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## Establishment of Botswana's National Park and Game Reserve System<sup>1</sup>

By Alec Campbell<sup>2</sup>

### Background

I commence this paper at the year 1925, some few years before declaration of Botswana's first Game Reserve. At that time, Botswana was a 'Protectorate' of Britain (called the Bechuanaland Protectorate), administered through a High Commissioner located in Pretoria and a Resident Commissioner with Secretariat (Headquarters) located in Mafeking (Mafikeng), South Africa. Kalahari sands cover about 75% of the county, while the remainder, a broad north-south belt in the east, is hardveldt with rocky outcrops and ranges of hills. Although flat, the Kalahari is by no means an uninteresting area, for it contains not only the Okavango Delta, but fossil rivers, dead lakebeds and grass-covered pans, dune formations, parkland, mosaics of varying woodlands, savanna and open grassland.

Three different legal forms of land ownership pertained in the 1930s and still do. Crownland, now called State Lands, have been much reduced in size. Tribal Reserves, the property of individual tribes where the greater part of the country's population lived and still lives, have been enlarged at the expense of Crownland. And small areas of Freehold land, originally owned by White farmers, were, and still are, used for cattle ranching. Differences in the land's legal statuses have, to some extent, shaped the ways in which reserves and parks have been established.

Censuses were notoriously inaccurate, but in 1930 the human population probably numbered about 300,000 individuals, less than one person to a square kilometre. Most people lived in Tribal Reserves in the east. In the west, and excluding a few communities living on permanent wells, vast areas were either unpopulated or contained small groups of semi-nomadic pastoral Bakhlagari and foragers (Bushmen, also known as San or *Basarwa*) who hunted and gathered wild food (Campbell 1965). Wildlife on Kalahari sands, but less so in the east, was said to have been prolific.

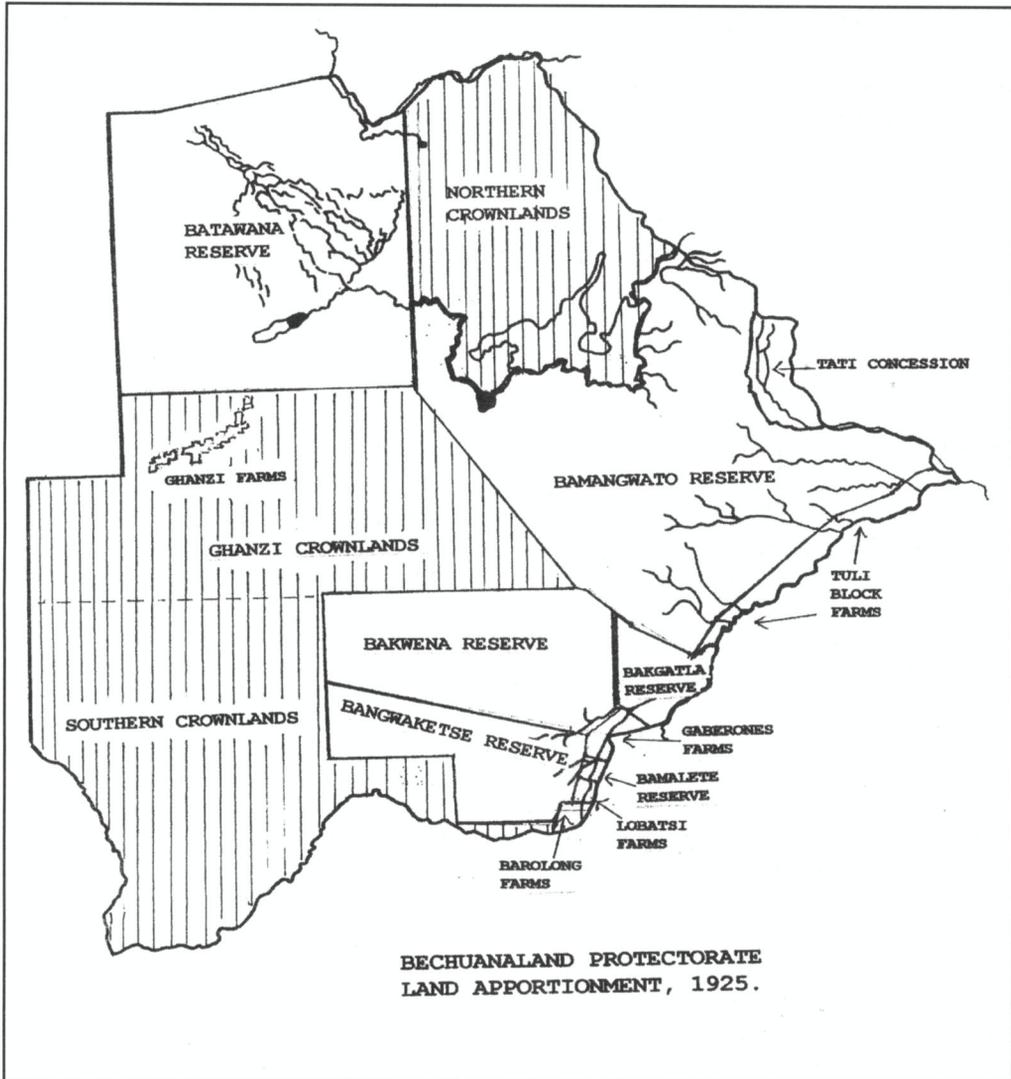
The 1925 'Game Proclamation', replacing earlier wildlife legislation, mainly controlled hunting by non-Batswana. It also reinforced existing powers of *Dikgosi* (Chiefs) to control large game hunting by their own people on their tribal lands and made provision for areas of Crownland to be declared non-hunting areas for named species for periods of up to three years. Until 1961, a few such areas were so declared for varying periods of time. It was not until 1940 and Game Proclamation No. 19 that the law finally provided for establishment of Game Reserves. In those days, there was no Department of Wildlife; day-to-day administration of wildlife matters was in the hands of District Commissioners and *Dikgosi* under the general supervision of the Resident Commissioner in Mafeking.

