

Last call for the Peruvian Plantcutter

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Endemic to the coastal desert scrub of north Peru, the Peruvian Plantcutter *Phytotoma raimondii* is on a perilous downward slope. Threatened by continual deforestation and land-use changes, its last remaining sites are ever-smaller and increasingly fragmented. The final nail in the coffin could well be the massive dieback of 'Algarrobo' *Prosopis pallida* trees, which constitutes the key species in the Plantcutter's habitat and a main food source.

The Peruvian Plantcutter inhabits open dry forest, desert scrub and riparian thickets, with records from sea level to 700 m altitude, although most are below 200 m. Being

Unless otherwise stated, all photos were taken in Peru by Jeremy Flanagan.

herbivorous, it needs habitat with a reasonable diversity of bush and tree species. Such diversity is being lost, however, and with it the plantcutter. The species is currently classed as Endangered by BirdLife International (2018), although I believe that its situation merits a more thorough revision,

1 Male Peruvian Plantcutter *Phytotoma raimondii* on a 'Palo Negro' bush, Lobitos, Piura, October 2017.



>> GLOBALLY THREATENED BIRD PERUVIAN PLANTCUTTER



Threats to the Peruvian Plantcutter are depressingly many and varied. They include: **2** Deforestation of Algarrobo trees in plantcutter habitat, Quebrada Seca, Tumbes, August 2011 (Mónica Romo); **3** the burning of Algarrobo to produce charcoal, Salinas, Lambayeque, August 2017; **4** the illegal processing of Giant Squid *Dosidicus gigas* (using Algarrobo firewood) to produce feed for shrimp farms, Quebrada Ancha, Talara, May 2004; the explosion of invasive plants such as **5** Sponge Cucumber *Luffa operculata*, which suffocates native plants growing underneath, Santuario Histórico Bosque de Pómac, Lambayeque, August 2017; and **6** illegal fly-tipping of waste in plantcutter habitat, Quebrada Ancha, Talara, June 2006.



7 Male Peruvian Plantcutter *Phytotoma raimondii* on an Algarrobo tree, Lobitos, Piura, October 2017.

purging erroneous information and updating its current status. This article draws attention to the variety of issues that, in combination, present an increasingly complicated situation for the conservation of this species.

Ever fewer, evermore widely separated sites

Endemic to Peru, the plantcutter's range – from the northern state of Tumbes south to Lima state – places it directly at odds with the country's human development. Of Peru's population of nearly 31 million, some 90% live along the coast, with burgeoning urban areas and land increasingly being developed for agriculture. The effect of such development on the plantcutter is clearly reflected in records.

Despite searches, the last records in Lima, from just two sites, were more than 35 years ago (Flanagan *et al.* 2009); it is reasonable to say the species no longer exists in the state. In Ancash, the plantcutter has been recorded at only three sites in the last 20 years, and only one in the last decade. Even worse at this latter site, torrential rain in early

2017 washed away vegetation, and colleagues have been unable to find the plantcutter there as of January 2018.

Further north is La Libertad state. Here the Andes descend almost to the coast, leaving only a narrow strip of low-lying land, which contains a handful of small sites for the plantcutter, surrounded by agriculture. The last remaining large area is north of La Arenita village, near Paijan. As a dry river course, the 500-ha site is unsuitable for farming or housing. Unfortunately, only about 20% of the site comprises suitable plantcutter habitat: perhaps 15–20 pairs cram in here.

Further north in Lambayeque state, the priority site is the 5,890 ha Santuario Histórico de Bosque de Pómac, which conserves adobe structures dating from the Sicán and Moche era. It is the only government-protected area for the plantcutter. The reserve harbours a variety of habitats, from arid scrub to tall, closed-canopy forest dominated by Algarrobo, which is restricted to the Río La Leche. Given that only a small proportion of the reserve, less than 20%, provides suitable plantcutter habitat, my prudent population estimate is around c.100 individuals here – lower than that suggested



8 Female Peruvian Plantcutter *Phytotoma raimondii* on a Palo Negro bush, Lobitos, Piura, October 2017.

by Nolasco *et al.* (2014), for example. Elsewhere in Lambayeque, birds cling on at the well-known site of Rafán, but other sites have been lost to agricultural expansion over the last few years.

