut is the fire place (*//ae-khou-!khaes*), where the women do the cooking. On rainy days, fires are made inside the hut.

The measurements of three of the huts, representing the different house styles, were taken. The approximate height, width, and length of the largest corrugated iron structure was 2,1 metres, 6,3 metres, and 7 metres respectively, while the height and diameter of the conical wooden huts averaged 2,4 metres and 10 metres respectively.

Facing the huts were two goat kraals, made of dry tree trunks and branches embedded upright in the sand. On the outside, pieces of meshed wire were fitted for additional protection against predators, and to prevent the lambs from escaping. A kraal comprises two or more separate enclosures, the smaller one (*!nurus*) is used for the lambs, while the bigger one accommodates the rest of the herd. The entrance to a kraal is referred to as *tao-ams*. The distance between the kraals and the huts were 16,8 metres, and 6,3 metres respectively, while the distance between the two kraals was approximately 37 metres. The diameter of both of these structures was just over 22 metres. The circular garden on the river bank was protected by a wooden palisade, and had a diameter of 6,2 metres. The garden was situated close to the drawing-well. This facilitated its watering. The distance between the well and the nearest hut was approximately 294 metres. A trodden path, used by the people and their animals, connected the huts and kraals with the well.





LEGEND:

- △ Male
- Female
- = Marriage
- = Unmarried
- △ Deceased
- Absent

\* In Nama, gender is denoted by suffixes, being -s (feminine) and -b (masculine) in the singular.

FIGURE 3: GENEALOGY OF SMALL DAOB-IGAOS

The depth of a well depends on the water table at the particular season. In this specific case, it was approximately 4 metres. The upper part of a well is lined with scaffolding consisting of tree trunks, to prevent it from falling in. When not in use, a well is normally covered with wooden poles or sheets of corrugated iron. This not only prevents animals from falling into it, but it also keeps out loose sand and lessens evaporation. Water is extracted in a bucket, suspended from the end of a long, counterbalanced pole running over a fulcrum. The Dama refer to this apparatus as *hotsikap*. The people along the Kuiseb River use a similar technique for extracting water (Jenkins & Brain 1967: 7). Water is also stored in drums near the huts. These are filled at the well, and then transported to the huts by donkey cart. This practice is especially necessary when the river comes down in flood, because the well is likely to be destroyed, resulting in a scarcity of clean water. In cases where a village both has a well and a spring (e.g. Gomatsarab), the former tends to be used primarily by people, while the latter is mostly utilized by animals.

A small fowl-run was located on the edge of the scrub line, and could be observed from the huts. Fowl-runs are either built of meshed wire or small sticks and branches. The communal graveyard, used by inhabitants of both Daob-!gaos and small Daob-!gaos, contained 45 graves, all of which heads faced towards the west. This area is normally avoided by the people, and children are advised not to play in a graveyard, as it is believed to make them unhappy. Visits to a graveyard should take place before sunrise, and preferably in the company of an elderly person.

Within a village, most of the activities centre in and around the huts, the goat kraals, and the well. These include sleeping, cooking, eating, gossiping, washing, milking, attending to animals, and fetching water. Skin-working, wood-carving, and general repairwork are normally also carried out in the proximity of the dwellings. Slaughtering generally takes place outside a kraal, mostly under available shade. During the heat of the day, people sometimes take a nap under the trees near the river.

The inhabitants relieve themselves in the veld. The open space in front of the huts are mostly used by the children for playing a variety of games of which *//hūs* (a pebble game) is a popular one.

A hut is generally inhabited by a nuclear family (*om-aris*), consisting of a man, his wife and their unmarried children. Apart from members of the nuclear family, old people, grandchildren, as well as relatives and friends, reside in the villages.

The subsequent genealogical table (Fig. 3) reflects the position at small Daob-!gaos during October 1976. At that time, Aron Kaseb's\* younger brother Gotlieb, resided in hut 5 (see fig. 2). The three children of Aron Kaseb's deceased brother Andries, stayed with him and his wife Magriet in hut 4. To them, these children were "*Grootmaakkinders*" (*kai-kai/gūn*). This relationship serves a number of purposes. It not only enables the children's mother to work, but may also imply financial support from her for Aron and his wife. Apart from this, it stresses kinship ties amongst the closer relatives (Gordon 1972: 42).