### Introduction

Before the 1960s, wildlife was said to be prolific throughout the country. Wild animal products played vital roles in human subsistence. Unlicensed subsistence hunting was recognised by the

1. The paper was originally written for the Fifth World Congress on Wildlife in 2003.

2. Alec Campbell joined the Bechuanaland Protectorate Administrative Service in 1962, and served as District Commissioner, Ghanzi 1962-3, Population Census Officer, 1963-5, Senior Game Warden and Director of Wildlife and National Parks, 1966-74, and Honorary Curator & Director, National Museum and Art Gallery, 1966-87. Currently he is a Director of the Trust for African Rock Art, Nairobi. He lives in Botswana.



**Figure 1. Bechuanaland Protectorate Land Apportionment 1925.**

Administration and by *Dikgosi* as a right. For the poor, wildlife provided meat, while skins were traded to buy clothes, tobacco, tea and sugar, and to pay taxes. Livestock owners saw wildlife as inexhaustible and a cash crop, but a menace to cattle raising on account of stock lost to predators and stock-transmitted diseases. Cattle were universally recognised as the backbone of the country's economy while wild animals were considered as having little value.

Reliance for all information on early numbers, distribution and movements of wildlife depended on eyewitness accounts. In 1962-3, huge herds of wildlife existed in both the Northern and Southern Kalahari. In the south, migrating wildebeest between Matsheng and Okwa could be seen in herds stretching almost continuously for great distances, estimates placing their numbers at many hundreds of thousands (Campbell 1997). In 1963 in the north, Dr Thane Riney, a Food and Agricultural Organisation ecologist, described wildebeest, zebra,

gemsbok and springbok around western Makgadikgadi Pans as 'the largest herds of plains game left in Africa today' (Riney and Hill 1963), notwithstanding the huge Serengeti herds in East Africa. In 1974, I estimated I saw about 40,000 hartebeest standing along the Sekoma to Kang road. It is reasonable to estimate that in 1962 the country held more than one million wildebeest and many hundreds of thousands of hartebeest, zebra and springbok. Numbers of other species for that time are difficult to gauge. By the 1960s, elephant were seen to be increasing from a seriously depleted population in the 1930s, while buffalo and lechwe were thought to be decreasing in numbers (Child 1968).

In earlier days, Game Reserves and then National Parks came into being, not as the result of careful planning nor, for the most part, on the basis of ecological research, but from accidents of history and circumstances obtaining at the time of their promulgation. Boundaries were usually arbitrary lines drawn on maps: tribal boundaries, rivers, roads and even a sand ridge. Their shapes were calculated to exclude settlements and interfere with as few people as possible.

### **The first Game Reserves**

The first game reserves, if they can so be termed, were created by *Dikgosi* (Tribal Chiefs) who announced in *dikgotla* (tribal meeting places) in the nineteenth century that they had reserved certain areas to themselves for their own and their invited friends exclusive hunting. Best known of these areas are Chief's Island in the central Okavango Delta reserved for hunting by Tawana Chiefs and another such area, its limits now forgotten, situated near Mmashoro in the Central District and reserved for hunting by Ngwato Chiefs.

In 1932, the Resident Commissioner, Charles Rey, wanted to establish a game reserve in the Chobe District. However, the cost of a warden and two scouts was at the time considered by the High Commissioner in Pretoria to be too high. Dr H.H. Webb, Director of Veterinary Services, also vehemently opposed the reserve. Although Rey failed to establish a game reserve, not to be outdone, he declared a no-hunting area in the Chobe District, a prohibition that was to be renewed until 1943 (Parsons & Crowder 1988).

The following year, 1933, saw Sir A.W. Pim conduct an economic survey of the country and, in a 200-page report, mention wildlife only in passing as a nuisance to the development of livestock (Pim 1933). The Veterinary Department constantly complained about wildlife and contested any attempts even to consider establishing game reserves (Bechuanaland Protectorate Annual Reports & Spinage 1991). Pim's Report, emphasising the value of cattle and ignoring wildlife, was to fix future attitudes towards economic development.

