

Foragers on the Move

San survival strategies in Botswana parks and reserves

Robert K. Hitchcock

The establishment of national parks and reserves has been recommended as a major strategy for ensuring the survival of indigenous peoples and the maintenance of their cultural identity. Some view the setting up of reserves as a means of preserving traditional lifestyles and facilitating adaptation to change at a pace set by native people themselves. In some cases, indigenous peoples are able to benefit economically from their status as reserve residents through the sale of goods or income generated from tourism. Other anthropologists argue that reserves are a threat to the very existence of indigenous peoples. In Namibia, for example, John Marshall and Claire Ritchie have claimed that a nature reserve in Eastern Bushmanland would be a retrogressive step, forcing some local groups to revert to foraging and requiring others to leave the reserve with their livestock. In their opinion, the declaration of a reserve would essentially require the residents to join the wildlife as tourist curiosities.

Some administrators, anthropologists and indigenous people believe that reserves are essentially isolationist in character and that they will preclude the development which many indigenous groups desire. Rather than set people apart in what certain critics refer to as "human zoos," integration strategies are followed in which indigenous peoples are incorporated into local and national socioeconomic systems. There is a growing argument over the role of indigenous peoples in reserves. One group, a large proportion of whom are conservation-minded ecologists, tends to oppose the presence of indigenous groups in parks and reserves. These people would prefer to see indigenous populations excluded completely from reserves in order to maintain habitats and wildlife in a state unmodified by humans. As pressure for alternative forms of land use mounts, more and more countries are allowing corporate and business interests to exploit resources such as timber and minerals in reserved lands. There is no question that many reserves are being subjected to processes of environmental degradation, but whether resident groups, outside agencies or climatic shifts are the primary forces of change are issues that have yet to be resolved.

It has become increasingly apparent that conflicts of interest exist in many countries, both developed and underdeveloped. They occur between administrators and local people, conservationists and developers, and ecologists and indigenous populations. There are few places in the world where some of these conflicts are better illustrated than in the Republic of Botswana in southern Africa. Like many African countries,

Botswana has a large percentage of its land devoted to national parks and reserves (Campbell 1973; von Richter 1976; Wilkinson 1978). It also has some of the largest herds of plains game left on the African continent, and wildlife-related tourism is increasing in importance in terms of its contribution to foreign exchange reserves. Habitat changes, expansion of pastoralism and agriculture, and construction of fences for disease control are beginning to have significant impacts on wildlife populations in Botswana.

Botswana is a country which contains substantial numbers of hunter-gatherers (Silberbauer 1965, 1981; Lee and DeVore 1976; Tanaka 1980). Known as the San to anthropology students, the Bushmen to the lay public, and the Basarwa to the citizens and government of Botswana, many of these people are facing profound socioeconomic transformations in their environments. In an attempt to prevent development from completely overwhelming the San, efforts have been made to set aside land for their use. The Central Kalahari Game Reserve, one of the largest in Africa, was originally established to protect traditionally foraging San populations and the fauna and flora upon which they depended for their survival (Silberbauer 1965; Campbell 1968a, 1968b, 1973). As social, economic and environmental changes have occurred in and adjacent to Botswana's reserves, recommendations have been put forward which would shift or modify the legal status and patterns of use of some of these areas. These changes would, in turn, greatly affect the residents of the reserves and might well result in additional restrictions being imposed on their mobility, foraging and other economic activities.

Botswana and Its Reserves

At Independence in September 1966, Botswana was considered one of the poorest and least developed nations on earth. Beset by drought and having a population that was largely rural and poverty-stricken, few believed Botswana would be able to persist without massive infusions of foreign aid. Since 1966, however, Botswana has exhibited one of the highest rates of economic growth of any country in the Third World. It has maintained its multiparty democratic system and has held five open elections. Emphasis has been placed on rural development, and social and physical infrastructure has grown significantly. The country has come to be well known for its sound development policies and forward-thinking planning practices.

Located in the center of southern Africa on a semi-arid raised plateau, the majority of Botswana consists of rolling savannas dotted with shrubs and trees.

