

## World Heritage Sites

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## CLIFF OF BANDIAGARA (LAND OF THE DOGONS) MALI

*The cliff and plateau of Bandiagara is one of the most impressive geological, archaeological and ethnological landscapes in West Africa. It protects beautiful houses, granaries, altars, sanctuaries and communal meeting-places which for centuries have been the heart of traditional Dogon culture, preserving traditional dances, rituals and ancestor worshipping ceremonies.*

### COUNTRY

Mali

### NAME

Cliff of Bandiagara (Land of the Dogons)

### MIXED NATURAL & CULTURAL WORLD HERITAGE SITE

1989: Inscribed on the World Heritage List under Cultural criterion v and Natural criterion vii.

### STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

### IUCN MANAGEMENT CATEGORY

III Natural Monument

### BIOGEOGRAPHICAL PROVINCE

Western Sahel (3.12.07)

### GEOGRAPHICAL LOCATION

The village of Sangha on the crest of the Bandiagara escarpment, lies at the centre of the sanctuary. It is 44 km north-east of Bandiagara town 90 km east of Mopti and 250 km south of Timbuktu, between 14°00' N to 14°45'N, and 3°00'W to 3°50'W.

### DATES AND HISTORY OF ESTABLISHMENT

Existing legal provisions relate only to the sanctuary's cultural heritage.

1969: Ordinance 52 regulated the export of objects of art;

1985: Protection and promotion of the national cultural heritage decreed by Law 85-440/ AN-RM;  
Archaeological excavations regulated by Decree 275/PG-RM;

1986: Excavation, commerce in and the export of cultural objects controlled under Law 86-61/AN-RM  
and Decree 299/PG-RM

### LAND TENURE

State-owned except for some land privately owned by residents of Sangha. In the administrative region of Mopti. Administered by the *Mission Culturelle de Bandiagar*

### AREA

327,390 ha (UNESCO, 2008)

## ALTITUDE

518m near Sangha to 777m (Mount Bamba).

## PHYSICAL FEATURES

The Bandiagara escarpment is formed of sandstone cliffs which run for about 200 km southwest - northeast above the sandy plain of Séno-Gondo, rising from 100m high near Ouou in the south to 300m near Sangha and over 500m in the north near Douentza. The plain extends to the Mossi Massif, which separates the Séno plain from the low-lying wetlands of the great inner delta of the Niger which parallels the cliffs some 90 km to the west. The site covers three physiographic zones: plateau, escarpment and plain, and consists of eroded flat tablelands, mesas and sandstone buttes with a notable cliff in the escarpment near Sangha-Bongo. The rock is predominantly upper Cambrian and Ordovician sandstones, horizontally bedded, with a great variety of facies. Exposed horizontal strata periodically result in rock polygonation. In places the plateau is crowned by a hard layer of laterite, ironstone shield or impervious conglomerates, with rock slabs riddled with holes, faults and caves that link with springlines along the base of the cliffs. The cliff edge has been shaped into many irregularities, indentations and promontories and is pierced by ravines, gorges, and rocky passages which connect the plateau with the plain. At low levels the ravines are filled by immense detached blocks of rock (L. Wright, pers. comm., 1989). The ravines have a humid and shaded microclimate which supports dense vegetation. Water is also retained in rock fissures, which results in seasonally boggy areas on horizontal or gently sloping rock strata.

## CLIMATE

The average annual rainfall varies between 200 and 500mm, falling mostly between June and September and most heavily in August. Droughts last for at least six months of the year. Temperatures range between 13.6°C and 42.6°C with shade temperatures in May reported to be some of the highest in the Sahel (Pern, 1985).

## VEGETATION

The botany of the region is of great phytogeographic interest. The floral communities at Sangha are on the interface between two different phytogeographic regions, the Sudano-Sahelian and Western Sahelian. The escarpment itself is rich in plants and vegetation types which have been destroyed by man in more accessible places. These are mostly relict humid species sheltering in the ravines in an otherwise arid Sahelian climate. Species with restricted distribution include the local endemic *Acridocarpus monodii* found on the escarpment at Kikara. A herbarium collection of 300 species was made from the region of Sangha by Dieterlen in 1952, and Jaeger and Winkoun in 1962.