In 1930, South Africa established the Kalahari Game Reserve adjacent to the Nosop River, the southwestern international boundary, and asked the Protectorate Administration to protect wildlife on its side of the border. This posed a problem since at least six small settlements existed on the Bechuanaland side of the Nosop River whose inhabitants, to some extent, hunted for subsistence (Clement 1967).

At first, the Resident Commissioner merely declared the Bechuanaland side of the border to be a 'no hunting' area in terms of the 1925 legislation, but issued its residents with hunting licences. The Bechuanaland residents were caught poaching in the South African Game Reserve, an act that eventually forced the Resident Commissioner to declare an adjacent area in Bechuanaland, a 40 km wide strip of land along the river, as Game Reserve. He agreed to move the people living on the Nosop River, provided they also agreed to move and South Africa paid all expenses including compensation to those moved. In 1938, 280 people under Titus Matthys were resettled between Tweerivieren on the Nosop River and Rappelspan on the Molopo River.

Seventy-seven nomadic Xhomi and Cauni (Bushmen), also residing in the Reserve, were resettled at the Reserve gate at Tweerivieren, but on the South African side of the border (J. le Riche, pers. comm.).

Then, in 1940, the Nossop (*sic*) River Game Reserve, an area of about 9,700sq km, was promulgated and all animals, but not plants, protected. There was no money to administer the new Reserve, and the South African Warden of the renamed Kalahari Gemsbok National Park was appointed Honorary Game Ranger for the new Bechuanaland game reserve. In effect, the National Parks Board of South Africa policed the Bechuanaland reserve, a situation that was to continue into the 1980s.

In 1940, a new form of protected area was to come into being - sanctuaries. These were small areas, particularly dams, in which the only protection afforded was to certain wildlife species. The first declaration involved Mogobane Dam in the Bamalete Reserve, where an area 12 km in diameter around the dam was declared, and in it all game birds – ducks, geese, guineafowl, sandgrouse etc. – were fully protected. This was followed in 1942 by declaration of an area six kilometres in diameters around Bathoen Dam in the Bangwaketse Reserve, where game birds were also protected.

### **The Game Department and Chobe Game Reserve**

Increasing elephant populations and destruction to crops along the Shashe River created so many complaints that the Administration was forced to take action. In 1956, Major P. Bromfield was employed to 'control' elephant and stationed in Francistown. Bromfield formed the 'Elephant Control Unit' in early 1957, and swiftly reviewed the existing Game Proclamation. Dedicated to wildlife conservation, Bromfield recognised the potential value of Botswana's wildlife and set about persuading the Administration to take action. His first move was to revive Col Rey's proposal for a game reserve in the Chobe District, this time with greater success (Bromfield pers. comm.). In 1960, the Chobe Game Reserve was proclaimed, an area of 15,400sq km with a northern boundary on the Chobe River, but so shaped as to avoid human settlements. Wild animals, but neither plants nor fish, were protected. No people were moved and those few still living in Serondela, once a logging camp and now situated in the Reserve, were allowed to remain. The Reserve's declaration was routinely opposed by the Director of the Veterinary Department, who stated, '... our cattle can never be put onto a proper footing if we are going to consider the game' (Spinage 1991).

In 1961, the Game Proclamation was replaced by the Fauna Conservation Proclamation, No. 22 of 1961, a much improved law based on the Northern Rhodesian (Zambian) law. The new Proclamation provided for declaration of areas as Game Reserves. The Elephant Control Unit became the 'Game Department'. A warden and staff were installed in the Chobe Game Reserve.

In 1965, Major Bruce Kinlock was appointed by the Administration to advise on wildlife matters. As a result of his report (Kinlock 1965), many changes were to take place. Major Bromfield received the title 'Game Officer', and two game rangers and more game scouts were hired. Dr Graham Child, an FAO ecologist, undertook a detailed reconnaissance of the new Chobe Game Reserve. As a result of Child's report, the Reserve's boundaries were revised, at first to excise areas then considered more suitable for logging and later to include areas needed to link the Park to the Moremi Reserve. Not all the changes suggested were implemented.

