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Change and Conservation

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## CANOEING DOWN THE ZAMBEZI

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*I am greatly encouraged by the work of the African Conservation Foundation for they are motivated by the idea that nature and our environment are an essential gift that we need to protect for the physical and spiritual well-being of future generations.*  
**His holiness the Dalai Lama, 30 August 2002**



*Hippos, Hippopotamus amphibius, escorted by a Cattle Egret, Bubulcus ibis, on an island in the Zambezi in the Lower Zambezi National Park, Zambia.*

A pod of partly submerged hippos grunted, snorted, chortled, and gurgled an “all clear” as our four canoes disappeared around a bend in the Zambezi River in southern Africa. When confronted by danger, many species give alarm calls but this was my first encounter with an “all clear” signal.

As a zoologist-naturalist I was with friends in the Mana Pools National Park, a World Heritage Site in Zimbabwe, in September 1993. We were intent on learning about conservation and seeing local birds and other wildlife. Then, in August 2007, with other friends, I had the privilege of visiting the Lower Zambezi National Park, a protected area in Zambia, located directly across the river from Mana Pools.



*The Lower Zambezi National Park, Zambia, in the foreground with Mana Pools National Park, Zimbabwe, across the river.*

The Zambezi is famous for its spectacular Victoria Falls, one of the great natural sights of our world. And just below the Falls, recreational rafts maneuver through class four+ rapids that are reputed to be dangerous and hence thrilling. This danger level is calculated on topography and river dynamics and does not reflect the all-too-frequent encounters with disgruntled hippos. Well downstream from the rafting areas, and about half way between the river's origin in Angola and the Mozambique coast, the river flows sedately and quietly between Mana Pools National Park to the south and the Lower Zambezi National Park on the north.

Multi-day canoeing trips, or half-day outings, are offered on these calmer waters but whatever the length of the ride, a canoe excursion on the Zambezi is a hippo experience. During the day, hippos hunker down in shallow water to relax, cavort, and sleep, often not far from riverside banks. Thus when in these waters, one needs to stay well out from shore and also keep an eye on the occasional grassy island where hippos may linger and where Nile Crocodiles, *Crocodylus niloticus*, rest. The presence of the reptiles provides an additional incentive not to tip the canoe over.



*Hippos, Hippopotamus amphibius, can short-crop edible grasses with their hard-edged lips. Massive canines are used in battle.*

Hippos are a quintessential indicator species of excellent environmental conditions.

Hippos are a quintessential indicator species of excellent environmental conditions. They do not defend grazing grounds but some males maintain mating territories in water. Hippos are easily shot with modern weapons and their meat, which can reach a ton from just one animal, is widely eaten. Political conflicts and ensuing chaos are often extremely hard on hippo populations, a situation formerly seen in Uganda and currently happening in parts of the Congo basin, as well as possibly in some parts of Zimbabwe. That this segment of the Zambezi harbors so many hippos indicates excellent protection.

During our time at Mana Pools, we spent two half days canoeing down the river, navigating the “open” water in sixteen-foot long, aluminum canoes from Canada. Before

boarding the craft, our naturalist/guide gave us a safety briefing with instructions that should a hippo, often a mother defending a baby, swim towards us we were to tap loudly on the side of the canoe with our oars. This warning worked remarkably well and individuals that did surge in our direction diverted as soon as they heard the tapping. And, once we were well passed the pod, the animals gave their “all clear” signal that to my untrained ear sounded much like their “be alert” warning.

Traveling down the river reminded me, surprisingly, of boat trips on the Narayani river in southern Nepal even though the Asian river was a continent away and some 8,000 kilometers/ 5,000 miles distant. The similarities between the two areas included: crocodiles (one species in Africa and two in Nepal), large cats (lions in Africa, tigers in Nepal; both areas harbor leopards), both have (or had) rhinos, both areas have (or had) elephants, both areas exhibit three identical species of egrets, each has a fishing eagle as well as various bee-eaters, rollers and kingfishers. That the biodiversity of parts of South Asia has a strong African resemblance points to a distant but long-standing connection.