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NOTICE

Wildlife is found in all but the most urbanized parts of the country, and hunting makes up an important part of the subsistence and income of rural populations. In order to protect its wildlife and the habitats utilized by both game and people, Botswana has set up a series of national parks and reserves (see the accompanying map and Table 1). Taking recent figures on land categories, over 100,000 km² are devoted to reserves of various kinds. If one adds a recently devised category known as Wildlife Management Areas (WMAs), which comprised 128,050 km² as of December 1982, a total of 233,841 km² of Botswana's land is made up of reserve and wildlife areas, over 40 percent of the country. As Wilkinson (1978:609) has pointed out, Botswana has the largest ratio of reserved land per capita of any country in the world; the new figures would place Botswana second in the world in terms of land set aside as reserves (see Wilkinson 1978:621, Appendix A).

TABLE 1.
National Parks, Game Reserves and
National Monuments in Botswana

Name of Park, Reserve or Monument	District Name	Size (km ²)
Gemsbok National Park	Kgalagadi	24,304
Mabuasehube Game Reserve	Kgalagadi	1,811
Kutse Game Reserve	Kweneng	2,703
Central Kalahari Game Reserve	Ghanzi	52,347
Makgadikgadi Pans Game Reserve	Northwest, Central	3,790
Nxai Pan National Park	Northwest	2,272
Moremi Wildlife Reserve	Northwest	2,788
Chobe National Park	Chobe	10,720
Tsodilo Hills National Monument	Northwest	132
Aha Hills National Monument	Northwest	148
Drotsky's Cave (G/wihaba) National Monument	Northwest	60
Gaborone Game Reserve	Southeast	260
TOTAL		101,335

Botswana's Fauna Conservation Proclamation (No. 22 of 1961) offered a framework for the declaration of parks and reserves. Boundaries of reserves are gazetted by Parliamentary approval, and regulations for use of these areas are spelled out in some detail. The parks and reserves are administered by the Department of Wildlife and National Parks in the Ministry of Commerce and Industry. The reserve areas cover the main habitats in Botswana, including wetlands (Moremi), pans (Mabuasehube, Kutse), open savanna and woodland (Gemsbok, Central Kalahari), ancient dry lake beds (Makgadikgadi, Nxai), fossil valleys (Kutse, Central Kalahari) and alluvial floodplain bounded by riverine gallery forest (Chobe). The national monuments are overseen by the Ministry of Home Affairs and consist of sites of archaeological (Tsodilo) and geological (G/wihaba) significance. Most of the parks, reserves and monuments are remote and relatively undeveloped. Management consists mainly of charging fees at park gates, conducting routine patrols to prevent poaching and doing a limited amount of building, road and firebreak maintenance work.



San Survival Strategies in Parks and Reserves

Virtually all of Botswana's parks and reserves contained San foragers at one time or another in the past, but today only four areas have San residents: (1) the Central Kalahari Game Reserve (Silberbauer 1965, 1981; Cashdan 1977; Sheller 1977; Tanaka 1980; English et al. 1980; Owens and Owens 1981); (2) Kutse Game Reserve (Dawson and Butynski 1978; Vierich and Hitchcock 1979); (3) Tsodilo Hills National Monument (Campbell, Hitchcock, and Bryan 1980); and (4) Moremi Wildlife Reserve. In all four cases population density is low. There has been a general pattern of outmigration from the reserves over the past several years. The population of the Central Kalahari Game Reserve, for example, has dropped from 5,000 residents in 1960 to about 1,000 in 1984. Mobility patterns are changing, with camps tending to become increasingly permanent. The San camp in the Tsodilo Hills, for example, had been occupied for two years at the time of my last visit, whereas in the past, residential moves were made several times a year.

Campbell (1973), in describing Botswana's parks and reserves, has noted that the majority are not the result of careful planning and research but reflect specific historical circumstances at the time of their inception. Gemsbok National Park, for example, was established originally in order to satisfy requests from the Republic of South Africa, which had set up a park on its own side of the border in the early 1930s. It is interesting to note that 300 people living along the Nossop River were resettled as a result of the park's declaration. In many cases the boundaries of the reserves were expedient, with lines of latitude, international borders, trek routes or roads being utilized. The Central Kalahari Game Reserve is an important exception to this generalization. Originally recommended by the Bushman Survey Officer of the Bechuanaland Protectorate, George Silberbauer, the reserve was designed in such a way as to include all the habitats within which San groups move. Unlike



San returning home after working on nearby farms as day laborers.