### **Central Kalahari Game Reserve**

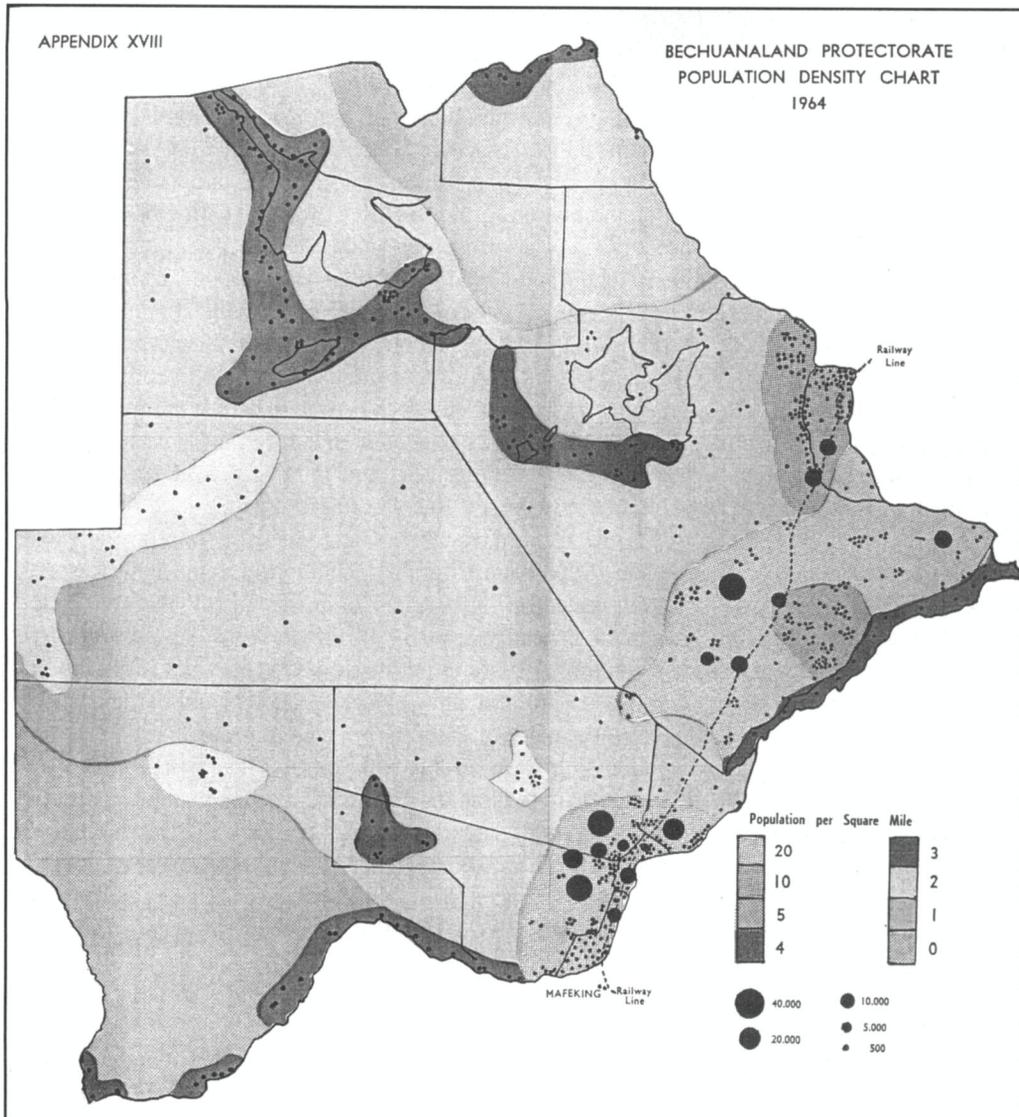
During the 1950s, first the Marshall Expedition explored the Kalahari seeking 'wild' Bushmen, and then Laurens van der Post published *The Lost World of the Kalahari*, both events stirring the public to consider the Bushmen's so-called plight and forcing the Administration in Mafeking to do something about them. In 1958, George Silberbauer, a District Officer, commenced the 'Bushman Survey', working mainly in the eastern Ghanzi District. His terms of reference required a report and recommendation for the Bushmen's future (Silberbauer 1965).

Silberbauer recognised the difficulties Bushmen underwent in their relations with other groups, and particularly their inability to retain rights on land wanted by others. He worried about encroaching farming and sought to secure land for the Bushmen on a permanent and legal basis (Silberbauer pers. comm.). In 1960, he recommended to the Administration that the entire eastern region of the Ghanzi District should be secured for the Bushmen living in it, then about 3,000 people. His main concern was that Bushmen be free to decide their own future in their own time. After discussions in Mafeking, he recommended that a Game Reserve be created in which Bushmen could live, keep small stock, and hunt any wild species using traditional weapons. It was feared that a 'Bushman' Reserve might create public disapproval (Silberbauer pers. comm.). In 1961, the Central Kalahari Game Reserve was promulgated, covering approximately 52,800sq km. Silberbauer drafted regulations for the new Reserve. These provided that entry be by permit issued by the District Commissioner, Ghanzi (not by the Game Department), and that Bushmen normally resident in the Reserve should have free movement in and out, unrestricted hunting rights and permission to keep goats, etc., but not dogs, cattle or horses. The intention was to prohibit entry by casual visitors and particularly by neighbouring peoples who had been in the habit of entering the area to graze their stock, hunt and recruit cheap labour, activities already proving problematic for the Bushmen. Tourism was to be excluded. When published, the draft regulations had been altered in the Secretariat: Bushmen were forbidden to hunt or keep small stock as this was contrary to the principles of Game Reserves, but provision was made for the issue of licences to hunt in the Reserve. On the other hand, in 1963, the Administration commenced drilling boreholes at Cade to supply water for both Bushmen and wildlife use (Hitchcock 2002). No effort was made to license Bushman hunting.

