

# The Re-introduction Project «Beshar el Kheir» at Ain Tijja-Mezguitem in North-east Morocco

■ Hans Peter Müller

Until the 1940s, the Waldrapp ibis used to breed throughout Morocco, from the Anti-Atlas in the northeast to the High Atlas and the steep sandstone cliffs at the Atlantic coast in the south. At that time there were about 38 breeding colonies with a total of more than 1000 birds. The number of birds declined to 346 specimens in 1983, and reached an all-time low in 1998 with only 180 birds. The about 300 birds currently living in the wild are all part of the two remaining colonies in the region of Agadir.

Over the past 20 years, major efforts have been made to prevent the Waldrapp ibis from extinction in the wild. The Moroccan Government established, in 1991, the Souss-Massa National Park at the Atlantic coast south of Agadir, in order to protect the remaining breeding colonies. A conservation programme executed in collaboration with the RSPB, Bird Life International and WWF, supports the Forestry Department's efforts aimed at saving the last wild survivors of the western Waldrapp ibis population. Although some promising results have been achieved, the status of this non-migratory population is still extremely



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vulnerable. The porous sandstone of their breeding ledges is exposed to erosion, the feeding grounds suffer from several years of drought and extensive land utilization, which forces the birds to search for food in more distant areas. In their absence, eggs and chicks fall easy prey to predators like ravens, seagulls, cormorants, or falcons.

ibis populations in other regions of the country. In 1997, Hans Peter Müller, at that time in charge of the GTZ project „Promotion and Protection of Natural Resources», was asked to make a feasibility study and identify suitable areas for the re-introduction of *ex situ*-bred Waldrapp ibis.

## The beginnings of the project

For the Moroccan Forestry Department the protection and rehabilitation of the Waldrapp ibis has the highest priority. Consequently it was decided to evaluate the chances of re-establishing Waldrapp

After extensive bibliographic research on the historical distribution of the Waldrapp ibis in Morocco, as well as inspection tours around the country, the region of Mezguitem in the northeast of Morocco, near Taza, was chosen among several potential areas. Historical data show that breeding colonies of Waldrapp ibisses existed in this region, the last one having disappeared in 1980.

The area chosen is a small secluded valley in the promontory Rif Mountains. A



small artificial lake, fed by the freshwater source „Ain Tijja» serves as water-supply for the livestock of the region. In the 1990s, Waldrapp ibisses still have been observed drinking from this lake. The rock walls of the surrounding mountains and steep embankments of the Oueds Msoun and Moulouya, offer many protected breeding niches. In the steppe region of more than 3000 km<sup>2</sup> and on the lake and the river beds of both Oueds, the waldrapp ibis could find enough food throughout the year. The arid region with lower steppe vegetation is used for sheep and goat pasture and for extensive grain growing without using herbicides or pesticides. A part of the Ain Tijja Valley is covered by protected forest. The local quarries that contributed to the disappearance of the original waldrapp ibis population have been closed some years ago. The region belongs to an arid bio-climate with hot summer and mild winter; snow and frost are exceptions. The project site is located at 8 km away from the town of Mezguitem and can be logistically managed efficiently. It is 760 km away from Agadir and is separated from the last free-living colonies by the high and middle Atlas Mountains.

In 1999, following the international workshop „Determination of Strategies for the Rehabilitation of the Waldrapp Ibis in Morocco», a co-operation agreement was signed by the Ministry of Forestry, the „Arbeitsgemeinschaft Waldrapp» (AgW, current



members: Munich Zoo, Tierpark Berlin, Vienna Zoo, Nuremberg Zoo, Rabat Zoo and Berne Animal Park) represented by Hans Peter Müller, the industrial company HolCim Maroc - a main sponsor - and the Council of Mezguitem. The signatories agreed that the conservation society of Tazekka (ATED), should be entrusted with the local implementation of the project. The National Zoo Temara/Rabat took on responsibility for providing veterinary care, and the training of the staff.

The project consists of three phases: (a) construction and establishment of the breeding station; (b) maintenance and breeding of an ex situ ibis population at Ain Tijja with related monitoring; and (c) release of ibises bred at the station and establishment of an ibis population able to survive in its natural habitat.