During my second visit to the Zambezi, I was with friends at the Chiawa Camp located within Lower Zambezi National Park in Zambia. This park, with 120 km/72mi of river frontage, covers an area of 4092 square kilometers (1600 square miles) of terrain that slopes gently south from the Zambezi escarpment. Two main woodland-savanna eco-regions occur here: the Southern Miombo Woodland with its *Brachystegia* trees growing on the higher ground to the north, and Mopane Woodland with *Colophospermum mopane* trees on alluvial soils towards the river. As one approaches the river from the north, one sees a variety of riverine trees with full canopies while the immediate edge of the river is floodplain with assorted grasses and some bushes.

Our canoe experience in Zambia in 2007 added to our previous exposure at Mana Pools as this time we paddled in open water for only a short spell, soon veering left into a slow-moving side channel. Here conditions, often in shallow water, were remarkably different from those in the open river and our contact with nature was comparatively intimate. The hippos in this side channel, for example, were solitary and, it seemed they were in ‘retirement areas.’ Our experienced canoe leaders from the Chiawa Camp knew to be on the watch for deeper pools. Should a hippo be submerged in these waters, it was not wise to pass directly over the beast. Passive, aged animals rested in shallow areas and watched us pass, often at close range.



*A 'retired' hippo in a slow-moving side channel of the Zambezi eyeing a passing canoe.*

In August, this portion of the Zambezi was well within the grip of summer's long dry spell (rains begin in October or into November) and at these times mammals are often drawn to water. Indeed we found considerable activity as these slow backwaters are favored not only by hippos but by other animals such as solitary Cape Buffalos. One buffalo, in particular, was well attended by cattle egrets. At one point elephants emerged from the bushes ahead of us and started making their way across the shallow channel, the water hardly reaching the bellies of the adults. To allow the pachyderms to cross without interference we clutched clumps of grass to hold our canoes against the slight current.

In addition to mammals, many birds are associated with these slow sidewaters, including colorful bee-eaters. The latter are African birds that nest communally, digging long tunnels in the soft soil of river banks; this stretch of the Zambezi was favored by numerous White-fronted Bee-eaters. Seven species of bee-eaters occur in Asia and this again illustrates the African-Asian connection. Kingfishers also excavate holes in banks, and the Giant Kingfisher, the largest of all African kingfishers, appeared in pairs along the Zambezi, but we did not locate a nest site.



*This White-fronted Bee-eater, Merops bullockoides, was sitting near a nest hole in a bank of the Zambezi.*

Conservation in this area, leading to the diversity of the birds and mammals that we find along the Zambezi, was of special interest as I am associated with Future Generations, a community service organization and a graduate school that views conservation and development as two sides of the same coin.

A favorite saying in Future Generation circles is the Chinese observation that development is the short-term part and conservation is the long-term part of the same process.

Development cannot be sustained -- for the long term -- without concern or regard for the environment. Thus I was heartened to learn that within the past few years conservation efforts along the Zambezi, Africa's fourth longest river (with a length of c. 3540km/2200mi), have included innovative programs which recognize that genuine community involvement is an integral part of sustainable conservation, and especially that local folks should benefit economically from their own natural resources.



*An elephant approaches a ZAMA ranger during our bush walk on the banks of the Zambezi.*

In 2007, our personal contact with conservation along the Zambezi was through the Chiawa Camp with canoe trips, bush walks, and a visit to the nearby Environmental Education Center run by the Conservation Lower Zambezi's (CLZ) organization. Besides the canoeing mentioned above, the bush walks were special. To be allowed on foot in wildlife areas of Africa is a treat not commonly available outside of private concessions. However, Zambia is known for encouraging foot safaris within its national parks. These outings are always with a well-trained naturalist/guide and a ranger from the Zambian Wildlife Authority (ZAMA), both carrying loaded rifles with



*That this elephant showed no signs of irritation even when within 20 meters of humans on foot is an indication of the splendid long-term protection afforded animals in the Lower Zambezi National Park.*

high-impact bullets. The weapons are almost never used as the guides and rangers are so well trained that they spot trouble brewing and keep out of harm's way.