### **Moremi Wildlife Reserve**

In the early 1960s, June and Robert Kaye, author and wildlife photographer, together with a group of Maun residents and help of Mrs Moremi, Regent of the Batawana, persuaded the Tawana Tribe to create a small reserve on their tribal land (Peter Smith pers. comm.). The Moremi Wildlife Reserve, as it was originally named, was the first Reserve in Africa to be established legally by a tribe on its own tribal land. In 1964, the Okavango Wildlife Society, a private organisation, arranged and paid for an ecological survey of the proposed area (Tinley 1966). As a result, boundaries were determined and the Reserve was proclaimed in 1964, about 2,000sq km of swamp, floodplains, islands, riparian strip and forest in the northeastern Okavango Delta. The Reserve was to be administered by a newly formed organisation, the Fauna Preservation Society of Ngamiland.

A group of about 40 semi-nomadic Bugakwe, under the leadership of Kgwere, then resident on and around Bodumatau Island in the Reserve, were moved to a site on the bank of the Khwai River, outside but adjacent to the Reserve (Peter Smith pers. comm.).



**Figure 2. Bechuanaland Protectorate 1964.**

In 1976, the Moremi's boundaries were extended westward to take in Chief's Island in the central Delta, and eastward to link it to the Chobe National Park, creating 3,900sq km of protected area. These extensions affected Gcanikhwe living on Chief's Island, who were moved, and the Tseca, residents of Kudumane, a neighbouring village in the Mababe Depression, by diminishing their areas traditionally used for hunting and gathering wild food (Michael Taylor pers. comm.).

In 1979, administration of the Moremi Wildlife Reserve was handed to the Department of Wildlife and National Parks and the Reserve's name changed to Moremi Game Reserve.

**1966, first Wildlife Conservation Policy, Changes in the Game Department  
and the National Parks Act**

In 1966, the year Bechuanaland achieved 'independence' from Britain and became the Republic of Botswana, a national conservation policy was prepared and the need to develop wildlife - not only for its own aesthetic value, but also as a commodity of economic return - was recognised (Campbell 1973). The following criteria were laid down:

1. The return from wildlife to be dramatically increased, initially through sport hunting, but later through more conventional forms of tourism;
2. Provision to be made for regular cheap subsistence hunting for local populations on a sustained-yield basis for so long as it should be needed;
3. Creation of large areas to form wildlife reservoirs, providing an annual spill-over into surrounding areas for all forms of hunting, such areas needing to be protected from agricultural expansion;
4. A cross-section of all habitats and ecosystems, and examples of all geological formations, to receive complete protection;
5. Protection of suitably large areas with necessary types of habitat for the preservation of all existing wildlife species;
6. Development of the areas listed above under 3, 4 and 5 to take into account the need not only to conserve wildlife but also to provide the facilities both for inviolate wilderness preservation and for all forms of tourism; and
7. Preservation of areas of historic and cultural value.

In the same year, Major Bromfield retired, Game Department headquarters was moved from Francistown into the Ministry of Commerce and Industry in Gaborone, and both a Chief Game Warden and Senior Game Warden were appointed.

In 1967, the Game Department was renamed the Department of Wildlife and National Parks, the Chief Game Warden became Director, and additional wardens and game scouts were hired. The Fauna Conservation Act was amended. A Wildlife Biologist was appointed. The National Parks Act was enacted and, finally, it became possible to upgrade some Game Reserves and establish National Parks. The Chobe Game Reserve acquired National Park status, although its size was reduced at the request of the Ministry of Agriculture to allow for commercial logging in peripheral areas. In 1974, Maikaelelo, an area excised for logging, was declared Game Reserve as logging under permit was permissible in game reserves. In 1980, its Reserve status was rescinded and the area reverted to Forest Reserve under the Forestry Act.

In 1969, poaching with lamps at night became a serious problem at Nywane Dam near Lobatse. Recognising that such hunting involved all animals coming to drink at the dam, and that fines under Sanctuary status would be insufficient, the fenced area of the dam was declared as Game Reserve, the Nuane (*sic*) Game Reserve, and all animals at any time within it protected.

In effect, there was to be little difference between Parks and Reserves. To establish a protected area on tribal land, the tribe had to grant its permission. After 1966 and Independence, District Council, and later both Councils and Tribal Land Boards, had to agree. In fact, tribal areas were widely utilised for cattle raising with little free space remaining. No permission was needed from residents of Crownland (now State Land) to establish a Reserve. For these reasons, most of Botswana's Parks and Reserves have been established on State Lands.

The major restrictions placed on game reserves were those of entry, hunting and introduction of domestic species – cattle, dogs etc. Even so, licences could be issued to people to hunt in game reserves and vegetation was not protected. National Park legislation restricted not only entry and hunting, but also damage to and removal of plants. Even so, the Minister could issue a permit to hunt in a Park.