The Sudano-Sahelian vegetation of open savanna and steppe surrounds Bandiagara and Sangha, with scattered *Acacia raddiana*, *A. albida*, *Balanites aegyptiaca* and *Cenchrus ciliaris*. The plateau of Bandiagara has a typically Sudanian savanna flora, including communities of *Daniellia oliveri* in association with *Butyrospermum parkii*, *Parkia biglobosa*, *Terminalia macroptera*, *Khaya senegalensis*, *Vitex cienkowskii*, *Prosopis africana* and brush species such as *Combretum micranthum*, *Heeria insignis* and *Guiera senegalensis*. On the rocky edge of the plateau, characteristic species are *Caralluma dalzielii*, *Euphorbia balsamifera* and *Senecio cliffordianus*. Open scattered vegetation includes xerophytes, cryptogams and deep-rooted trees in rock fissures where they are protected from fire. Cliff and ravine vegetation is often very diverse and dense; it includes *Cissus quadrangularis*, *Ficus lecardii*, *Boscia angustifolia*, *Euphorbia sudanica*, *Lannea microcarpa* and *Combretum lecardii* (Rousselot, 1939; Jaeger & Winkoun, 1962).

In rainy seasons the horizontal rock strata contain water, creating boggy areas where species such as *Cyanotis rubescens* and *Bulbostylis* sp. can grow. The rock pool depressions of Sangha support aquatic plants such as *Nymphaea maculata*, *Najas graminea*, *Ottelia ulvaefolia*, *Cyperus* sp., *Sacciolepis* sp. and *Melochia corchorifolia*. Other shallow water vegetation includes floating carpets of *Pistia stratiotes*, *Neptunia oleracea*, *Ipomoea reptans* and *Najas graminea*. The humid microclimate of the escarpment ravines supports *Combretum* spp. along with *Stereospermum kunthianum*, *Gloriosa simplex*, *Cissus populnea*, *Acacia ataxacantha* and *A. sieberiana*. Notable hygrophilic species include *Celtis integrifolia*, *Pachystela pobeguiniiana* and *Diospyros mespiliformis*, *Selaginella* sp., *Begonia rostrata*, *Fleurya aestuans* and *Ceratopteris cornuta*. At the foot of the escarpment, in the plain of Douentza, there is a preponderance of Sahelian species such as *Acacia albida*, *A. raddiana*, *Dalbergia melanoxylon*, *Combretum aculeatum* and *Tamarindus indica* (Jaeger & Winkoun, 1962) and occasional baobab *Adansonia digitata*.

## FAUNA

The diverse vegetation communities support a notable resident and migratory avifauna. During a short visit in 1990 127 species were recorded on the plateau (Balança & de Vischer, 1993). Cliff-dwelling species are the most various. They include gabar goshawk *Melierax gabar*, fox-kestrel *Falco alopex*, (common), stone partridge *Ptilopachus petrosus*, rock dove *Columba livia*, speckled pigeon *C. guinea*, rose-ringed parakeet *Psittacula krameri*, yellow-billed shrike *Corvinella corvina*, scarlet-chested sunbird *Nectarinia senegalensis*, mocking cliff chat *Myrmecocichla cinnamomeiventris* (abundant), the endemic Mali firefinch *Lagonosticta virata*, Neumann's starling *Onychognathus neumanni*, rock martins *Hirundo fuligula*, mottled swift *Tachymarptis aequatorialis*, sun lark *Galerida modesta*, and abundant cinnamon-breasted rock and house buntings *Emberiza tahapisi* and *E. striolata*. Pied crows *Corvus albus* and brown-necked ravens *C. ruficollis* soar on the updrafts (Crickmore, 2008).