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many other reserves, the Central Kalahari is a topographic entity and contains sufficient land to support substantial game populations in both wet and dry seasons.

A major characteristic of many of the parks and reserves in Botswana is a lack of surface water except after rains. Food supplies are scattered, and the unpredictability of rainfall often puts the adaptability of resident populations to severe tests, especially during dry seasons. An important survival strategy employed by San is mobility; traditionally San groups have moved from one place to another during the year in order to gain access to moisture, food or materials. The number of annual residential moves varies, depending in part on availability of surface water; whereas G/wi in the Central Kalahari move between four and fourteen times, River Basarwa groups in the Moremi Wildlife Reserve may move only once or twice a year. Range sizes of forager groups tend to be large, averaging between 500 and 4,000 km² in the central and southern Kalahari, and between 250 and 400 km² in the Tsodilo Hills, where semi-permanent springs exist. In dry periods San in some reserve areas utilize melons and, to a lesser extent, roots or the rumens of animals as sources of moisture. In Gemsbok National Park !Xō groups used sip-wells, a labor-intensive strategy involving sucking water from porous sands through a straw and then spitting it into containers such as ostrich eggshells. The shells are then stored in huts or buried in places marked for subsequent visits.

!Kung, G/wi, !Xō and other San utilizing the

reserves are organized into co-resident groups consisting of individuals and nuclear families related through kinship, marriage and friendship. The composition of these groups can vary tremendously; in periods of resource abundance several bands may coalesce into groups of a hundred or more, while in dry seasons they tend to break down into minimal units. It is not unusual to find individual families dispersed widely across the landscape in drought periods. Adjustments are made in the diet in the dry season, with a wider variety of species being utilized, a strategy that is similar to that of lions and other predators in the Central Kalahari (Owens and Owens 1978, 1984). In general, dietary dependence tends to be greater on plants than animals, though in some cases, as in Mabuasehube and Gemsbok, meat can make up a significant portion of the diet at various times. San could be termed opportunistic or eclectic in their feeding habits, and this flexibility ensures survival in stressful periods.

The need to move in search of food and water, as well as the desire to obtain non-local goods such as fence wire for making arrowheads, has prompted the establishment of an extensive system of band alliances, many of which stretch far beyond the boundaries of reserves. Social ties are facilitated through marriage and exchange links; these ties can provide individuals and groups with access to alternative resource areas in times of stress. In the Central Kalahari there is a 25-50 percent reduction in population in the reserve in dry seasons, and in severe

drought periods the decline may be as high as 75-80 percent. Some G/wi and G//ana move to farms in Ghanzi or cattle posts in Kweneng and Central Districts in order to seek handouts from relatives or get part- or full-time jobs (Silberbauer 1965; Vierich 1977; Cashdan 1977; Hitchcock 1978). In very dry periods San have been known to simply sit under trees and not move at all in order to maintain bodily moisture and energy levels (Silberbauer 1979). Some individuals have opted to join the ranks of those migrating to the mines of South Africa. Others work as *badisa* (herders) on cattle posts of the Tswana (Hitchcock 1978) or do seasonal agricultural labor (*majako*) in exchange for a portion of the crop produced (Vierich 1977). There have been cases where San groups have had to leave behind the elderly and younger children in an attempt to move long distances to sources of permanent water and food; this was seen, for example, in the eastern Central Kalahari in October 1979 (Soblen Mayane, personal communication).

