produced evaporation processes that led to a rather high relative humidity and acted as a kind of padding or curtain against the winds that abruptly unleashed their cold or warm currents. In other words, the brusque temperature changes that moved toward Mexico City from the north or northeast were buffered when they crossed the lake area. Thus, the Texcoco Lake acted to regulated the region's climate.

But as the region became more desiccated, only a thin film of water survived. That too slowly disappeared, leaving behind soils with very high salt concentrations (about twice that of seawater) that hamper the regeneration of the ecosystem.

THE LAKE TODAY

One of the options for the improvement and recuperation of these kinds of soils is to plant forage species that accelerate the rehabilitation process by generating a plant cover and reducing soil erosion. Some 40% of the dust storms that affected Mexico City before have been eliminated by programs to create artificial grasslands and by planting 15 million trees in the area.

Despite the profound transformation of the Texcoco Lake area over the centuries, it still plays an important role for certain members of the regional fauna. The area is part of what is known as "the central route," one of four main flight paths used by aquatic migratory birds during their trips south to escape the northern winters. Huge numbers of these birds stop in the Texcoco Lake area as part of their annual migration from Canada, Alaska and the rest of the United States. Artificial lakes constructed in the area provided a habitat for some 350,000 birds from October to March last year.

According to Aníbal Huerta, biologist and head of the Lake Commission's Department of Biotic Resources, a total of 68 aquatic bird species live in the Texcoco Basin. Thirteen of them are duck species, 29 are shore are birds, 11 are herons, 5 are sea hens, one is a grebe, another is an ibis and eight are marine species such as pelicans, gulls and sea swallows. Among the most important resident species that reproduce in the area is the Mexican Duck (*Anas diazi*), an endangered species. At one point the population was reduced to only 400; now there are about 2000.

A large part of the waters that reach Mexico City and adjacent Nezahualcóyotl are treated before they are used. There are even artificial lakes that store them and regulate the runoff from rivers to the east of the Basin. Many fish species live in these waters.

According to Lake Commission officials there are several projects underway to convert this zone into an ecological reserve, as well as to develop the artificial lakes for recreational rowing and canoeing. One of these lakes, in particular, "Nabor Carrillo," covering about 2300 acres is proposed for these sports. In addition, it will be used for irrigation, municipal industry and other purposes.

In its important efforts, the Texcoco Lake Commission has taken advantage of the temporary aquatic habitats formed each year during the rainy season to re-establish more permanent habitats, linking them together to form a much larger ecosystem that benefits Mexico City's 18 million inhabitants.★

Jesús Yáñez Orozco

What About the Monarch Butterfly?

The migration of the Monarch butterfly and its hibernation in Mexico is a unique natural phenomenon. Each year, towards the end of the summer, the entire Monarch population from Canada and the United States east of the Rockies sets off on its journey south towards the dense fir forests found along the neo-volcanic chain cutting across Mexican territory. Some 3000 meters above sea level, these forests cover more than 7400 acres in the states of Mexico and Michoacán and provide ideal conditions for the Monarch's overwintering.

Tens of millions of Monarchs feed on the profusion of flowers that cover Mexico after the end of the rainy season, storing up the fats they need to hibernate for four months. Nonetheless, the most important factor for the Monarch's survival after it leaves the coldest regions of North America is access to specific ecological conditions; these are found only in Mexico's highland fir forests.

Rodolfo Ogarrio, president of "Monarch, A.C.," a non-profit organization concerned with the butterfly's conservation, explains that a number of processes, especially population growth and the advances of technology, have reduced the extention of Mexico's forests. Thus, the sites used year after year by the Monarch represent some of the last remaining habitats providing the conditions needed for its hibernation.

"This situation," he adds, "makes the project to preserve the Monarch's hibernation habitat an important one for Mexicans. It offers us the opportunity to coexist with other generational beings, a kind of consciousness that we lose from time to time."

He acknowledges that in the case of the Monarch, as in many other similar ones, it's not really the animal that must be protected; the butterfly can take care of itself. It's the habitat that's in danger.

Photo by Sergio Dorantes

Therefore, the Mexican government's decision to backtrack on a previous decree establishing a Monarch butterfly sanctuary is of great concern. The ecological reserve in the Chincua and El Rosario mountains, in the states of Mexico and Michoacán, where the butterfly overwinters each year, was to have become a sanctuary area for the species. That decree was replaced by a ministerial-level agreement in which the Ministries of Urban Development and Ecology, and of Public Education will allow researchers to work in the area, using facilities originally constructed for natural resources management.

We hope that this is only a temporary situation and that we will soon have a fully established Monarch butterfly sanctuary in Mexico.

Jesús Yáñez Orozco