

SANTIAGO'S PIGS AND ISABELA'S GOATS: EL NIÑO'S IMPLICATIONS FOR MANAGEMENT AND THE ENVIRONMENT

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Above average levels of rainfall during the 1997-98 El Niño provided an increase in available resources for both feral and native terrestrial animals, by promoting an increase in vegetation biomass and providing surface water, which is scarce in normal years. This affected pig and goat populations in quite different ways and had implications for their habitat and for hunting success.

On Santiago Island, the last few years have seen an intensive and consistent effort that will soon achieve the eradication of the pigs. However, since pigs are limited in part by the availability of surface water, the abundant rains of El Niño allowed them to expand their range, which had been diminishing due to hunting pressure. In addition, increased vegetation density caused by the rains reduced hunter success, as large areas became impenetrable to hunters and dogs alike. As a result, pig populations recuperated somewhat during El Niño. During the months following El Niño, water points began drying up and vegetation began dying off. Pigs were forced to concentrate around ever-diminishing permanent water points. The movement of hunters and dogs then became less constrained by vegetation and the kill rate increased dramatically, especially in the five months following the end of the rains (June – October). Expected post-El Niño drought conditions (La Niña) should speed the eradication of pigs on Santiago.

On nearby Alcedo Volcano, on Isabela Island, these same drought conditions threaten to provoke destruction

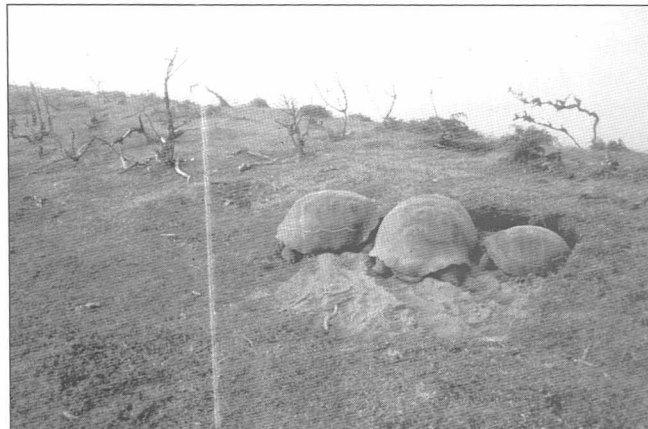
by goats of critically important natural habitat, so preventive measures are planned. On Alcedo, El Niño rains brought about a vigorous vegetation growth, as they did on Santiago. Widespread availability of vegetation allowed feral goats to disperse over a wider area, thus reducing direct browsing pressure on Alcedo's southern rim. As a result, vegetation biomass may have stabilized or increased during El Niño in this particular area. However, the overall increase in vegetation is likely also to have assisted in the goats' reproductive success, which will continue even after vegetative production slows, magnifying the detrimental impacts of the goats. The predicted La Niña is expected to produce drought conditions that will concentrate goat activity on the rim. Regularly scheduled control hunts will aim to limit goat damage to acceptable levels until the eradication campaign for goats on northern Isabela is fully funded and ready to be implemented. El Niño may have temporarily slowed the degradation of habitat on Alcedo, but the goat menace is as potent as ever - their eradication is essential for the survival of the ecosystem.

For the Project Isabela team, charged with the management of both the Santiago pig and the Isabela goat eradication campaigns, El Niño has been a mixed blessing, as will the expected drought of La Niña.

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Giant tortoises gathering in drizzle fog drip areas on caldera rim during garua season. Photograph by Tui De Roy.



Giant tortoises huddling on barren caldera rim ravaged by new goat invasion, fog drip trees destroyed. Photograph by Tui De Roy.