During our bush walk on August 10th, for example, we came upon a large, bull elephant and were halted immediately while our escort analyzed the animal. The pachyderm, only some 50m/150ft away and in rather open forest, showed no exceptional twitching or ear flapping and did not exhibit nervous behavior. So we stood and watched. Then, as the beast ambled in our direction, our guides clustered us behind a tree trunk in order to be less visible and thus less provocative.

The animal continued to approach, finally stopping to graze on a high bush not 20m/63ft away, all the while showing no signs of agitation or surprise. Should the guides have detected irritation, we would have quickly moved back and out of the way.

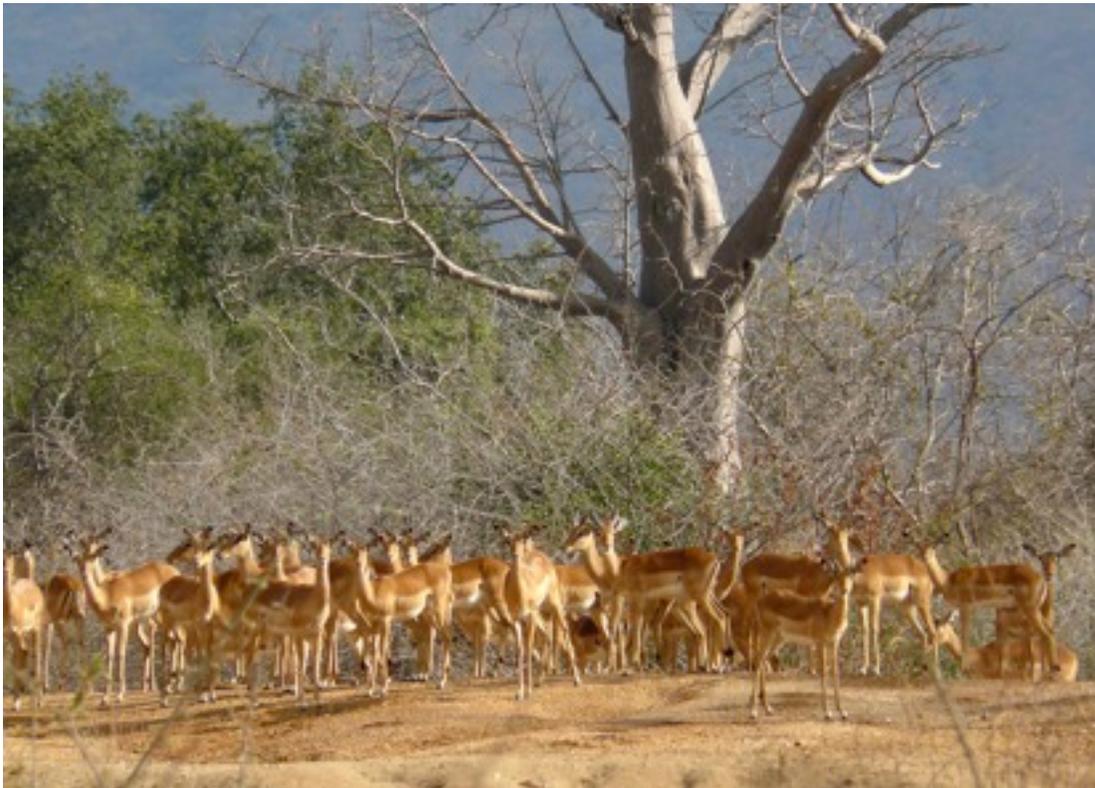


*The Chiawa Camp bush walk team with Cairine Butler of Harare.*

The guide's training for these bush walks and canoe trips is rigorous - as it should be when graduates are responsible for visitors amid potentially dangerous circumstances. The guides at Chiawa Camp, for example, all from local villages, had undergone the Safari Guide Training Program organized by Conservation Lower Zambezi. Students in this course train in identification of plants, mammals, and birds and also in ecology and conservation with a special emphasis on Zambezi ecosystems. Besides the natural history, guides also cover food and beverage handling and guest etiquette. In addition, they learn how to use reference books as well as the Internet as educational tools. At the conclusion of the training period, students take a required general exam. Then, to be a canoeing guide, a student must take an additional 200-hour course and pass a rigorous exam. Similarly, walking guides need 200 hours of instruction and pass a final exam.

Many organizations sponsor research efforts that incorporate discussions about how to include villagers in various conservation efforts. Currently, Conservation Lower Zambezi is field testing

programs that truly benefit local stakeholders. These efforts may become models for conservation initiatives in other parts of Africa.



*Impala, Aepyceros melampus, gather on flat ground towards the western side of the Park with the Zambezi Escarpment rising behind.*

During our August visit, we were in the field with Lackson Tembo who had passed all three papers with distinction. The quality of his instruction was evident in his ability to communicate with us and to understand and read the forest and the river. Grant Cummings, the Chiawa camp manager and a superb naturalist, is the chief instructor for the guides course and he, with Lackson as well as a ranger from the Zambian Wildlife Authority, took us on our bush walk. We were not surprised to later learn that in 2008 Chiawa had snared the first place trophy for 'Best Guiding Team in Africa.'

