

Tides of time

Banc d'Arguin National Park, a World Heritage marine site in Mauritania, is one of the largest protected areas in West Africa



Lesser flamingos at the Banc d'Arguin: Hundreds of bird species are attracted by the park's rich marine life.

SPOTLIGHT | Outstanding biodiversity

Banc d'Arguin National Park: World Heritage marine site is way station for migratory birds

Ask any bird lover why Banc d'Arguin National Park was named a World Heritage marine site, and the answer comes easily. Most birders know that this 1.2-million-hectare (three-million-acre) expanse of terrestrial sand dunes, mangrove swamps, mud banks, marshes and shallow waters fringing the coast of Mauritania in West Africa is a major way station for migratory birds. More than two million avian travelers stop here each year: some stay to hibernate for the winter, others rest before continuing on their southward journey.

"Bird migration is one of the most spectacular sights of this site," says Guy Debonnet, chief of the Special Projects Unit for Unesco's World Heritage Centre. A birder himself, he knew about Banc d'Arguin long before he started working for Unesco in 2001. "The whole East Atlantic flyway for migrating birds would be affected if anything were to happen to this particular site," he adds.

Therefore it is no surprise that Banc d'Arguin — one of the largest protected areas in West Africa — was inscribed on the World Heritage List in 1989 for the significance of its ecosystems and biodiversity. Although Mauritania is one of the poorest countries in the world, it recognizes the importance of the region and had made it a national park in 1976, 13 years before the World Heritage designation. The government officials who have been appointed site directors since 1989 have all been exceptionally competent,

underscoring the park's visibility at the highest levels. One former director subsequently became prime minister, and others have held ministerial rank or served as directors of key public enterprises. The site's current director, Mohamadou Youssouf Diagana, is an economist and a former director of the national budget in Mauritania.

The outstanding biodiversity of the site is exemplified by some 250 species of migrating birds, attracted by the rich marine life just offshore. The shallow waters contain nutritious elements like phytoplankton and deepwater upwellings that make it ideal for fish breeding. (An upwelling occurs when nutrient-rich deepwater is driven by natural forces toward the ocean's surface, replacing the warmer, nutrient-depleted water otherwise found on the surface).

The rich water nourishes not only fish, shellfish, rays and other forms of marine life, but also five species of dolphins, two threatened species of sea turtles and the world's largest colony of monk seals, the most endangered species of seal on earth. The biological productivity that draws birds and mammals also attracts local fishermen, the Imraguen, whose traditional fishing methods do not jeopardize the park's marine eco-balance. The Imraguens' 114 local sailing boats are the only vessels allowed to

operate within the 600,000 hectares of marine reserve.

However, commercial fishing vessels from Europe, Japan and Russia are also drawn to the site, and they do threaten the park's ecosystem. Overfishing has become a major threat in recent years, in spite of World Heritage status. A decade ago, industrial fishing vessels were operating illegally in the

park, and some 400 small-scale motorized boats were arrested each year, says Antonio Araujo of the Fondation Internationale du Banc d'Arguin, an independent organization working with Unesco site staff in Mauritania.

Back then, the park's budget was around €100,000 (\$136,000), so a lack of funds for maritime surveillance was part of the problem, Araujo says. Today, the park's annual budget allocated by the state is more than €1 million, and the government has donated €3 million to set up a trust fund to ensure long-term financing. Increased funding has meant increased surveillance, which in turn has driven industrial fishing boats from the park (although they continue to fish outside its boundaries). Within the park, intentional fishing of sea turtles has been eradicated; fishing focused on rays and sharks has dramatically decreased. Only sailing boats are allowed in Banc d'Arguin; the number of motorized pirogues caught

inside the park has been cut by two-thirds. Site managers work with locals to develop a sustainable management plan for fish stocks, in recognition of the area's importance as a fish nursery. Mauritania derives important annual revenues from fishing licenses; the European Union's most important fishing agreements globally are with Mauritania. "Protection pays," notes Araujo.

Oil also pays, and oil exploration off the coast of Mauritania is a second major threat to the well-being of Banc d'Arguin. Offshore oil exploration is now under way outside the park, but since Banc d'Arguin covers one-third of the coastline and protects 60 percent of the most productive coastal habitats, it could obviously be affected. Accidental oil spills would have an enormous impact, cautions Debonnet, with a nod to the BP oil spill off the Louisiana coast.

The advice of the World Heritage Centre is for Mauritania to urge oil exploration farther away from the site and to do an environmental impact assessment. Disaster

preparedness is essential and should be part of the management plan for all heritage sites, Debonnet says. However, adequate funding is necessary to ensure the implementation of disaster planning proposals.

Oil exploration also means tankers — another threat to the site. The international waters west of Mauritania's coast are crossed by one of the world's busiest shipping lanes. The big tankers passing in front of Mauritania carry dangerous materials as well as oil. Site managers are seeking "particularly sensitive sea area" status from the International Maritime Organization so that shipping lanes can be moved further away from the coast.

Longer term, climate change could have a marked impact on the marine portion of the park. Already, the vegetation — encompassing 190 plant species — along the coastline has been visibly affected. If the ocean temperature changes in the future, the consequences would affect the global food chain, from microplankton to migratory birds to mammalian diets on land and sea.

