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Namibia Yesterday, Today and Tomorrow

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ABSTRACT

Written knowledge on vast, arid and thinly populated Namibia is scant, although man can trace his presence here back to the Early Stone Age. While prehistory teaches that adaptation to the environment was an effective survival mechanism, history and present behavior demonstrate encroachment of the desert due to maladaptation and counterproductive development patterns.

A few people of good faith strive to show that Namibia could become a model where human beings of heterogeneous origin can communicate positively about protecting their future by taking lessons from and about their environment. This paper describes a research proposal aimed at domestication of an endemic, edible, multipurpose plant, *Acanthosicyos horrida*, which has been used by local people for over 8,000 years. Other plants in Namibia have similarly interesting potential for domestication as do wild animals, which resist droughts more successfully than cattle, sheep and goats, the present mainstay of farming in Namibia. Namibia has considerable resources in terms of what it can offer to the international scientific community for research in fields ranging from appropriate technology to dry lands studies and anthropology, in reciprocity for profitably applying the results of sound scientific investigations.

INTRODUCTION

Namibia is a large country with a small population. It is larger than the state of Texas, but the population of the area is ten times less. The territory was colonized by the German Empire just over a century ago. Since the First World War the country has been administered by the Republic of South Africa and remains the last colonial territory on the African continent.

The western part of Namibia consists of a strip of land parallel to the Atlantic Ocean, receiving an average annual rainfall not exceeding 100 millimeters. It is the barren and inhospitable Namib Desert from which the name Namibia was derived. The eastern part of Namibia is covered by thick layers of permeable sand preventing the formation of open waters or spring. In spite of the fact that the region is covered with grass and trees due to the average annual rainfall exceeding 300 millimeters, the area is inhospitable and is known as the Kalahari Desert. The remaining land between those two deserts consists of a high plateau, where the majority of the Namibian population lives.

Similar to most other developing countries, Namibia has a dual economy consisting of a modern sector which was introduced by the colonial powers and a traditional sector which dominated the scene during precolonial times. Subsistence farming is the predominant occupation in the traditional sector. The modern sector is almost exclusively export oriented. The primary industries consist of the mining of minerals (copper, tin, uranium, diamonds, etc.), agriculture (beef and karakul pelts) and fisheries (crayfish and pelagic fish). Additional industry is virtually nonexistent. Namibia is very much dependent on its ruler, South Africa. Not only does it have to import all goods ranging from vegetables to machines, but South Africa also controls its infrastructure: roads, railroads, airways, postal services, electricity supplies and (by implication) water supplies.

Namibia Yesterday

Namibian written history barely covers 100 years. Prehistorically, however, people lived here since the Early Stone Age, which dates back some 2,500,000 years in southern Africa (1). Ancient living sites, cultural material and skeletal remains resemble the sequence of socioeconomic and cultural developments of southern Africa in general, with one notable exception: intensive cultivation of plants never featured significantly in the socioeconomic history of the country. The area of highest

rainfall in Namibia is along the northern border--here the average annual rainfall exceeds 700 millimeters. Only here Bantu-speaking agriculturalists have developed a sedentary mode of living, based on mixed farming. In the rest of the country, where the average annual rainfall is low or very low, hunting and gathering predominated until approximately 1,000 to 2,000 years ago, when domesticated animals were first introduced. In the Namibia of yesterday, population density was very low and mobility was in accordance with regional rainfall and climatic conditions; the natural environment was not destroyed by over-exploitation of the grazing and water resources.

Namibia Today

The introduction of a modern economy and the reduced mobility of the traditional sector are the two principal factors that have caused deteriorating patterns of land usage, threatening the natural environment with destruction. Hunting and gathering is no longer feasible as an economic basis for survival and is practiced only marginally by small groups who depend on other sources of income as well. Traditional methods of pastoralism have been all but stifled due to changes in land tenure. The restricted mobility and the communal ownership of land by too many people have resulted in overstocking and overgrazing of the land available to them. Modern sector farming is being practiced on large tracts of land by individual owners who, as a rule, cannot survive without substantial government subsidies. They too tend to overstock their farms in order to produce short-term benefits. The result is that Namibian farming land in both the traditional and modern sectors is being destroyed at the risk of the creation of another Sahel.

Namibia Tomorrow

Little or nothing is being done to initiate systematic research to find solutions to the many problems facing agriculture in arid Namibia. Concerned with tomorrow, the authors of this paper feel that the 1984 Kew International Conference on Economic Plants for Arid Lands (KICEPAL) and this conference, Arid Lands: Today and Tomorrow, directly address themselves to Namibia's needs. A promising future for the country's horticulture is seen in the domestication of suitable species of the indigenous flora.