### The breeding station

Construction works for the breeding station and the water distribution system were sponsored by the company HolCim and started in February 2000. It was not an easy task to build the aviaries and other structures in this difficult country without roads, electricity and water. Rocks, cement, and water had to be transported on donkeys' backs or by the local people. A system of solar cells was installed to provide electricity. A well was dug, and a reservoir built, in order to supply drinking water to the station and to the rural population living nearby. This included the pro-



vision of «donkey-parking» areas near the water taps, because, during summer, more than 60 families a day are coming with their donkeys and mules to get drinking water. These people know that their water supply is guaranteed thanks to the ibis. Often the station can also provide work opportunities. As a consequence the locals are no longer facing the dilemma of moving elsewhere. By now the Ibis is a focal point, reaching the status of honoured and well-accepted bird. The local population has named the station «Bshar el Kh-ir», which means «the bearer of luck». Like the cattle egrets and storks breeding in the region the waldrapp ibis used to be part of the local culture and benefitted from the rural people's activities. The population will now get accustomed again to the ibis by the daily contact and, likewise, the Ibis will get used to the people with their mules, donkeys, sheep, goats and the surrounding environment. The inauguration of the Ibis station by the Moroccan Ministry of Agriculture and the governor of the province town of Taza took place in October 2000 in Mezguitem with a small public festival.

The breeding station consists of 2 big aviaries (2x180m<sup>2</sup>) over 10m high, separated by a small service building, which also serves as a lockage through which staff members have access to the aviaries, and for breeding

the service building the two aviaries are connected by another lockage system allowing the birds of the two aviaries to get in protected contact with each other, and which can also be used as a trapping device. The rear wall of the aviaries is made of natural stones with breeding niches of various sizes. The aviaries are covered with nets, and only the sides are closed with 3m high wire screens. A third aviary with a separate entrance has been built on the back side. It can be reached by the ibises through a 6 m large and 1 m high window on the top edge of the breeding wall. The birds are fed every day in this aviary and get used to flying out and back to their big aviary. A special installation allows for opening half of the aviary's covering in a few minutes time.

**Project activities and outlook**

On November 1, 2000, a forest technician was hired by the ATE. He is directly in charge of the local activities and takes daily notes on his observations. He is equipped with a PC, a printer, a pair of binoculars and a mobile phone. The technician is salaried by the AgW, which comes up also for most of the other running costs. A 4x4 Mitsubishi cross-country vehicle could be acquired thanks to a generous donation from Vienna Zoo. The forest department is responsible for the maintenance of the access road, they also assigned two wildlife wardens. The perimeter fence and the solar cell system for the service building have also been provided by the local forest department.



On November 25, 2000, after air transportation sponsored by Lufthansa and 6-week quarantine at Rabat Zoo, the first ten waldrapps arrived from Germany: an adult pair from Munich Zoo and eight one-year-old ibises from Tierpark Berlin. A few days after their release into the aviaries of Ain Tijja, a young bird died from a flight accident after curious ravens had caused a panic. In 2001 the pair from Munich Zoo succeeded in rearing the first chick. In 2002 and 2003 some of the young ibises started nesting, but no chicks hatched, probably as a result of rather unusual, extreme weather conditions. On 28th April 2004 another ten ibises, coming from the zoos of Vienna and Nuremberg were delivered to Ain Tijja. The birds settled very well, but unfortunately also this time one young bird died two days later due to a flight injury.

It is planned to keep ten breeding pairs in each of the two aviaries. Aviary No 1 with its annex is supposed to be the releasing aviary. Once the group size in Aviary No 1 has reached a number of about 40 birds, the releasing operation could be initiated. A release to the wild will, however, only take place if all requirements are met and the Moroccan authorities in collaboration with the national and international scientific institutions involved have given their consent. Aviary No 2 is intended to keep a permanent breeding stock of ten pairs. Only their offspring is supposed to be released on the long run.



An information and development centre has been built following a request from the Mezguitem school community. A small living and working zone has been

established in the information centre. The first year pupils of Mezguitem will be supplied every year with school material sponsored by HolCim on behalf of the waldrapp ibis project, and the teachers will regularly hold classes on the project. The hunters of the region will be involved in the return to the wild process. They will gain knowledge about the ibis and must notify all their observations of the birds made during the hunting season, providing their suggestions on the ibis protection scheme. By doing so, they will contribute positively to the wildlife conservation process. ●