Paulina Tanises, Magriet's mother, occupied hut 6, a small conical shaped bark hut, after leaving hut 1 where she had stayed during June 1976. Izak Huseb and Elsie Tanises, a sister of Aron's wife, and their two children, Simon Taniseb and Hildegard Tanises, stayed in hut 7. During June 1976 they had occupied hut 3. Hut 2, the largest of the dwellings, was occupied by Elende Tanises, and her daughter Augustus Tanises, whose father August /Haubebe, was absent. He was

\* The oldest male inhabitant.

employed by one of the mines in the vicinity of the Brandberg. According to his concubine he visited her once every three months.

The total human population of small Daob-!gaos during October 1976 was 13, of which 5 were males and 8 females. The population seem to fluctuate continuously, because during July 1977, small Daob-!gaos had only three inhabitants (Augus /Haubeb, Elende Tanises and Augustus Tanises). Old Paulina Tanises was on a visit to one of the mines, while all the others had left the village, primarily because of a shortage of Acacia pods for their animals, which coincided with the drop of the water table. Small Daob-!gaos looked quite deserted, with six empty houses and two delapidated kraals testifying that people were living there.

## SUBSISTENCE

Dama along the Ugab Valley utilize a variety of resources. These include plant-, animal-, and money resources. Of these animals, especially small stock, are of primary subsistence value in their total food economy, and will be discussed in greater detail than the others.

### Animal husbandry

Husbandry is concerned with the herd as a harvestable resource to its owners, and faces problems of the allocation of capital. Herding, on the other hand, is directed to the welfare of animals, and requires adequate labour (Paine 1972: 79).

The subsequent discussion deals mainly with aspects of animal husbandry, the herd, the utilization of animal products, and the way the Dama pastoralist copes with the seasonal scarcity of pasture and water.

Dama along the Ugab keep goats (*pirin*), sheep (*gūn*), a few cattle (*goman*), donkeys (*donkin*), horse (*hān*), fowls (*anin*), and dogs (*arin*). Of these, goats and sheep are of primary subsistence value. Their meat, and in the case of goats their milk, are basic food elements. Donkeys are used as draught-animals for the purpose of pulling the donkey cart (*donki-gunis*), still the most important form of transport. The possession of cattle is regarded as a status symbol, and these animals fetch relatively high prices at periodic stock auctions. Fowls have been introduced recently (Lebzelter 1934: 123). According to informants most of the Dama originally obtained their goats and sheep from the Herero and Nama through barter or raiding.

A herd generally includes animals belonging to a number of owners. For example the one combined goat and sheep herd at small Daob-!gaos comprised 36 animals, and was owned by Aron Kaseb, his wife Magriet, and his brother Gotlieb. These animals graze together, and use a common kraal. Aron had the power to control the herd, and could utilize milk from the goats without his brother's permission. However, he was not allowed to slaughter any of his wife's or his brother's animals without their consent. This system of animal borrowing is referred to as *gures*, and obviously strengthens social relationships between people. Apart from this, it assures the distribution of animals, and thus protects the owner from a total loss. As such, it may be regarded as a survival strategy.

Animals are obtained through barter, purchase, inheritance, or as a result of gifts. For instance, women receive livestock from their relatives when they marry. Likewise, sons obtain animals

as gifts from their fathers when they reach the age of marriage. A wife with dependent children inherits all her husband's animals after his death. In other cases, any relative, male or female, may inherit from a deceased.

The Dama take an active interest in their animals, and desire to own large quantities of small stock. This aspiration was expressed in phrases such as, "Having a few goats is not pretty", and "One tries to get as many goats as possible". A herd comprising roughly fifty animals is regarded as the minimum amount from which to make a reasonable living. Female animals predominate, as these ensure rapid herd growth. On average, one he-goat to every 40-50 she-goats is kept. The animal population of small Daob-!gaos during October 1976 is reflected in the following table.

