Burkina Faso

Winter ecology of the black stork in Burkina Faso (West Africa)

Photos courtesy of Damien Chevallier and François Baillon

Black stork

The black stork, *Ciconia nigra*, is a Palearctic migrant that breeds in Europe and winters in West Africa. This rare species (world population estimate: 8000 pairs) breeds in forests and, because it feeds on fish, is a good indicator of water quality. Its ecology is relatively well known in Europe but the behavior and habits in the black stork's wintering grounds are still poorly known and no long-term study has ever been made in tropical Africa. This project includes a three-year monitoring of its ecology in the game ranch of Nazinga, Southern Burkina Faso— in the Sudanian savannah belt—near the border of northern Ghana. The program involves four major parts: a). Etho-ecological study of the black stork on the 93,000 ha game ranch of Nazinga and its eleven dams. b). Study of human activities (hunting, fishing, gathering) on the same area to assess how natural resources and space are shared between the black stork and the local human population. c). Marking and satellite radio tracking of three individuals (juvenile and adult) to describe movement patterns of the species on its wintering grounds, the migration routes to the northern breeding grounds, and to identify their breeding area. d). With local people, define micro-projects of rural development (e.g., educational, medical) with the black stork as a symbolic keystone and guide for cooperation projects between Europe and Burkina Faso. This last part is aimed at securing optimal and lasting conditions for the protection of the black stork in Burkina Faso.

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Preliminary data suggest that there are no traditional routes. The birds' location is shifting according to that of the current food sources, probably to minimize energy expenses. Our first data also suggest that the juvenile birds just move through southern Burkina Faso, but do not actually winter there, or do not do so completely. Most birds regularly seen in the Nazinga Game Ranch between December and February are adults, and are more faithful to the area.

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Madeira

Following Cory's shearwaters with PTTs

Photos courtesy of Elizabeth Zino and Henrique Costa Neves, respectively

Cory's shearwater

The majority of the population of the Atlantic subspecies of Cory's Shearwater live in the Azores and Madeira Archipelagos. They are excellent bio-indicators of the state of the surrounding waters and also of the oceans through which they travel during migration. Fishermen in both archipelagos use them to indicate the shoals of tuna and bonito.

Previous work in conjunction with the Parque Natural da Madeira and the Museum of Natural History, Paris, showed that Cory's shearwaters migrate to the coast of Africa to feed during the incubation period. Current work, headed by Dr. Francis Zino and involving also Dr. Manuel Biscoito, Director of the Marine Biology Station of Funchal and Dr. Uli Querner of the Max Planck Institute (who greatly finance the project), aims at tracking Cory's adults during their annual migration.

It is known through previous ringing work that Cory's move to South America during migration, but it is of prime importance to know how they get there and back and where they stop to feed. This work should be repeated at regular intervals in order to ascertain the influence of currents and weather changes on migration patterns and food availability. The team also hopes to be able to better understand the way that Cory's "navigate" and their dependence on wind and currents.

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Frank Zino holding a juvenile Zino's petrel

With this knowledge it may be possible to identify ecologically important areas in the ocean—areas where birds are known to feed—and then influence Governments to create marine protected areas (MPAs). MPAs will not only benefit the birds, but they will also help restock the depleted Atlantic fish stocks.

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