North again, in Piura, the priority area is Talara province, where records are widespread. Here, suitable habitat is generally restricted to dry gullies and valleys where groundwater maintains vegetation. In Peru's northernmost state (Tumbes), there were two reports in 2009 (Sánchez *et al.* 2009), but searches in 2012 failed to find the species (Romo *et al.* 2015). Whether a stable population remains in Tumbes has yet to be established; wider explorations are needed.

Put all this information together, and the plantcutter's overall situation is grim. It has a highly fragmented and declining population, that I estimate comprises c.1,000 individuals in a shrinking range. In my view, chance sightings at new locations probably relate to post-breeding dispersal by juveniles forced to leave their parents' territory (typically 1–3ha in size) in search of suitable new areas (which largely no longer exist). To consider sites briefly occupied by such transitory individuals as implying the existence of

a permanent or viable population would give an erroneously rosy picture of the species's status – and thus needs to be avoided.

Threats are intensifying

In north Peru's rapidly changing landscape, little is being done to protect Peruvian Plantcutter and its habitat. The recent agricultural boom has seen large areas of land converted to plantations in Piura, Lambayeque and La Libertad. Illegal land invasions are a further threat. Moreover, there is neither specific legislation that protects rare wildlife such as the plantcutter from these land-use changes nor biodiversity-conservation standards in Peru's agricultural policies or practices.

Another serious problem is the invasion of non-native Tamarisk *Tamarix* sp. Trees are filling dry riverbeds; their proliferation is unchecked. A normally dry river course exceeding 40km in length, Quebrada Pariñas in Talara, has become overrun by this exotic. Tamarisks are a conservation nightmare, supplanting native vegetation, monopolising scarce groundwater and exuding saline droplets. The Talara situation

is aggravated by a lack of public or municipal authority awareness that the plant is so aggressive, which means that government agencies have offered no answers for controlling it.

Algarrobo: the key problem?

A more insidious menace is illegal logging of Algarrobo trees to produce charcoal, mainly for chicken restaurants. With presumably hundreds of people involved, this activity is very difficult to control. And with numerous chicken restaurants depending on this supply there is no viable solution in sight. In January 2018, some 80 Algarrobo trees were removed from a key Plantcutter site near Talara – and this in the wake of years of illegal extraction. Talara's Algarrobo are peculiarly vulnerable given the major local industries of oil production and aquaculture. Thieves steal crude oil, then distil it over fires fed by Algarrobo wood to make rough kerosene. Further damage is caused by illegal processing of Giant Squid *Dosidicus gigas* to produce feed for shrimp farms; the squid is boiled using Algarrobo firewood. These activities have exacerbated deforestation in Talara for over a decade.

The final nail in the Plantcutter's coffin might well be the massive dieback of Algarrobo. This phenomenon was first detected in the state of Ica in southern Peru around 2003 (Whaley *et al.* 2010). It is now well advanced along the northern coast as far as Tumbes. The dieback is caused by a tiny fly *Enallodiplosis discordis* of the gall-midge family Cecidomyiidae, which is specific to the *Prosopis* genus. Exactly how this fly has proliferated and become so devastating is not fully understood, but its impact is manifest.

In some areas of the Bosque de Pómac, 40% of Algarrobo trees are dead (A. Juárez *pers. comm.*) and in some areas of Talara, the figure has reached 80–90% (*pers. obs.*). The dieback also affects rural communities who collect Algarrobo seedpods to produce the popular and nutritious syrup *algarrobina*, and as fodder for livestock. Anecdotal references indicate a reduction in both quantity of seedpods and in quality, as trees become sick and slowly die over several years. While healthy stands of Algarrobo trees can still be found, these are mainly restricted to watercourses where a greater availability of groundwater may increase disease

9 Singing male Peruvian Plantcutter *Phytotoma raimondii*, Lobitos, Piura, October 2017

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Among initiatives being taken to save the Peruvian Plantcutter *Phytotoma raimondii* are: **10** an annual Peruvian Plantcutter day in Talara municipality (May 2016); and **11** schoolchildren planting native trees near El Nuro, Piura (May 2017).