### **Finding Areas Suitable for New Parks and Reserves**

Recognising the importance of wildlife in the Okavango region and Maun Village as the probable future centre for the country's tourist industry, first moves involved declaration of an area of 400sq km around Maun as a no hunting area, and establishment of a small educational game reserve in Maun. An area of 8.5sq km on the east bank of the Thamalakane River, directly opposite the village, was fenced and declared Maun Game Reserve. Wildlife was captured in the Okavango Delta and the new reserve stocked with a variety of species.

The next move involved a search for land to fulfil the requirements of the Wildlife Policy. Using the Report of the 1964 Population Census, those areas which appeared to have no human occupants were ringed on maps and what knowledge existed of wildlife, its numbers, distribution and movements, was accumulated. Of paramount importance was the need to secure sufficient land for large plains populations to migrate to grazing and water during drought years. Unfortunately, time had run out, disease control fences had begun to inhibit migrations, and expanding settlements on pans and permanent water sources had resulted in cattle depleting grazing in areas important to wildlife during drought periods. Nor was it possible to find areas that would adequately fulfil all the national conservation policy's requirements

Certain areas clearly needed to be protected in the southwestern Kalahari and around the western end of Makgadikgadi Pans. A brief survey of the area adjacent to the Nossop River Game Reserve, by then called the Gemsbok Game Reserve, indicated the locations of those settlements nearest to the Reserve. Straight lines were drawn on maps across the desert so as to make the reserve as large as possible without interfering with human settlement. The Reserve was much enlarged and upgraded to National Park. In addition, a rectangular area containing a number of important pans situated against the eastern end of the new Park was declared the Mabuasehube Game Reserve. Until the drought of the 1930s, Mabuasehube Pan had been home to the Kgothi family, but they had then moved to Tsabong and indicated they had no interest in the area.

Attention was now turned to the Makgadikgadi Pans, and in 1967 an ecological survey instituted. The ecologist, Dale Birkenholz, recommended that western Makgadikgadi should become a wildlife management area and open to some hunting. He noted wildlife migrations from Nxai Pan (also then known as 'Paradise Pan') to Makgadikgadi and proposed that Nxai Pan and surrounding area be declared National Park (Birkenholz 1967). In the event, it was decided to declare as Game Reserve western Ntwetwe Pan and surrounding areas stretching to the new Nata-Maun road and westward to the Boteti River. This area became Makgadikgadi Pans Game Reserve. It was also determined to create as National Park the area lying between

the old Nata-Maun road and Latitude 19°30' S, the area in which Nxai Pan is situated. This would have left a passageway between the old and new Nata-Maun roads, the northern and southern boundaries of the two areas to be protected. Both proposals were vehemently opposed by the Director of Veterinary Services who said they would inhibit existing cattle trek routes, one along the old Maun-Nata road and the other running from Kazungula via Mpandamatenga to Kanyu (on the old Maun-Nata road). The latter trek route had at that time, and has even now, never been used.

After long discussions, Makgadikgadi Pans Game Reserve was declared in 1970, its proposed boundaries little altered. In the following year, Nxai Pan National Park was also declared, its size now much reduced to 1,500sq km. The southern boundary of the Park was moved northward so as to lie along a sand ridge some distance away from the cattle trek route and the northern boundary was moved southward to provide more land for commercial safari hunting.

Because the Central Kalahari Game Reserve was closed to tourists and wildlife formed potential sources of income for rural Bakwena, the Khutse Game Reserve on Bakwena Tribal Land, the second game reserve to be established in a tribal area, was proclaimed in 1971, an area of 2,600sq km. The Reserve protects an important complex of Kalahari pans, typical Kalahari savanna veldt and the most southerly area in which giraffe are still to be found. The Reserve's proximity to Gaborone offers both local and foreign tourists easy opportunity to visit an undeveloped area of the Kalahari Desert.

