

Ecuador endangered: A call to action

The tropical Andes of Ecuador are at the top of the world list of biodiversity hotspots in terms of vertebrate species, endemic vertebrates and endemic plants. For example, Ecuador has more orchid and hummingbird species than Brazil, which has an area 32 times larger, and has more biodiversity than the entire US.

In the last year, the Ecuadorian government has quietly granted mining concessions to over 1.7 million hectares (4.25 million acres) of forest reserves and indigenous territories. These concessions were awarded to transnational corporations in closed-door deals without public knowledge or consent.

This is in direct violation of Ecuadorian law and international treaties, and it will decimate headwater ecosystems and biodiversity hotspots of global significance. However, Ecuadorian groups think there is little chance of stopping the concessions using the law unless there is a groundswell of opposition from Ecuadorian civil society and strong expressions of international concern. The first country in the world to inscribe the rights of nature into its constitution (the celebrated *Pachamama*) is now ignoring that commitment.

The Rainforest Information Centre (www.rainforestinformationcentre.org) hired Ecuadorean researchers and discovered that 41 *bosques protectores* (protected forests) have been secretly concessioned. For example, nearly all of the 311,500-hectare Bosque Protector Kutuku-Shaimi, where 5000 indigenous Shuar families live, has been concessioned. For a detailed mapping of the full extent of the horror being planned, see Vandegrift *et al.* (2017).

In Ecuador, civil society is mobilizing and has asked their recently elected government to prohibit industrial mining

in water sources and water recharge areas, in the national system of protected areas, in special areas for conservation, and in protected forests and fragile ecosystems (for some recent coverage of this struggle see Hill [2018]). Fortunately, unlike the previous administration, the new government has signalled an openness to hear indigenous and civil society's concerns.

But we will need a massive international effort to rescind the existing concessions – many billions of dollars of mining company profits are opposed to some of the most biologically diverse ecosystems on Earth and the many local communities and indigenous peoples who depend on them.

The lure of mining profits is a deadly mirage (Roy *et al.*, 2018). The impacts of large-scale open-pit mining within rainforest watersheds include mass deforestation, erosion, contamination of water sources by toxins such as lead and arsenic, and desertification (Roche *et al.*, 2017). Mining transforms a lush rainforest into an arid wasteland incapable of sustaining either diverse ecosystems or human beings.

Without a huge outcry both within Ecuador and around the world, the biological gems and pristine rivers and streams will be destroyed.

It does not have to be this way. Civil society needs to be in open conversation with the state. Ecuador's society and government must explore how an economy based on the sustainable use of pristine water sources, the country's incomparable forests and other natural treasures is superior to an economy based on short-term extraction leaving behind despoiled and impoverished landscapes. For example, studies by Earth Economics in the Intag region of Ecuador (where some of the new

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Biodiversity; conservation; indigenous culture

mining concessions are located) show that ecosystem services and sustainable development would offer better approaches even when considered in purely economic terms – let alone ecological and social ones (Kocian *et al.*, 2011).

How you can help

Please join, follow and share the Rainforest Information Centre's campaign to save Ecuador's rainforests on social media (<https://is.gd/Ecuador>). Please also sign their petition (<https://is.gd/ecupetition>) and support the crowdfunding campaign (<https://is.gd/ecufund>).¹ ■

Notes

¹ A longer version of this article can be found at <https://is.gd/Pu2NqP>. For more links to the history and causes of Ecuador's mining crisis, visit <http://ecuadorendangered.com>.

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Insects of Ecuador

Photographer: Andreas Kay

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Adult and nymph of the treehopper *Alchisme grossa*



Ball-bearing treehopper (*Bocydium globulare*)



Adults and nymph of the shieldbug *Edessa rufomarginata*



Snake-mimic chrysalis of the butterfly *Dynastor darius*



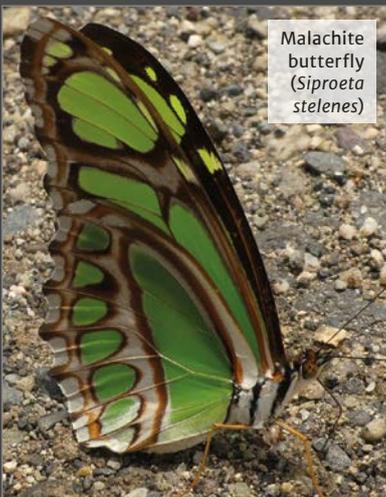
Caterpillar of a moth in the genus *Naprepa*



Caterpillar of a saturniid moth



Snake-mimic caterpillar of the moth *Hemeroplanes triptolemus*



Malachite butterfly (*Siproeta stelenes*)



A metalmark



The moth *Idalus herois*

Lichen katydid
(*Markia hystrix*)



A monkey hopper
(*Homeomastax* sp.)



A pair of grasshoppers
(*Megacheilacris bullifemur*)

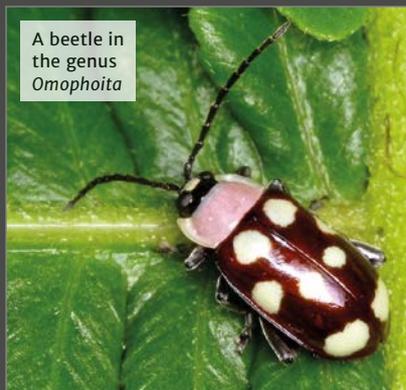




A brentid beetle



Target tortoise beetle
(*Ischnocodia annulus*)



A beetle in
the genus
Omophoita



The beetle
Stolas placida



Pair of fungus beetles