

## What is a corridor?



The Biosphere Reserve La Encrucijada, Chiapas | Photography Eccardi Fulvio Exhibition "Mesoamerican Biological Corridor: Space of Life". 2007

Biological corridors are areas, usually elongated, connecting two or more regions. They may be narrow strips of vegetation, riparian forests, tunnels below roads, plantations, remnant vegetation or large expanses of natural forest. Their crucial quality is that they maintain connectivity between extremes to avoid the isolation of populations.

Biological corridors began to have relevance for nature conservation with the observation of the decrease in the number of species in isolated areas. For example, with the construction of the Panama Canal (1907-1913), the 425 km<sup>2</sup> Gatun Lake was created in the Chagres River. With the enormous flood, the tips of the mountains became islands, including the 15.7 km<sup>2</sup> island of Barro Colorado. This was declared a nature reserve in 1923. However, since that date, the fauna and flora of the island have undergone major changes. More than 65 bird species have disappeared from the 208 originally present on the island. In addition, It has been suggested that the disappearance of large predators (puma, jaguar and harpy eagle) has resulted in a population increase of their prey (coatis, agouti, sloths and howler monkeys), which in turn has changed the composition of vegetation as a result of their dietary preferences.

Specifically, the proposal to maintain or restore landscape connectivity through corridors comes from observations

made on the islands. Since the 1960s the Theory of **Island Biogeography** (by Robert MacArthur, 1930-1972, and Edward O. Wilson, 1929) noted that small and/or remote islands have far fewer species than larger islands and/or those closer to the mainland. During the 1970s it was proposed that protected areas (national parks, biological reserves) that were isolated within the countryside and surrounded by agricultural, livestock or urban developments, could also lose species and that there was therefore a need to maintain their connectivity. This concept began to be used substantially following the United Nations Conference on Environment and Development in 1992.

Corridors maintain the continuity of biological processes. One of the most important of these, in terms of conservation, is the process of dispersal of individuals. Generation after generation, populations disperse and successfully colonize locations far removed from the site where they were born. In plants, seeds perform this dispersal while in animals it is usually the young who migrate. Corridors allow colonization and movement of individuals which prevents the local extinction of populations, maintains gene flow, reduces incidence of inbreeding and preserves the diversity of species within the fragments.



**URL** [http://www.biodiversidad.gob.mx/v\\_ingles/corridor/whatis.html](http://www.biodiversidad.gob.mx/v_ingles/corridor/whatis.html)