In the woodlands lining many of the watercourses are species such as abyssinian roller *Coracias abyssinnica*, white-billed buffalo-weaver *Bubalornis albirostris*, Bruce's green-pigeon *Treron waalia*, black-billed wood dove *Turtur abyssinnicus*, Veillot's and bearded barbets *Lybius vielloti* and *L. dubius*, western grey plantain-eater *Crinifer piscator*, northern anteater chat *Myrmecocichla aethiops*, speckle-fronted weaver *Sporopipes frontalis*, and yellow-billed oxpecker *Buphagus africanus*. Savanna and sahel species include white-bellied bustard *Eupodotis senegalensis* and laughing dove *Stigmatopelia senegalensis*, little green bee-eater *Merops orientalis*, and greater blue-eared starling *Lamprotornis chalybaeus*. Species abundant around villages include grey-headed sparrow *Passer griseus* and hooded vulture *Necrosyrtes monachus*. The pools are a haven for Egyptian plover *Pluvianus aegyptius* and grey-headed kingfisher *Halcyon leucocephala* (Rousselot, 1939; Pern, 1985).

Mammals in the region which still probably exist around Bandiagara include rock hyrax *Procapra capensis*, crested porcupine *Hystrix cristata*, common jackal *Canis aureus* and pale fox *Vulpes pallida*. But the dama gazelle *Nanger dama* (CR), dorcas gazelle *G. dorcas* (VU) and wild dog *Lycaon pictus* (EN) are no longer found there (Directeur, National, des Ressources Forestieres Fauniques et Halieutiques, pers.comm.,1995).

## CONSERVATION VALUE

The Bandiagara plateau is one of the most impressive geological and landscape features in West Africa and the cliffs protect beautiful architectural structures which for centuries have housed the soul of traditional Dogon culture.

## CULTURAL HERITAGE

Archaeological evidence suggests men have lived on the cliffs for over 2,000 years. Cultures whose relics have been dated are the pygmy Toloy people in the 3rd to 2nd centuries BC, and later, between the 11<sup>th</sup> and 15<sup>th</sup> centuries, the Tellem who lived in caves cut into the cliffs where they left many artifacts still unearched by local people. They were pushed out around 1490 by the Dogons from the south-west (or south-east) perhaps fleeing slave raids by Songhai, Fulani and Mossi tribesmen. They came in four clans, the Dyon, Ono, Arou and Domno and spread over the plateau, the escarpment and the plains of the Séno-Gondo, living on top of or at the foot of the cliffs. They divided into small village communities, each member having a village surname shared by every inhabitant. Dogon buildings are a unique architecture of sculptural mud-built huts, altars, distinctive tapering granaries for each sex, each with a pointed cap of thatch, and meeting houses (Diakite, 1988; Hollyman & van Beek, 2001).

The area is one of the main centres for the Dogon culture which is rich in shamanic rituals, orally transmitted cults, traditional arts and lore: the village of Sangha is celebrated both for its triennial circumcision ceremonies and its rock carvings. There are three main cults: of Awa, of and for the dead; of Lebe of agricultural fertility; and Binu a totemic practise associated with fertility and death. Symbolic relationships exist with animals such as the pale fox and jackal. In Bandiagara, semi-domestic crocodiles are kept as sacred protectors of the village and its ancient founder; they are also revered in ritual rain dances (Yaro & Diko, 1940). Ancestor reverence is central to the culture. To placate and ease the passage of the dead very elaborate masks and head dresses are worn during the long ceremonies and ritual funeral dances of the Awa cult, which perpetuate the mythological history of the society. The art is religious and ceremonial in origin and therefore traditionally kept private, but the 78 different types of masks are sought out by western collectors and both dances and masks are now also produced for tourists (Griaule, 1941; Jaeger & Winkoun, 1962; Hollyman & van Beek, 2001).