Animals	Number
Cattle	-
Goats	62
Sheep	6
Donkeys	9
Horses	-
Fowls	16
Dogs	3

Table 1. Animal population of small Daob-!gaos

The relative importance of goats, compared with sheep, is illustrated in the table. Informants attributed this to the fact, that goats not only supply meat and milk, but also skins. Apart from this, these animals are well adapted to an arid environment, and are alledgedly less labour intensive than other livestock.

If one divides the human population present at small Daob-!gaos during October 1976 by the amount of goats, one gets an average of approximately 4,75 animals per head. However, part of Gomatsarab had 23 people and 134 goats. This gave an average of roughly 5,8 animals per head. The higher average of animals per head, may be attributed to the availability of permanent water at this village which attracts other stock owners during drier periods.

Although people desire to possess large herds, they are aware of the critical balance between herd growth and the human population. This was demonstrated at Daob-!gaos during June 1976, when the large amount of small stock, that normally required water daily, and the few cattle, quickly emptied the only working well. For some stock owners this meant, that they either had to leave the village for permanent water, or that they had to sell their excess stock.

Interest in their animals is further exemplified in nomenclature. These not only pertain to sex and colour, but also apply to horn shape, ear shape, and the physical condition of animals. It also includes proverbs in which animals are praised (*gare mīti*). Dama distinguish eight principal colour terms: white (!uri), black (‡nū), brown (‡gama), grey (/hai), yellow (!huni), red (/awa), spotted (/hō), and blaze (!na). These are employed for all their animals. For example, a black she-goat is referred to as ‡nū *piris*, a red cow as /awa *gomas*, black sheep as ‡nū *gūn*, and a white ox as !uri *gomab*. Colour combinations, and the distribution of colours are also distinguished. For instance, a she-goat with a black neck is referred to as ‡nū /ao *piris*. Likewise, a cow with yellow spots will be !huni /hō *gomas*.

Nomenclature pertaining to horns and ear shape include: hornless - !om, with horns - //nāxa, straight horns - !ari //nā, big ears - kai ‡gae, and tiny ears - ‡ari ‡gae. Terminology such as *tsaūib* - young ox, !khusa *piris* - a pregnant she-goat, and *dapisa pirib* - a castrated goat, relate to the physical condition of animals. Livestock that voluntarily return to their own enclosures in the evenings, are praised with the subsequent short *gare-mīts* which stresses their obedience.

“Aore xutse titse

Gare tsi tara ti xun ge hats go !kais !aroma”

The use of animal products such as milk, meat, blood, dung and skins as food and household necessities, especially reflects the economic value of animals. The most direct economic use of their goats is the consumption of milk (*dai-i*), and goat's milk (*piri dai-i*) constitutes an important source of protein. Milking is done by adults and children of both sexes. This occurs in the goat's kraal twice daily. In case of children, two are engaged in milking; the additional one twists the animal's neck. The daily yield per she-goat varies between 900 ml and 1,6 litres, depending on the condition of the pasture. These animals are first milked at about eighteen months of age. Cattle are milked once a day, because they supply more milk than goats, and tend to graze further from the villages. Before the actual milking the calf is allowed to drink, then the cow's hind legs are tied together. This prevents the animal from knocking over the milking pail. Animals without any milk are referred to as /go *ha*.

Milk is stored in a calabash (*awas*) or any other suitable container. Butter is obtained by first rolling a sealed calabash filled with cream to and fro, after which it is gently shaken. The butter then rises to the surface. Milk is consumed in a variety of ways, and the Dama distinguish between fresh milk (/a *dai-i*), sour milk (/kuru *dai-i*), curdled milk (/aō *dai-i*), and butter milk (/nuwu *dai-i*). Of these, curdled milk is favoured.

The people's primary meat supply comes from their own animals. Of these, goats, sheep, cattle and donkeys are slaughtered. Although horses are not slaughtered, an animal that died naturally is eaten. This also applies to the other livestock. Animals are slaughtered for their meat, as well as to observe social obligations at occasions such as burials, marriages and visits. This demonstrates the nutritional and sociological value of food. These gatherings, as well as the drop in milk production during winter time and early summer, require more animals to be killed.