In addition to seeing the operations at the Chiawa Camp, we visited the nearby Environmental Education Centre, another important plank in the Zambezi conservation picture. This Centre is a community based conservation education facility that opened in 2005, initially with funds from the Royal Danish Embassy in Lusaka. Now, several years later, the Centre has held workshops for

hundreds of teachers, students, and community members. And a Land-cruiser with a mounted AV system has reached thousands more in local schools. Exposure and education of this sort is but one facet of successful conservation. In addition to wildlife tourism, the Conservation Lower Zambezi Trust, along with the African Wildlife Federation as a primary partner, have established the Chiawa Cultural Village that is conceived of as a center for cultural tourism. Here visitors have a chance to engage with the traditions and art of the local Goba people.



*These maturing lion cubs are a result of effective conservation practices that benefit all residents of the Lower Zambezi National Park and surrounding areas.*

Another effort in community-based conservation is the formation of the Chiawa Partnership Park, a concept pioneered in 2008 by the Lower Zambezi Conservation Trust in cooperation with the Zambian government, the UNDP, and other bodies. This Partnership Park covers a 100-square kilometer area of forest to the west of the Lower Zambezi National Park in a region that was formerly a game management area. The new park now forms a very useful buffer between the national park proper and highly populated areas to the west. And in keeping with Conservation Lower Zambezi Trust's aim of developing a true partnership between local villagers, lease holding private companies, and the Zambian government, the Partnership Park will provide employment opportunities for local folks, teach entrepreneurial skills, and promote social awareness within the surrounding communities.

It is anticipated that revenues from the Partnership Park fees will go to both park conservation and to neighboring community development projects. And it is understood that how this money is apportioned and who makes these decisions is of the utmost importance if the park is to become a true partnership that significantly benefits local residents. Indeed, important activities that incorporate local folk have already been launched by the Lower Zambezi Conservation Trust and these include the training of professional game scouts, the creation of protected farms, and craft manufacturing.

A downside to this initial program is that much of the income from the Partnership Park will depend on tourism, a wildly fluctuating revenue source. However, as the economy of Zambia strengthens, an increasing number of Zambians will be enabled to visit the park and this input will form a far more reliable revenue source than monies from foreign tourism. The change from predominately foreign to local visitors is clearly seen these days in both India and China where today the majority of the visitors to those country's parks are local vacationers.