Marine site conference

On Dec. 1-3, Unesco held the first-ever meeting of its World Heritage marine site managers in Honolulu. The conference, "Navigating the Future of Marine World Heritage," brought together managers of the "crown jewels of the ocean," most of whom had never met. But after three days of shared experience, discussions and group work, participants emerged feeling they had found a unified force and had gone one step closer toward building a World Heritage marine site community that would develop a common approach to fight issues facing them all: climate change, overfishing, invasive species and tourism. Fanny Douvère, coordinator of Unesco's World Heritage Marine Program, said: "This is a beginning. We have a long way to go, but we can make changes that will make a difference for all of us."

J.J.

EXPLORING | Desert and sea

A seashore with solitude, and the journey to reach it

Just about anywhere else on the planet, high-rise hotels, country clubs and rowdy bars would line this stretch of coast. But Mauritania's Banc d'Arguin National Park is anything but typical. This is the western end of the Sahara, where the unrelenting desert tumbles into the sea, a patch of Atlantic notorious as the birthplace of hurricanes and the last resting spot of many ill-fated ships.

But for those who crave a seashore with solitude, Banc d'Arguin is nirvana. There aren't many equatorial beaches where the only footprints in the sand were made by feral camels, where the offshore waters are as unpopulated as they were 100 years ago, and

where the only human touch is a handful of tiny fishing villages.

While splendid isolation is the park's primary allure, it is also the biggest impediment to visiting. Mauritania attracts very few foreign visitors. As a result, tourist services in the sparsely populated West African nation are few and far between. For those with deep pockets, lots of time and experience driving in deep-desert conditions, hiring a four-wheel-drive vehicle in Nouakchott (the capital) is the easiest way to reach and explore the mainland parts of Banc d'Arguin. Anyone who opts for this do-it-yourself approach will need to outfit themselves with food, fuel, drinking water, GPS and other necessities — as well as entry permits from the national park service — in Nouakchott.

From the capital, it's about a 250-kilometer (155-mile) drive northward along a good paved road to the park's southern boundary. Because the highway slants inland, reaching the coast requires a rough-and-tumble traverse of unpaved desert roads. The most popular is probably the 36-kilometer route from Chami (where there is a gas station) to Arkeiss, which lies about midway along the park's 180-kilometer stretch of shoreline.

Accommodation inside the park is at sanctioned community "lodges" with permanent tents, often at stunning waterfront locations. In addition to Arkeiss, there are tented camps at four other locations, including the sandy peninsula at Iwik and bayside at Tessot. Rates range from about \$10 for a small, Western-style tent that sleeps two to three people to \$50 for a large Saharan-style tent that can sleep as many as 10. Reservations for tents and meals can be made ahead of time by contacting park authorities in the capital. A la carte (primitive) camping within the park is strictly prohibited.

Activities inside the park include swimming, bird-watching, dune walking, driving the beach at low tide (the only time when coastal motoring is possible) and visiting the fishing villages of the local Imraguen people. It's also possible to go boating with the Imraguen in their traditional lateen-rigged sailing vessels, either on fishing trips or general exploration of the islands and sandbanks. History buffs will relish the chance to sail the shallow waters where the French navy frigate Medusa wrecked in 1816, the catalyst for one of the great maritime survival epics of all time. Both inspiring and tragic, the tale has been spun several times, including Jonathan Miles's "The Wreck of the Medusa," which makes great reading for anyone visiting Banc d'Arguin.

For those who don't have the time or desert expertise, organized tours can be the solution. Mauritanie Aventure, for instance, offers guided 4x4 trips that include both the Sahara and Banc d'Arguin.

J.R.Y.



TWO HEARTS. REAL PRECISION.



Precision, innovation and luxury by Jaeger-LeCoultre

If Jaeger-LeCoultre watchmaking could be summed up in one word, that word might be "precision." The latest Jaeger-LeCoultre models showcase its greatest achievements in a 177-year history, offering the most complex movements ever made. A movement, or caliber, is the organ that gives life to the watch; Jaeger-LeCoultre has created over 1,000 of them. Caliber makers, also called movement-design engineers, produce 12 prototypes for each new model, and must test them for as long as one year. Forty different crafts and 1,000 professionals ensure that each watch is perfect. "Making parts like this, and putting them on the market, is a challenge for watchmakers because you're creating something nobody has ever seen before," says Christian Laurent, master watchmaker in high complications at Jaeger-LeCoultre. "But it's a challenge our watchmakers love."


Before leaving the manufacture, a 1,000-hour control policy recreates the conditions in which the finished timepiece will be worn. This process lasts six weeks, while every part of the watch is rigorously tested. The 1,000-hour control policy has become an industry benchmark. But now Jaeger-LeCoultre has gone even further. A new "1,000 Hours Chrono" label adds another validation, entirely dedicated to accuracy. It was developed for the high-precision Master Grande Tradition models. A Jaeger-LeCoultre Master Tourbillon Calibre 978 watch won the 2009 Chronometrie International Timing Competition, with a score of 909 points out of a possible 1,000. In second place was Jaeger-LeCoultre's Reverso Gyrotourbillon 2, with 908 points. The result certifies the Master Tourbillon as the most precise mechanical wristwatch made today.

J.J.




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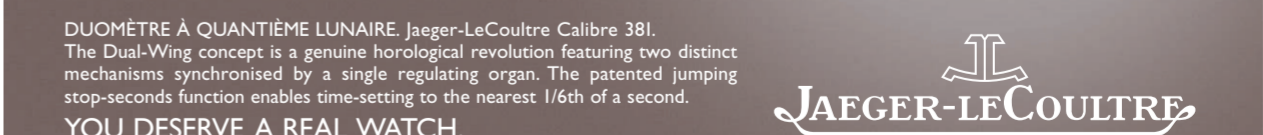



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