Small stock are slaughtered by both men and women, while larger animals such as donkeys and cattle, are generally only slaughtered by men. Stock owners can only kill their own animals. Slaughtering normally takes place outside the kraal. For this purpose, the animal is placed on a sheet of tarpaulin or corrugated iron, and then turned on it's side. In case of small stock, three people are engaged in the slaughtering. One to press down the animal's hind quarters with his knees, the other one to cut the main artery in the animal's neck, and the third one to collect blood from the wound by means of a suitable container.

Blood (/aub) is regarded as a delicacy, and constitutes an important supplementary food. Before it is consumed, it is cooked by boiling with salt, sugar, fat, and flour. Meat is a basic food element, and a number of informants described it as "--- the best food." Apart from the meat that is consumed the same day, some of it is cut in strips and then dried in order to preserve it for longer periods. Old men enjoy eating the tail-fat, while adults favour the liver and heart of animals.

## Gathering

Reference to the gathering of grass seeds from ant-hills (#gui-adi) and other ant-nests by Dama, has been noted long ago (Büttner 1878, Gürich 1891). Although this activity still occurs along the Ugab today, it does seem as if grass seeds are now more of an emergency food supply. However, the gathering of grass seeds has the advantage that a few kilograms of these can be collected within a relatively short period of time if needed.

Seeds from a variety of grasses are collected. One of the most common grasses utilized is *Stipagrostis obtusa*. This grass bears small white seeds known to the Dama as *sau*i. Red seeds they refer to as *bos*ui. Collecting is done by both men and women throughout the year. Women are generally responsible for the preparation of grass seeds. According to informants, the period after the rainy season (April - May) is the best time for collecting grass seeds, because by then the ants had gathered large quantities into their nests.

In order to open an ant-hill or ant's-nest, a stick (/urihaib) or iron rod is used. The seeds are then collected by hand, and put into a wooden bowl (#goub) (Figure 5). This utensil is carved by men using a small adze (#kanxas) and chisel-like instrument (#gereb). Soft wood obtained from the *ana* (*Acacia albida*) and *luinas* tree (*Sterculia africana*) is preferred for the manufacture of these bowls.

The preliminary cleaning of the seeds takes place at the gathering site. First, the full #goub is tilted against the wind. This process is repeated a few times. Seeds that are blown from the bowl, are collected on a piece of plastic, tarpaulin or skin. Small stones, ants and other dirt are removed by hand. After this, the bowl is once again filled with seeds, after which it is rocked to and fro. The shaking of a #goub is referred to as *samis*. Those seeds that will be utilized, are now collected and poured into a bag or other container. The locality from which the seeds were taken, is then properly closed. This ensures that the ants will continue their activities. According to informants, termites are sometimes eaten.

The further preparation of the seeds is done at home, where they are first spread on a piece of tarpaulin, plastic, or skin, and then pounded with an oblong stone (*gamanab*). This process is followed by winnowing, for which purpose the seeds are once more placed in the #goub. This is first tilted, and then rocked to and fro.

The seeds are now ready to be cooked in water or milk to which a little fat has been added. When cooled down, they are eaten, sometimes with other food such as meat. *Sau*i and *bos*ui is also used in the preparation of beer (!kari-i), for which purpose grass seeds are added to sugar water. In order to ferment, the mixture is stored in a tight container. Fermentation (!gaûgo) takes approximately three days. After this, the beer is ready for use. Grass seeds are also sold. This enables people to buy additional food such as mealie-meal. These are either bought from the shops at Uis, farm stores, or from a pedlar that comes by regularly.

