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RECOVERY OF THE ATLANTIC FOREST, SUCCESSFUL EXPERIENCES

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The Atlantic Forest stretches from Rio Grande do Norte to Rio Grande do Sul, reaching also the southern part of Mato Grosso do Sul, in an area of 1.3 million square kilometers with a population of 124 million people. It is owner of one of the most impressive biological diversity on the planet and scenario of the main postcards of Brazil, and form one of the blocks of tropical forests in the country.

It separated of the Amazon area by Cerrado and Caatainga biomes (characterized by the vegetation opened), the Atlantic Forest was recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a Biosphere Reserve by being an environment megadiverso consist of a large complex of regions with vegetation formations and geological fertile and lush. A significant part of its fauna and flora is endemic, i.e., does not occur in any other place on the planet.

The mega diversity comes from its genesis for millions of years in the formation of what today are the North, East and South of Brazil. As the forests were continuous, the Atlantic Forest has been marked by periods of contact with other forests on the South American continent, such as the Amazon rain forest, interspersed with periods of isolation. This alternation of contact and isolation with other habitats has resulted in an intense differentiation of wild fauna and flora, generating a high biological diversity and single occurrences which is now in the biome.[1]

The combination of three geographical factors: great variation of latitude, a situation shared with few tropical forests on the planet; great variation of altitude, with their ecosystems occupying areas from sea level to areas to more than 2,500 meters; variation of longitude with forests interior significantly differing from the forests that are

located near to the coast. These factors have created a unique diversity of landscapes, and also help to explain this extraordinary diversity of species in the region.

Although the concentration of investment in research in the Southeast region becomes the Atlantic Forest, in relative terms, the biome with greater knowledge of their biological diversity and with more extensive scientific collection, there is still a lack of significant part of its biodiversity. As an example, quote itself what was discovered between 1990 and 2006, more than 1,190 new species of plants.[2]

By virtue of its biological wealth and alarming threat levels, the Atlantic Forest, next to other 33 regions located in different parts of the planet, it was indicated by experts as one of the hotspots, i.e., one of the priorities for the conservation of biodiversity throughout the world.[3]

In an effort to preserve this property Brazilian several are the entities - public and private - and also the actions that seek its preservation. There are numerous areas of high biological value, cultural, recreational, scientific, and educational, in addition to the importance to the economy, by environmental services that provide. The federal and state governments retain the following conservation units:

National Historic Park of Monte Pascoal, in southern Bahia, where is located the Monte Pascoal, reference of the discovery of the country;

National Park of the Serra dos Órgãos, in Teresopolis (RJ), place of tourist attraction;

National Park of the Tijuca, in Rio de Janeiro, where is the monument of the Redeemer Christ, on Corcovado Hill;

National Park of the Iguaçu, in Parana, protects the Iguaçu Falls, recognized as one of the places of Natural Heritage of Humanity by UNESCO, in addition to having been voted one of the Seven Wonders of the World;

National Parks of Serra Geral and Aparados da Serra, between the States of Rio Grande do Sul and Santa Catarina.

State Park of the Rio Doce, in Minas Gerais, which protects one of the systems of lakes in the country.

State Park of the Serra do Mar, in the state of São Paulo, the largest conservation unit of the Atlantic Forest.

The private sector has assumed an increasingly important role in the conservation, since the majority of the remnants of native vegetation of the Atlantic Forest is in particular properties. The Private Reserves of National Heritage (RPPN, acronym in Portuguese) have significantly contributed to the conservation of biodiversity, complementing the work of the public power.

Although small, the RPPN constitute an excellent tool for training strategies of corridors and protection of the buffer zones of large public units, since in many municipalities the only existing conservation or to be deployed is an RPPN, which is in these cases as the only way of protecting the remnants of biodiversity.