## LOCAL HUMAN POPULATION

The Dogon were little influenced by the French occupation, and thus preserved their distinctive traditions until the mid 20th century after which they were opened to influences from the outside world. In the 1986-1987 census, there were 199,291 Dogon inhabitants in Bandiagara and 20,940 in Sangha, out of an estimated 701,460 Dogons in Mali (Directeur Nacional des Ressources Forestieres Fauniques et Halieutiques, pers. comm., 1995). More recent figures give a population nearer 300,000, living in some 70 villages of fewer than 500 people each, 13 in the Sangha area, drawn from several different ethnic, cultural and linguistic origins. Most are animists, though some are Muslim and Christian (Hollyman & van Beek, 2001). The people are subsistence farmers who lived on the plateau where their ancient villages still dot the cliffs and where they still bury their dead in caves high on the cliff. However, most have relocated to the plains below and cultivate the fertile plain, living in villages built under the walls of the escarpment for defence and where subtribes practise smelting and iron and wood working. The main subsistence crop is millet, with sorghum, calabash, cassava and onions. Rice is grown in cultivated rock pools, and irrigated gardens are made on level places on and under the cliffs. They rely for permanent water on springlines along the base of the escarpment (Jaeger & Winkoun, 1962; Pern, 1985; Diakite, 1988).

## VISITORS AND VISITOR FACILITIES

Inaccessibility preserved the Dogon from modern influences until the mid 20th century, since when they have become a popular tourist destination. Rest houses are located at Sangha and Bandiagara. Mopti on the Niger is a centre of tourism and hotels have been built there. The Mali Office of Tourism publicises the historic sites of the region (FAO, 1969). There is a small airfield at Bandiagara and another at Mopti.

## SCIENTIFIC RESEARCH AND FACILITIES

The Dogon have been the subject of many anthropological studies, starting in 1903 with a serving soldier, L. Desplagnes. The first scientists to study the Dogon people were the French anthropologists M. Griaule and G. Dieterlen who, between 1931 and the 1950s pursued detailed though now controversial investigations of the complex Dogon rituals and symbolism. Work on the botany of the area was initiated between 1950-1952 by G. Dieterlen, followed by Jaeger and Winkoun in the 1960s for the *Institut Français d'Afrique Noir*. A herbarium collection of 300 species was made from the region of Sangha (Dieterlen, 1952; Jaeger & Winkoun, 1962). A fauna and flora survey was undertaken in 1988 for the *cantonnements forestiers* (Diakite). Present archaeological research is conducted by the *Mission Archéologique et Ethnoarchéologique Suisse en Afrique de l'Ouest*. The *Division de la Recherche Forestière et Hydrobiologique* of the *Ministère de l'Élevage et des Eaux et Forêts* maintains a hydrological laboratory at Mopti which researches fish systematics and biology.

## MANAGEMENT

The site is overseen by the *Mission Culturelle de Bandiagara*, an arm of the Ministry of Culture and Communications, the director of which is charged with conserving the cultural heritage of the region (Le Directeur N.R.F.F.H, pers. comm., 1995). The mission conserves the site because of its exceptional architectural structures, its unique social customs and the interaction between Dogon culture and the environment, and aims to maintain its associated houses, granaries, ritual sanctuaries and meeting huts. The surrounding natural features are also valued: the plateau near Sangha-Bongo is one of the most impressive geological and landscape features in West Africa and the botany of the region is of great interest for its relic and uncommon species (Jaeger & Winkoun, 1962; Diakite, 1988). The result during the last fifty years has been a touristic invasion.

## MANAGEMENT CONSTRAINTS

The greatest threats to the area have been drought and desertification. The savanna vegetation has been profoundly degraded by fire and scrub clearance, most notably around village communities (Jaeger & Winkoun, 1962). But uncontrolled tourism is also affecting the economic structure and menaces the basis of Dogon culture. Insufficient funding means that the site cannot be adequately patrolled (Directeur, N.R.F.F.H., pers. comm., 1995.)

## STAFF

In 1995 there were three (Directeur N.R.F.F.H., pers. comm., 1995).

## BUDGET

In 1995 an inadequate annual budget of CFA 5,000,00 (US\$10,000) came from the government (Directeur N.R.F.F.H., pers. comm., 1995).

## LOCAL ADDRESS

*Mission Culturelle de Bandiagara*, PO Box No 1. Bandiagara, Mali

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