Other wild plants that the Dama utilize as food include the fruit of the *Ficus sycomorus* tree (/nomas), !khobas (*Hoodia spp.*), and #aun berries (*Grewia flava*). //Khuribe -//khamis (*Harpagophytum procumbens*) is used for medicinal purposes, while the roots of the /hunib tree (*Boscia albitrunca*) is sometimes prepared as a substitute for coffee. The bark from the !has tree (*Combretum imberbe*) is utilized in skin-working. Gathering is mostly done by women, and is not an organized activity. Most wild plants are collected during and immediately after the rainy season (March till May).

Except for the gathering of plant foods, the collecting of honey and ostrich eggs needs mentioning. These commodities are collected exclusively by men, and both are regarded as a delicacy. In case of ostrich eggs, all are removed from a nest, as it is believed that the female ostrich will break the remaining ones. In the past, ostrich eggs were used as water containers. Beads were also made from ostrich eggshell. Nowadays, the eggs are mostly utilized as food. However, old people still regard powdered ostrich eggshell as a medicine for the treatment of children's diseases.

Honey (*danib*) is found in hollow trees, caves, or holes in the ground, and even today some people look for it in the Brandberg. Whoever reaches a hive first, marks the spot by means of a stick or a few stones. This is an indication to others that the specific hive has been located, and that it will be utilized. This was also reported by Vedder (1966: 60). It is considered bad manners by any person to remove honey from such a hive. If children should find honey, they must report this to their father or, in his absence, to any of his close male relatives. They themselves are not allowed to collect the honey.

To locate a hive can take two or three days. In order to establish the exact spot, men not only pay attention to the flight of bees, but also observe their secretion which can be seen clearly on dark stones. Before the honey is removed, the hive is fumigated. Normally only half of the combs are taken. This prevents the bees from deserting the hive altogether, and thus secures its future utilization. Honeycombs are eaten, while honey also constitutes an ingredient of an intoxicating honey beer (*dani-!kari-i*).

### Gardening

An additional source of plant food is obtained from their gardens. Although small, these require more attention than their goats and sheep. The care of gardens is largely the responsibility of women. A variety of maize, sorghum, pumpkins, tobacco, and even tomatoes and watermelons, are grown in the garden patch. Of these, tobacco is the most valued, not only because it is smoked, but it can also be sold and used for bartering purposes. Other food, and even animals, can be obtained with it.

Dama distinguish between tobacco plants with small - (#kari #gaeb), and those with big leaves (*kai # gaeb*). According to informants, tobacco was first obtained from the San, from whom it was bartered for meat, food and household utensils such as wooden bowls. It takes approximately one and a half months before the leaves of a tobacco plant can be utilized. These are either dried in a tight container, or under smouldering ashes. After three months, the whole plant dies. Local Dama were also familiar with cannabis. Allegedly, this was also bartered from the San.

No examples of any songs pertaining to agricultural products could be obtained from the

people, although the existence of these are probable. In fact, Zaby has recorded some wheat songs from Okombahe (1976: 18-19).

Nowadays a mixture of dry goat's dung and soft sand is used as fertilizer. Gardens are normally started just before the rainy season. A garden is utilized for a few seasons before it is deserted. This generally happens when a new well is dug. Although garden yields are normally limited, the people enjoy eating vegetables with meat and milk. Those with big gardens have the opportunity of earning extra money by selling some of the garden produce to other Dama.

### Hunting and Fishing

The research area has a variety of game and birds. However, people only occasionally hunt, primarily because of the availability of ample food resources from their own animals. Predators such as jackal are still killed when these threaten the safety of the herds. Metal traps, snares, and clubs are used as hunting equipment. In some cases, game are tracked down by means of horses and dogs.

Terminologically, the Dama distinguish between wild animals (*/gurun*) and tame animals (*/goan*). However, these are not exclusive categories, as goats are believed to have once roamed the mountains amongst the klipspringer (*†nubeti*) (Also compare Lebzelter 1934: 120).

Larger antelopes that are eaten include zebra (*!goren*), kudu (*xain*), and oryx (*/gain*). Small antelopes that are hunted are springbok, duiker and steenbok. Apart from these, the hyrax (*!δus*) is especially regarded as a delicacy. A number of birds such as the ostrich (*/amib*), bustard (*//haragas*), helmeted guinea-fowl (*Numida meleagris*), red-billed francolin (*Francolinus adspersus*), rock-pigeon (*Columba guinea*), and Monteiro's hornbill (*Tockus monteiri*), are sometimes killed for their meat. Dead animals, including hyraxes, will not be eaten, unless they died natural deaths. Snakes, leguan, baboons, scorpions and spiders are not eaten.