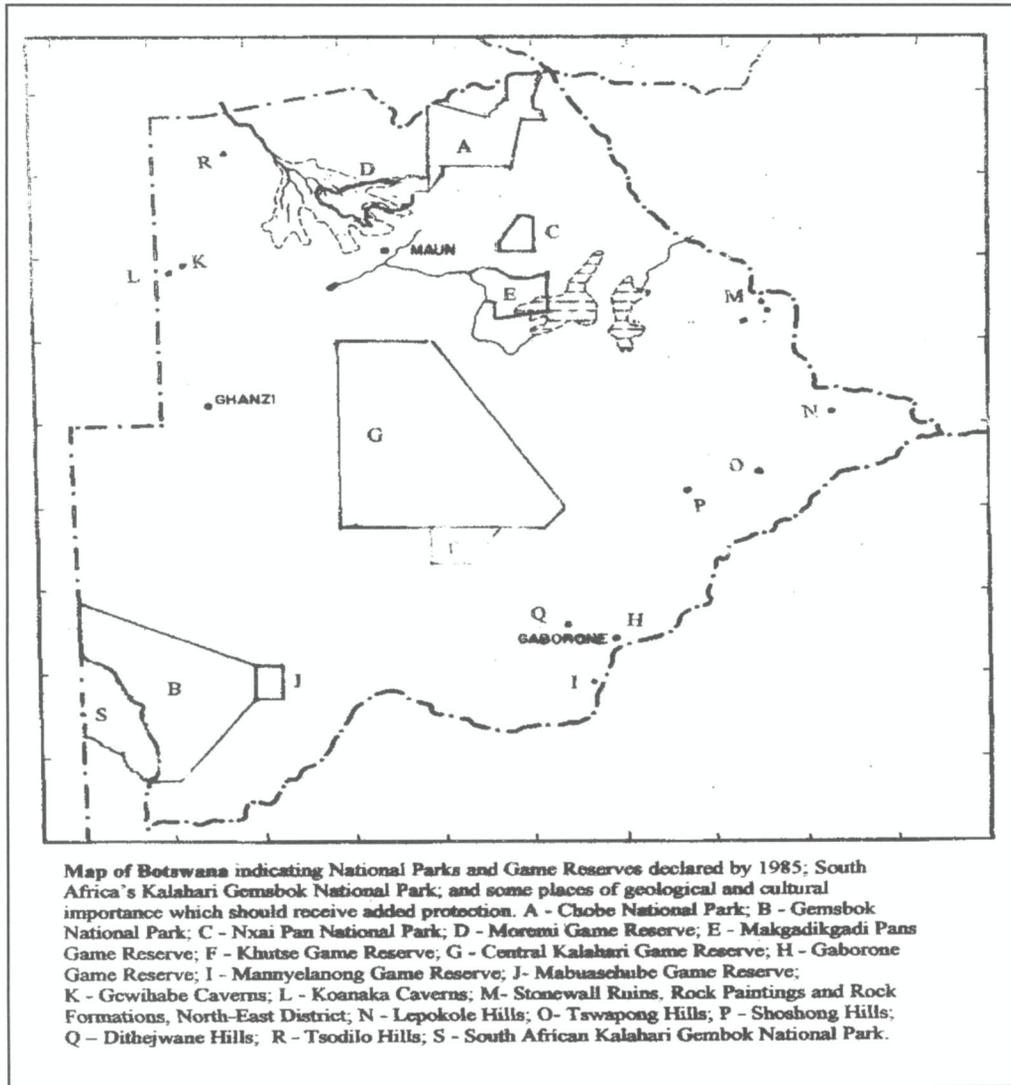
Attempts were made to establish a Game Reserve on the reservoir at Gaborone as early as 1968, but these were met with opposition from the Director of Water Affairs who believed wildlife would contaminate the town's drinking supply. On discovery that the reservoir was contaminated by bilharzia and that a game fence would keep people out, agreement was reached and in 1975 the Gaborone Dam National Park, an area on the western side of the reservoir, was declared. The Park was never initiated and the declaration revoked in 1979 when the Gaborone Town Council agreed to the establishment of a Game Reserve adjacent to the town's northeastern suburbs. In 1980, the Gaborone Game Reserve, about three square kilometres, was declared.

In 1973, first attempts were made to protect a Cape vulture colony on the south cliffs of Mannyelanong Hill on Balete Tribal Land. Negotiations were sporadically continued with the Balete until 1985, when Mannyelanong Hill was declared Game Reserve. The Reserve, about three square kilometres in extent, protects, in addition to the vulture colony, interesting hill vegetation, several prehistoric mining sites, and a variety of wildlife species, such as klipspringer, mountain reedbuck, kudu, leopard, caracal, civet, and other species in a heavily populated area.

I close my discussion of the establishment of Botswana's National Parks and Game Reserves with the declaration of Mannyelanong Game Reserve. New areas have been protected since that date, such as Nata Sanctuary on Sowa Pan and Khama Rhino Sanctuary near Paje; others will doubtless be created in the future.

I have not touched on Private Game Reserves for which provision exists in the Fauna Conservation Act. Such Reserves are areas of freehold land whose owners have requested the Minister to protect their land under the Act. Private Reserve status does not stop hunting by its owners or people with their permission; it merely increases fines for those caught illegally hunting on their land.

Nor do I include more-recently established major private Reserves, such as Mashatu Game Reserve in the northern Tuli Block, established for private commercial tourism, and Mokolodi Nature Reserve south of Gaborone, created mainly for education purposes.



**Figure 3.** Map of Botswana indicating National Parks and Game Reserves declared by 1985; South Africa's Kalahari Gemsbok National Park; and some places of geological and cultural importance which should receive added protection. A - Chobe National Park; B - Gemsbok National Park; C - Nxai Pan National Park; D - Moremi Game Reserve; E - Makgadikgadi Pans Game Reserve; F - Khutse Game Reserve; G - Central Kalahari Game Reserve; H - Gaborone Game Reserve; I - Mannyelanong Game Reserve; J - Mabuasehube Game Reserve; K - Gcwihaba Caverns; L - Koanaka Caverns; M - Stonewall Ruins, Rock Paintings and Rock Formations, North-East District; N - Lepokole Hills; O - Tswapong Hills; P - Shoshong Hills; Q - Dithejwane Hills; R - Tsodilo Hills; S - South African Kalahari Gembok National Park.