San in and adjacent to reserves are facing increasing problems of competition and resource depletion. Permanent sources of underground water have been established on the peripheries of many reserves, and in some cases, within the reserves themselves (e.g. at !Xade in the Central Kalahari, drilled in 1962). People tend to congregate around these permanent water sources; wild foods are exploited quickly and fights are not infrequent. As water points have increased, so, too, have livestock numbers. Cattle eat some of the same resources as people, melons and grevia berries being examples, and the result is that foraging returns decline in areas that are heavily grazed. The use of guns by livestock owners for hunting or predator control frightens game and increases flight distance; this process, in turn, places hunters using traditional weapons at a comparative disadvantage. An additional problem is that more and more San hunters are being arrested for supposedly violating hunting regulations. San are being fined and imprisoned, and the result is that people are afraid to hunt. When the Central Reserve was originally declared, traditional hunting was to be allowed. More and more game scouts and police, however, are taking people into custody in spite of the fact that bows and arrows are being used. Under the Unified Hunting Regulations, passed in 1979, subsistence hunters are to be issued a Special License which permits them to obtain up to 1,200 kilograms of meat per household per year. As of early 1984, however, San were still being arrested for hunting, even if they had a license in their possession.

Additional problems facing San in reserves include the establishment of veterinary cordon fences to prevent the spread of Hoof-and-Mouth Disease. The Central Kalahari, which has the second largest wildebeest migration on earth, has witnessed massive die-offs of these and other animals in the past few years (Owens and Owens 1980, 1981). While large-scale wildlife losses have been known to occur historically (Campbell 1968a:193-194; Child 1972), the frequency and severity of die-offs has increased significantly since the

fences began to be erected in the mid-1950s. Some San have cut the tails off dead or dying wildebeest for sale to traders, and others have picked up the bones for sale to the bonemeal factory in Francistown. Some San have been arrested for attempting to take meat and other wildlife products across the cordon fences; this has led to a reduction of trade in skins, which has been an important source of income for San.

In response to these pressures, many San are employing a mixed economic strategy. Some household members are continuing to forage, others do wage labor, and still others engage in rural industries such as handicraft production. In the Tsodilo Hills, it is estimated that the average family makes approximately 600 Pula (about \$550) through sales of bow and arrow sets, decorated wooden plaques, ostrich eggshell bead necklaces, leather bags and other items. Some San in reserves work as guides for tourists and others do dances; one group in Kutse, for example, makes as much as 50 Pula (about \$45) in a single night of dancing. Income generated from these activities is used to purchase household items, livestock and sometimes guns. Hunting is markedly more successful with the aid of horses, and larger amounts of meat and wild plant foods can be transported on donkeys. More resources can thus be stored at residential locations, something which, in turn, extends the period of time a group can stay there. Becoming more settled has a number of impacts, including changes in social and political organization, technological shifts and a rise in population growth rates.

As reserve populations have become increasingly sedentary, there has been an increase in demand for social services. At !Xade in the Central Reserve, for example, G/wi and G//ana requested that the Remote Area Development Programme and the Ghanzi District Council provide them with a school and health post. They also requested extension advice, and an Agricultural Extension Assistant was assigned to the area. By 1982, !Xade had become a small permanent village whose residents were pressing for further development assistance. Similar requests were being made by a group in the Tsodilo Hills, which was pressing for its own water source separate from that of the resident Mbukushu group.

The Future of San in Botswana's Reserves

There are differences of opinion among San, administrators and conservationists concerning the future use of Botswana's parks and reserves. Many San have already expressed their opinion by simply moving out of the reserves altogether. Other San use them only seasonally, moving into the areas in small groups for subsistence purposes. Still others have elected to remain in the reserves. The majority of these people wish to have all the benefits of development, including schools, health facilities, water, roads, livestock, land for agriculture and extension advice (see, for example, English et al. 1980 on the aspirations of the Central Reserve population). The numbers of contacts between reserve populations and government workers has increased substantially in the

past few years. Remote Area Development Officers (RADOs) have tended to favor the idea of development in situ, and a number of projects have been initiated in reserve areas, particularly in the Central Kalahari. Still, there are some Remote Area Development Program officials who would like to see San moved out of reserves; in Tsodilo, for example, suggestions have been made for digging a well five miles south of the hills and relocating the San there. Resettlement out of national parks has already occurred in Chobe and Gemsbok, so precedents exist for the removal of indigenous groups.

Pressures are building to change the legal status and use of reserves in Botswana. It is possible to divide the various approaches being taken to planning the future of reserves into four major categories: (1) protectionist, (2) conservationist and developmental, (3) development with equity, and (4) development with production.