After exceptional rains, fish are washed down the Ugab River. These are caught in shallow pools using funnels made from wire-netting. The extent to which fish is utilized is not known, but it seems as if it may also be considered an emergency food.

### Migrant labour

Genealogical data from small Daob-!gaos, and interviews at Gomatsarab revealed, that at least three men were migrant labourers. Of these, one was employed by a mine in the vicinity of the Brandberg, one worked at the Uis mine, while the third one was with Rössing Uranium near Swakopmund. According to the women their husbands visited them once every three months, with the exception of the man that worked at Uis, who tried to be home every weekend. Although migrant labour has obvious financial benefits, it also has implications for normal family life, and at least two of the women complained about this. In their view, the men refrained from sending them any money, and allegedly had affairs with other women.

### Transhumance

Dama along the Ugab Valley inhabit a marginal environment, characterized by the



unpredictability of resources. This seasonal scarcity of pasture and water presents a problem to the Dama pastoralist. Like other pastoralists, he faces the task of feeding his family, and keeping his animals in good condition. To cope with this problem, stock owners have to move their livestock. These movements (*doe-be*) can be characterized as transhumantic as formulated by Stenning, who describes seasonal Fulani movements as “. . . . a conservative exploitation of a known habitat, involving continuous and careful appraisal of environmental and social demands which are not necessarily in harmony” (1960: 148).

Dama nomadism has environmental, socio-economic, and technical causes. Along the Ugab Valley, a combination of any of the subsequent variables seems to be important: the annual variability of rainfall, the place to place variability of the precipitation during the rainy season, the sparse distribution of surface water, technical problems such as to reach the water after the drop of the water table and the breakdown of pumping equipment, lack of wind to turn windmills (Köhler and Wagner 1959: 49), the deterioration of pasture, especially of Acacia pods, a shortage of male labour to dig new wells, prior experience with other areas, the factor of kinship, and the need to exercise control over animals that graze further from their own villages during drier periods.

These variables result in a pattern of seasonal nomadism, and it is necessary to distinguish between movements during the rainy season (late summer), and those during the dry season (middle winter). Of these, wet season movements have a large nomadic range, are more frequent (Köhler and Wagner 1959: 48), and especially relate to the variability of rainfall from place to place during the short rainy season. However, the duration of wet season movements is shorter than the less infrequent movements during the dry season. Furthermore, they are less disruptive, in the sense that it is unnecessary to demolish part of a settlement, because people will return to it after it has received adequate rain. These movements possibly also involve less people and animals compared with dry season ones (Köhler and Wagner 1959: 48).

This last type of movements especially demonstrate the importance of the Ugab River, not only as a source of water supply, but also to support the vegetation. During the dry season, the few permanent water sources along the Ugab attract a number of stock owners. A similar pattern was also noted amongst Kalahari San by Lee (1976) and Yellen (1976), and has obvious demographic implications. For example, during July 1977 Gomatsarab had four additional huts, while two families that resided at small Daob-!gaos during October 1976, had subsequently left the settlement to move close to Gomatsarab. This not only enabled their animals to drink at the spring near Gomatsarab, but also facilitated proper control over the herds. Interesting in this regard, is the tendency of animals to return to their former kraals, even though their owners have moved. For example, a few stray sheep observed at Daob-!gaos, covered a distance of approximately 5 km to their previous enclosures.

## SUMMARY

Dama settlement and subsistence along the Ugab Valley is discussed against the backdrop of an environmental framework. The subsequent conclusions should be seen as tentative, mainly because I was only able to observe part of the activities during the course of a year.

Notwithstanding the marginality of the environment, it does offer the people a variety of resources that can be utilized. Settlements are small, and their location and length of occupation reflect conscious ecological choices.