### Conclusion

Recognising the very size of the first Game Reserves, it is not surprising that a wide range of habitats and geological features has received protection, fortuitously, since the main concern at the time of declaration was the protection of the animals within them.

Only after 1963 did ecological surveys, as a prelude to declaration of protected land, commence. Even then, boundaries had to be juggled to take into account other interests - population settlements and future population expansion, tribal boundaries, grazing areas, cattle trek routes, logging and so on. Slowly, some of the problems have been overcome by alterations to Park and Reserve boundaries. However, few if any Reserves or Parks are today ideally configured, either to include sufficient areas of diversity for protection of all their various aspects for all time, or to provide for traditional migration routes for larger species looking for moisture during drought periods. Nor has much thought been given, by establishing small Parks and Reserves, to protection of cultural remains such as prehistoric stonewall settlements, smelting sites, religious places, rock art and geological formations, such as limestone caverns, granite koppies, gorges and hot springs.

Many important areas, particularly in the east, remain unprotected: unfortunately, the decision to create parks and reserves came late, at a time when the land was already occupied. A glance at the map shows that almost every park and reserve is situated in the west, in areas that were sparsely populated. Planners have tended to look only at larger uninhabited areas where wildlife still exists in recognisable numbers, with little attention paid to eastern Botswana where wildlife is scarce, yet geological formations and cultural remains are abundant. The development of Mokolodi Nature Reserve, recently an area of overgrazed farmland, shows what can be done. Areas of the Twapong Hills, Shoshong Hills, Lepokole Hills, stonewall ruins, rock paintings and rock formations in the North East District, the Dithejwane Hills, Gcwihibe and Koanaka Caverns, the Tsodilo Hills (recently proclaimed a World Heritage Site) and many other places are crying out to be protected in areas declared as park or reserve.

The value of wildlife and growing tourist industry is recognised. Today, greater account is paid to a multi-disciplinary use of land, particularly in areas little suited to cattle production and where provision of water is expensive. The problems of cattle ranching versus management of wildlife that dogged early attempts to create protected areas are being resolved. However, the creation of parks protecting geological formations and cultural remains is still a project of the future.

### Bibliography

- Bechuanaland Protectorate Annual Reports 1936, 1937, 1960 and 1964. London, HMSO.
- Birkenholz, D.E. (1967) A study of the status and movements of big game in the Botletle-Nyai Pan area of Botswana (19 pages and unpublished).
- Campbell, A.C. (1965) *Report on the Census of the Bechuanaland Protectorate 1964*. Gaborone, Bechuanaland Government.
- (1973) The National Park and Reserve System in Botswana. *Biological Conservation* 5.1 pp 7-14.
- (1997) A History of Wildlife in Botswana. In ed. F. Monggae: *Proceedings of a National Conference on Conservation and Management of Wildlife in Botswana: Strategies for the Twenty-First Century* pp 7-31.
- Child, G. (1968) *An Ecological Survey of Northeastern Botswana*. FAO No. TA 2563.
- (1970) Wildlife utilization and management in Botswana. *Biological Conservation* 3 pp 18-22.

- Clement, A.J. (1967) *The Kalahari and its Lost City*. Johannesburg, Longman Southern Africa.
- Hitchcock, R.K. (2002) 'We are the First People': Land, Natural Resources and Identity in the Central Kalahari, Botswana. *Journal of Southern African Studies* 28.4 pp 797-824.
- Kinlock, B.G. (1965) *Report to the Game Department of Bechuanaland*. Gaborones, Ministry of Mines, Commerce and Industry.
- Parsons, N, and M, Crowder (1988) eds. *Monarch of All I Survey. Bechuanaland Diaries 1929-1937 by Sir Charles Rey*. Gaborone, The Botswana Society.
- Pim, Sir A.W. (1933) *Financial and Economic Position of the Bechuanaland Protectorate*. London, His Majesty's Stationery Office.
- Riney, T. and P. Hill (1963) *Interim Report on Bechuanaland Protectorate*. FAO-IUCN Report.
- Silberbauer, G.B. (1965) *Bushman Survey Report*. Gaborones, Bechuanaland Government)
- Spinage, C (1991) *History and Evolution of the Fauna Conservation Laws of Botswana*. Gaborone, The Botswana Society)
- Tinley, K.L. (1966) *An Ecological Reconnaissance of the Moremi Wildlife Reserve*. Johannesburg, Okavango Wildlife Society.
- The Fauna Conservation Proclamation, No. 22 of 1961 of the Laws of the Bechuanaland Protectorate.