The protectionist approach is exemplified by the Department of Wildlife and National Parks, whose officials would like to see an increase in anti-poaching patrols and a complete stop to all development of social and economic infrastructure in reserve areas. As DWNP officials note, Section 93(2) of the Fauna Conservation Proclamation of 1961 forbids any type of development in reserve areas unless it is of direct benefit to the fauna. Wildlife officials would prefer to see only wildlife and tourism-related activities in parks and reserves.

Perhaps some of the strongest arguments for changing the status and use of reserves have come from ecologists (e.g., Owens and Owens 1981). The Owens' approach has elements of both conservation and development. Like DWNP officials, the Owens recommend that the northern third of the Central Reserve should be elevated to national park status. San and other groups residing in the area should be removed, they argue, since in their opinion they are no longer traditional and engage in activities supposedly harmful to the area's ecology. As they put it, "The livelihood of primitive people cannot long remain consistent with the objectives of a game reserve or national park" (Owens and Owens 1981:11).

Development schemes for the park should include, according to the Owens, areas for tourism, conserved wildlife habitats such as sections of fossil river valleys, and closed areas where only research could be carried out. Administrators in the Department of Wildlife have suggested that the southern two-thirds of the Central Kalahari Game Reserve should become a Wildlife Management area, a new land zoning category in which people would be able to get assistance in wildlife-related activities such as tanning and game farming. Detailed stipulations have not yet been set forth as to allowable settlement size or the number and types of livestock residents can keep in WMAs, but presumably strict limitations will be enforced. These recommendations are not unlike those of the Department of Nature Conservation in Namibia, which would allow people to stay in a reserve only so long as they remain traditional; those pursuing a mixed economy would either have limits



San women threshing grain.

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imposed on herd size and land cultivated or would be excluded from reserves altogether.

Along with the Owens, officials in the Ministry of Agriculture and the Department of Wildlife have recommended the drilling of boreholes for game in the Central Reserve as a means of alleviating some of the problems posed for wildlife by the cordon fences. Without strict monitoring and enforcement, however, it will be difficult if not impossible to keep people from settling on the peripheries of the water points, and perhaps even more importantly, to prevent livestock owners from moving their herds to these places. Cattle owners in the surrounding districts see the Central Reserve as a vast, unexploited rangeland where their livestock could thrive. The Ngwato Land Board in Central District has already allocated drilling sites to cattle owners within the eastern boundary of the reserve.

A major concern of Botswana has been to increase production and expand foreign exchange reserves. Besides livestock production, mining revenues have come to assume major significance in the national economy. Some administrators, particularly those in the Ministry of Mineral Resources and Water Affairs, want to see greater emphasis on mineral development.

The type of multiple use strategy for Botswana's reserve and other lands is reminiscent of that recommended for federal lands in the United States by former Secretary of the Interior James Watt. Multinational corporations have been given the right to explore the Central Kalahari and other reserve and monument areas, and a large strike could lead to major mining operations. Plans have been outlined for a Trans-Kalahari Railway which would cut directly across the Central Reserve from the coal fields in eastern Botswana to the deep water port at Walvis Bay in Namibia. Concessions have been granted for timber extraction in the Forest Reserves of Chobe District, and suggestions have been made by safari companies that they be allowed to undertake culling operations in some of the reserves.

The future of San in Botswana's parks and reserves remains uncertain. There is no question that traditional foraging strategies no longer provide sufficient resources to sustain large numbers of hunter-gatherers. At the same time, removing San from areas where they have lived for generations or imposing restrictions on their economic activities will only serve to further undermine their survival strategies. Hopefully, the government of Botswana will find a means of meeting the needs of San and incorporating them into development planning for the country's reserve areas. Should this not occur, Botswana's lofty goals of social justice and economic development for all will not have been achieved. □

Robert K. Hitchcock is a visiting assistant professor of anthropology at the University of Nebraska. Formerly he was the research manager in the National Refugee Commission of Somalia and the Senior Rural Sociologist in the Ministry of Agriculture of Botswana.

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