

SANTA LUCIA REFORESTATION AND SILVOPASTURE PROJECT 2002 - 2006

Santa Lucia began in the 1970s as an agricultural cooperative. While the majority (at least 84%) of the cloud forest is still primary forest, some areas during those years were cleared for pasture, to grow crops and for timber to construct homes.

The change from clearing the forest to conserving Santa Lucia began in the late 1990s when the landowners/members of Santa Lucia Cooperative decided to protect their land and to seek ecotourism as a sustainable alternative to farming. Although reforestation had begun in 2001 with the planting of purchased trees, April of 2002 saw the creation of a native tree nursery. Over a four year period, with funding from Rainforest Concern UK, local staff and volunteers planted at least 6,000 native trees in 20 hectares of degraded land within the reserve.

Most trees planted were pioneer species. These are trees which grow rapidly in conditions of ample sunlight and provide the necessary shade for other trees and flora. After experimentation, the trees best suited for the direct sunlight and the poor soils of the pasturelands were determined as Aliso (*Alnus* sp.) and Sangre de Drago (*Croton* sp.) Aliso contains nitrogen fixing nodules in its roots, highly beneficial for the nutrient poor soils of the pasturelands.

Species which require shade to establish were also planted, both in areas of existing secondary forest to boost biodiversity, and in areas where the newly planted pioneer species were already providing sufficient protection from the sun. These species include Motilon (*Hyronema oblonga*), Cedro (*Cedrela* sp.), Guayavillo (*Campornanesis* sp.), Cuero de Puerco (*Pollalesta* sp.), Colca (*Miconia* sp.), Tarqui (*Hedyosmum* sp.), Guabo (*Inga* sp.), Poroton (*Erythrina megislophyllia*), Lechero (*Euphorbia laurifolia*), Chachacoma (*Weinmania pinata*), Palmito (*Geonoma* sp.), Arrayan, and Verbenacia.

Staff experimented with different methods of seed collection, seed preparation and propagation to find the best results for each species. Some trees were grown from seeds from the forest and others from seedlings gathered from beneath the parent trees. Once planted out in the forest, the trees need at least two years of after-care to clear the pasture around the tree.

Trees were planted in areas of degraded land most at risk of erosion with the aim of eventually creating secondary forest, and also in areas of pastureland to create silvo-pasture. The creation of silvo-pasture stabilizes the soil, increases its nitrogen content and provides a considerable boost to biodiversity, while at the same time allowing us to continue to use the pasture for the mules which are necessary for bringing up supplies to the lodge.

Santa Lucia would like to thank Rainforest Concern UK and all the volunteers who worked so hard so make this project a success.