Here we seek a method of collaboration between the two components of Namibia's dual economy by marrying the traditional knowledge of the Namibian environment to modern research.

PROPOSED METHODS

Indigenous plants should be selected, tested for their usefulness, cultivated and possibly domesticated to satisfy needs locally, nationally or internationally.

In Namibia, remains of wild plants still used today are found frequently in archaeological excavations. For example, *Acanthosicyos horrida*, a cucurbit endemic to the Namib Desert, attracted the authors' attention for the following reasons:

1. It is a multipurpose plant still used and well known to the Topnaar Hottentots (Figure 1) and the Himba Herero, two groups of people whose existence is severely threatened by confounded social, economic and political conditions in Namibia today (2).
2. The archaeological evidence indicates that the plant has long been a staple; it was transported and perhaps even traded for at least 8,000 years.
3. *A. horrida* grows in an area uninhabited by people and reserved only for such purposes as possible future mining or as a tourist attraction.
4. Cultivation and possible domestication of this plant would ensure its preservation and could contribute to the solution of a number of problems, not only locally but in other, similarly arid and stricken areas of the world as well.

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Figure 1. Topnaar woman collecting *Acanthosicyos horrida* melons.

Consequently this plant was chosen when work was started on a project that aims at historical and ethnobotanical research of economically useful plants in Namibia as well as at an assessment of livelihood strategies in relation to ecosystem function.

A superficial survey of ethnobotanical research (3) and knowledge of the plant as such indicated that information was limited. It was discovered that a close relative to *A. horrida*, namely, the Buffalo Gourd (*Cucurbita foetidissima*), had been the subject of precisely the kind of work envisaged for the Namibian project (4). This work could well serve as a guide for the research on *A. horrida*.

DISCUSSION

In an ad hoc way more research on *A. horrida* was encouraged and the most remarkable results can be summarized very briefly together with the elementary information on this native of the Namib Desert:

1. The plant is dioecious with male and female flowers on separate bushes (Figure 2).
2. There are no leaves, only thorns, and photosynthesis takes place directly through the stem.
3. The shrub grows on or through hummocky sands or dunes and has sand-binding qualities.
4. In the thickened rootstocks (Figure 3) are stored a variety of nutritious and pharmacological substances. Starches are of an unusually small size, rendering them suitable for addition to the manufacturing of plastics, and making the latter biodegradable (5).
5. Seeds make up approximately one-third of the volume of very sweet, juicy melons. The seeds contain predominantly protein and fat and can be stored for a very long time (6). The flesh is prepared according to a variety of different recipes.
6. Young shoots and the leathery skins of the melons provide fodder for goats, cattle and donkeys.

CONCLUSION

Almost every part of *A. horrida* can be used, and for millennia the plant featured significantly in the economy of the hunter-gatherers and "Erntevölker" (harvesters) as Budack calls the Topnaar or Naranin (7). More research has to be done on the !Nara, which is the common name for *A. horrida* and after which the Topnaar were called Naranin. Its suitability for cultivation and domestication



Figure 2. Female flowers of *Acanthosicyos horrida*.



Figure 3. Excavating the roots of *Acanthosicyos horrida*.

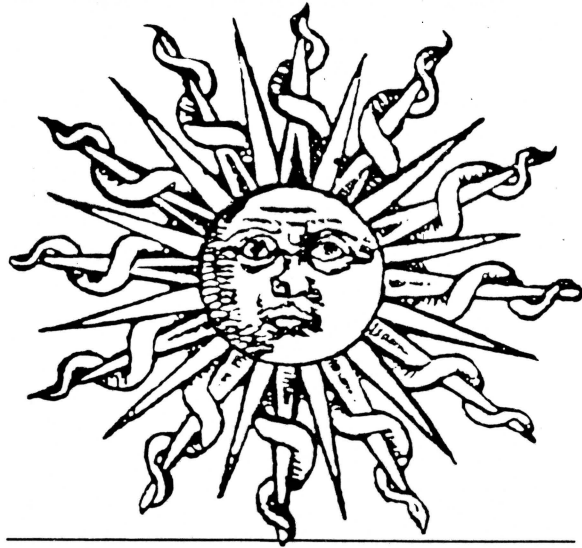
should be compared to that of other plants and judged within the context of ecological, socio-economic and political conditions in Namibia.

A development project led and guided by a team of experts seems a feasible vehicle for starting this kind of work in Namibia where all research is controlled by government agencies and, so far, has been the domain of foreigners. Often data are collected and published unknown to the inhabitants. Vice versa, existing information may elude the scientists who do not have contact with the local population.

The method of combining modern research and traditional knowledge could be demonstrated by using *A. horrida*, an arid land plant that could solve some arid land problems.

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