The work of the RPPNs already comes from a good time. In 1988, in pioneering work led by professor Ricardo Ribeiro Rodrigues, of the Escola Superior de Agricultura Luiz de Queiroz, of the São Paulo University (Esalq/USP), in the municipality of Iracemópolis, began the restoration of a water reservoir, after a severe drought and the city suffer with the lack of water. The methodology that was born from then on smote roots Brazil and gained credibility to the point of being one of the references reviewed for the formulation of the Restoration Atlantic Forest Agreement, prepared by a group of non-governmental organizations and presented in November 2007, in Vitória, Espírito Santo. 4

The reports of work of this group of the Esalq describe restores of forests on the lands of pulp and paper companies in Rio Grande do Sul, Bahia and Paraná, on farms of sugar cane in São Paulo, coffee in Minas, soya beans in Pará and livestock farming in São Paulo, Mato Grosso and Mato Grosso do Sul. In 15 years the teams of the Laboratory of Ecology and Forest Restoration of the Esalq restored 3,500 hectares of riparian forests. A result still shy, but that works like the start the expansion of RPPNs.

Agronomists and forestry, and biologists that group act together with non-governmental organizations and with representatives of the government, in particular promoters who are pressuring the owners to comply with the law, regarding the rebuilding of the areas of permanent protection APPs, and legal reserve areas (RL) of the properties.

The motivation for owners of land is not the daughter of fear of law or of love by nature, but the need for environmental certification, which is essential to obtain financing, economic returns in the areas of legal reserve and sell their products in other countries. Sell seeds of trees used in forest restoration can also be a good deal. A

kilogram of seed may cost up to R$ 2,000, depending on the size of the seed and the difficulty of collection.

Imperfect forest, before despised, earned value ecological and economical. The secondary vegetation – so called to if differentiate from the primary vegetation, which holds the structure and diversity of species of original forest – is now seen as one of the bases for an ambitious plan for expansion of the Atlantic Forest.

In 2009, representatives of non-governmental organizations, companies and universities have announced in São Paulo the Atlantic Forest Restoration Pact, whose goal is to recover 15 million hectares of forests by 2050, an average of 300 thousand to 400 thousand hectares per year. 5 These areas, even more easily than the pastures and abandoned, in general with vegetation more impoverished, could be enriched with local species and interconnected with larger fragments at lower costs than the restoration of land without any vegetation, in accordance with the methodology of the team of the Esalq/USP.

Today the fragments of secondary vegetation in different stages of growth - the majority in particular properties - occupy an area that corresponds to almost double the size of the Atlantic Forest still primary.

It will not be because of a lack of proposals that the Brazilian forests will grow again. There are dining options for large and small producers, so that the profitability of the areas recovered is becoming increasingly attractive. As early probably there will be no consensus on which is the best method, but experts agree today on two points: the use of native species, since the risk of the alien die soon is high, and the greatest diversity of species.

It is important that the example that occurs in the Atlantic Forest is extended to other Brazilian biomes, because in addition to the restoration of vegetation, it creates a consciousness preservationist who will contribute to the balance between preserving and producing, with gain to society as a whole.

NOTES

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2 SOBRAL, M. & STEHMANN, J. R. An analysis of new angiosperm species discoveries in Brazil (1990-2006). *Taxon,* v. 58, n. 1, p. 227-231, 2009.

3 MITTERMEIER, R. A.; GIL, P. R.; HOFFMANN, M.; PILGRIM, J.; BROOKS, J. MITTERMEIER, C. G.; LAMOURUX, J.; FONSECA, G. A. B. *Hotspots Revisited: Earth's Biologically Richest and Most Endangered Terrestrial Ecoregions.* Washington, D.C.: Cemex, 2004.

4 FIORAVANTI, C. Semeadores de florestas. *Revista Pesquisa Fapesp*, n. 144, fev., p. 38-42, 2008.

5 FIORAVANTI, C. Verde multiplicado. *Revista Pesquisa Fapesp*, n. 159, maio, p. 38-39, 2009.