*The loud cries of the African Fishing Eagle, Haliaeetus vocifer, is one of the quintessential sounds of wild Africa. These magnificent birds are frequently seen and heard in many parts of the Zambezi Basin.*

## **Conclusion**

Only a few years ago most people were prevented from living within national parks and other wildlife areas. But today the situation in much of the world calls for a different model, one in which the local people are incorporated into the management of their own natural resources and are the prime recipients of revenues from these entities. And today an amazing array of African and international players actively works along the Zambezi. Some of these, with web sites, are listed at the end of this paper.

We hope that conservation efforts along this splendid river continue to build on recent successes and that the roar of the lion, the grunting of the hippos, and the distinctive duet of the Tropical Boubou will continue to sound over the waters of the Zambezi, and that the people as well as wildlife in this wonderful part of Africa will benefit from these dedicated efforts.

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## **Appendix: Organizations that focus on Zambezi conservation**

### **Zambezi Specific**

The **Zambezi Society** was founded in 1982 as a lobbying group to oppose the proposed Mutapa Gorge Dam that, if built, would have flooded Mana Pools. In ensuing years, the Society has expanded into many activities including rural community resource management and it is still the main conservation group devoted solely to looking after the whole Zambezi basin.

[www.zamsoc.org](http://www.zamsoc.org)

**Conservation Lower Zambezi** was started in 1995 to help protect wildlife and habitat in the Lower Zambezi National Park and surrounding Game Management Areas. The organization is testing innovative conservation programs that successfully incorporate all stakeholders in this part of the Zambezi. [conservationlowerzambezi.org](http://conservationlowerzambezi.org)

### **Africa with Zambezi Interests:**

The **African Wildlife Foundation**, started in 1961 in Tanzania as the African Wildlife Leadership Foundation, is devoted solely to conservation in Africa and focuses on three areas: conserving wildlife, empowering people, and protecting land. Working at ‘landscape’ levels, the Foundation believes that protecting Africa’s wildlife and wild landscapes is the key to the future prosperity of Africa and its people. [www.awf.org](http://www.awf.org)

The **Biodiversity Foundation for Africa [BFA]** formed in Bulawayo in 1992 aims at conserving sub-Saharan biodiversity through incorporating sound scientific data into the conservation planning process. Has prioritized twenty sites of high botanical interests within the Zambezi Valley that need urgent conservation action. The foundation works with local communities to develop ways of using their natural resources as an aid to conservation.

[www.biodiversityfoundation.org](http://www.biodiversityfoundation.org)

The **African Conservation Foundation (ACF)**, founded in 1999, aims to link conservation initiatives across Africa. The Foundation’s overall mission is “to change the approach of the management and utilization of natural resources to one in which the means of human

development in the region are reconciled with biodiversity conservation.”

[www.africanconservation.org](http://www.africanconservation.org)

The **African Biodiversity Collaborative Group** was founded in 1999 by eight US-based conservation non-government conservation organizations [including two listed in next paragraph] to coordinate field programs in Africa. The mission of ABCG is to tackle complex and changing conservation challenges by catalyzing and strengthening collaboration, and by bringing the best resources from across the continuum of conservation organizations to effectively and efficiently work towards this vision of Africa [www.abcg.org](http://www.abcg.org)

In addition, African organizations often partner on many levels with international groups such as the World Wildlife Fund ([wwf.org](http://wwf.org)), Conservation International ([conservation.org](http://conservation.org)), Wildlife Conservation Society ([wcs.org](http://wcs.org)), and Flora and Fauna International ([fauna-flora.org](http://fauna-flora.org)). Also, there are large, multilateral organizations active in Africa such as The Global Environmental Facility ([thegef.org](http://thegef.org)) and the ICUN. ([icun.org](http://icun.org)). Furthermore, many travel agencies including Expert Africa ([expertafrica.com](http://expertafrica.com)) make important contributions to conservation efforts along the Zambezi.