Worse, this loss will be irreversible, because reforestation based on Algarrobo would be a futile exercise. Although planted trees grow well, they would be infected by *Enallodiplosis discordis* within a year.

What to do?

Clearly, the situation of the plantcutter and its habitat is parlous. Official threat categories become academic for those working day-to-day with the species, given that these appear not to galvanise official action. From the field, it looks unlikely that any kind of top-down conservation plan will be implemented. And every day, more of the plantcutter's habitat is destroyed. It is probably not hyperbole to say that no Peruvian Plantcutter now lives more than 20 m from some evidence of human activity, be it a road, track, oil pipeline, house, pylon, plantation, farmland, pig farm, cattle, goats, logging impact, charcoal production site, fly-tipping site or wind turbine. So what to do?

As there are ever fewer sites for the Plantcutter and those sites are being slowly degraded, the obvious recommendation would be to protect remaining sites wherever possible. However, some sites (mainly in La Libertad and Lambayeque) are so small – merely a few hectares – that they do not present realistic opportunities for effective conservation activities. Moreover, the agricultural

resistance, and where the trees are protected from felling by local farmers.

Although relevant regional and national authorities have been aware of the dieback for several years, they have yet to take action. The impression given – to conservationists such as me, at least – is that government authorities are standing by while a unique habitat and its associated biodiversity disappear and while rural communities lose an important economic activity. The fate of Algarrobo matters because it is a main food source for the plantcutter. As Algarrobo is the dominant species in this sparse dry-forest habitat, its extirpation has serious consequences for the remaining vegetation. What exactly will happen is unclear – as is whether the Plantcutter viable populations can persist in Algarrobo-stripped habitat. But what is clear is that the deterioration of this dry-forest habitat continues unabated.

boom and land speculation have caused land prices to soar, which is a major constraint to the purchase of terrain for conservation. Buying habitat to create reserves does not seem to be the solution.

But that doesn't mean that action *per se* is futile. Vida Digna, a Peruvian NGO, established the project SOS Peruvian Plantcutter (www.sosperuvianplantcutter.pe) in 2016. In a small way, this initiative seeks to redress some of the problems.

The project has started a small tree nursery in Sullana, Piura, specifically to propagate some important species growing in plantcutter habitat. One key plant is the 'Palo Negro' or 'Canutillo' bush *Grabowskia boerhaaviifolia*, which, fortunately, is easy to propagate and grows quickly and is important in the plantcutter's diet. Unfortunately, other important species such as 'Realengo' *Maytenus octogona*, 'Overo' *Cordia lutea*, 'Zapote' *Colicodendron scabridum*, 'Satuyo' *Cappari cordis crotonoides* and 'Vichayo' *Beautempsia avicennifolia* are difficult to propagate and extremely slow to grow, hampering even medium-scale cultivation. With the loss of the Algarrobo tree it is important to run trials growing other important (but less common) species.

The project has sold plants to a hotel development near Cabo Blanco, Talara, to bolster native vegetation and provide more plantcutter habitat. However, large-scale dry-forest reforestation is prohibitively expensive: only oil/mining companies and hotel chains might be expected to have the funds to spend on even such small-scale projects. At the University of Piura, the project has trialled 'cocoons' (manufactured by Land Life Company: see www.landlifecompany.com) to assist cultivation of plants in arid conditions. This seems to work well, although the widespread use of cocoons in reforestation projects would require significant investment.

In Lobitos village, Talara, the project is collaborating with the NGO EcoSwell (www.ecoswell.org), working with local residents to propagate Palo Negro plants and seeking to create more plantcutter habitat around the village. In Talara, three schools have successfully lobbied Talara municipality to declare 25 May as *Día del Cortarrama Peruano* ('Peruvian Plantcutter day'). The project is seeking to have a 100 ha area on the

outskirts of the town declared as a reserve for the plantcutter. Funding from a NBC Conservation Award enabled the project to conduct further fieldwork in Lambayeque. Although the future of the Peruvian Plantcutter remains bleak and is unlikely to change anytime soon, a growing and dedicated caucus is working to raise awareness and to save this species from extinction.

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