

Critically endangered: Yellow-eared Parrot *Ognorhynchus icterotis* in Colombia

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El Proyecto *Ognorhynchus* reporta los resultados de investigación y conservación en Colombia sobre el Loro Orejiamarillo *Ognorhynchus icterotis*, una especie críticamente amenazada. Desde 1995 una bandada de 24 individuos ha sido observada en siete ocasiones en las Palmas de Cera del Quindío *Ceroxylon quindiuense* en bosques de montaña y bosques enanos, correspondientes al Volcán Nevado del Ruiz y del Tolima, en la Cordillera Central. *Ognorhynchus* permanece prácticamente desconocido, pero sufre numerosas amenazas que sugieren una inminente extinción, considerando, particularmente, el catastrófico declive de la población durante este siglo.

Introduction

Yellow-eared Parrot *Ognorhynchus icterotis* is immediately threatened with global extinction owing to severe habitat loss and hunting across its limited distribution in the high Andes of Colombia and Ecuador^{2-5,7}. *Ognorhynchus* depends on wax palms *Ceroxylon* spp. for nesting and roost sites, and undertakes nomadic movements in search of fruit abundances^{2,3,4}. Although once numerous², since 1990 all *Ognorhynchus* records appear to refer to just two flocks, each with a maximum of 20–24 birds: one in wax palm forests in the Central Cordillera of Colombia and the other in a highly deforested area in western Ecuador. Their exact whereabouts for much of the year is unknown, rendering protective measures difficult. Unlike other large Neotropical psittacid species, there are no known individuals of this monotypic genus presently in captivity, hence a captive breeding or reintroduction programme is not an option.

In response to the increasingly grave situation of the species, NK commenced a research and conservation project for the last known flock in Ecuador, detailed in Krabbe & Sornoza³. In Colombia, PS and NK established "Proyecto *Ognorhynchus*" in 1998, as an emergency response to study and protect what is probably Colombia's last surviving flock, discovered by PS in the mid-1990s.

The study was conducted by BLL from June–December 1998, with the aim of determining the ecological requirements, distribution and status of the species in order to assess threats and formulate a conservation strategy in the region. Fieldwork was concentrated in a 50 km² study area of unprotected montane forest and pasture intermixed with many dense wax palm *Ceroxylon quindiuense* groves, in the Volcán Tolima-Ruiz massif, Cordillera Central. *Ognorhynchus* has been known from this region, which encompasses possibly the largest remnant of its natural habitat^{3,4,7,8}, since the early twentieth century^{1,7}. Such an extensive area of wax palm, Colombia's national tree, albeit fragmented, forms an ideal breeding and perhaps feeding ground for *Ognorhynchus*.

Recent sightings

Despite ornithological activity in adjacent areas, including Parque Nacional Natural Los Nevados and private nature reserves, the species is known only from the unprotected study area. BLL conducted intensive surveys through the wax palm-covered slopes and forested valleys of the Volcán Tolima-Ruiz massif, searching for possibly just a single flock of *Ognorhynchus*. Although these surveys were unsuccessful in locating the species, we report seven reliable sightings in the study area since 1995 by local people and birders that confirm the continued existence of *Ognorhynchus* in the region: one pair in August 1995 (Pablo Florez); one pair in September 1995 (T. Cowley); a flock of 6–12 birds in November 1995 (T. Cowley); one pair in January 1996 (M. Casas); one pair in December 1996 (P. Florez); a flock of 24 birds in October 1997 (PS *et al.*); and a flock of c.20 birds in August 1998 (L. Emilio E.). All sightings are from areas of upper humid montane forest and elfin forest, dominated by wax palms.

The lack of *Ognorhynchus* sightings during the June–December 1998 survey is probably related to a combination of post-breeding dispersal and a paucity of fruiting wax palms. However, almost all palms flowered in late 1998, anticipated by local people to result in a *cosecha* (fruit harvest) in February–March 1999. The palm *cosecha* is both erratic in occurrence and irruptive in fruit intensity. The previous large *cosecha* in the study area was in October 1997, coinciding with the sighting by PS *et al.* Thus, the sporadic phenology of wax palms could be the principal factor in the nomadic behaviour of *Ognorhynchus*.

Other threatened parrots

During searches for *Ognorhynchus*, two other threatened psittacid species² were observed in the study area: Golden-plumed Parakeet *Leptosittaca branickii* and Rufous-fronted Parakeet *Bolborhynchus ferrugineifrons*. These were also studied when opportunities arose. *Leptosittaca branickii* is relatively common in the study area,

with single flocks of up to 60 individuals recorded during the day and up to 200 birds at roost sites. The species feeds on wax palms *Ceroxylon quindiuense* and fruits of montane tree species. Ecological details of *L. branickii* nesting in wax palms in the study area will be published elsewhere. In July numbers increase with fledglings, but thereafter no breeding activity has been recorded until late December when nest hole inspection of palms and other trees commenced. The Volcán Tolima-Ruiz massif appears to be a global stronghold for the species, with many flocks of 20–150 individuals regularly encountered throughout the region. *Bolborhynchus ferrugineifrons* is locally common in elfin forest / páramo ecotones at c.3,600 m but has been recorded from 3,300–4,000 m, with flocks of up to nine birds. In other parts of the Volcán Tolima-Ruiz massif, the species is locally common with flocks of 10–150 individuals (PS).

Ognorhynchus education campaign

Local people and institutions have an instrumental role to play in all these species' survival. In addition to the fieldwork, the project aimed to generate good relations with the local campesino population and obtain support for the study from community groups. Informal interviews were conducted, by BLL, throughout the study area to assess the local community's socio-cultural knowledge of *Ognorhynchus* (Loro Orejiamarillo). Feedback from local people has permitted examination of the threats posed to *Ognorhynchus*. Few campesinos pay attention to parrots which are not "maize-eaters", although nestling *L. branickii* are known to have been taken as pets. Through casual conversations and use of the *Salvemos al Caripero* poster, designed for the Ecuadorian project, and presentations in schools, the vast majority of inhabitants of the study area know of the project and its objectives. An environmental education programme based around a cessation of hunting of the species is largely redundant as killing parrots has been prohibited by the guerrillas in the region and this is adhered to throughout the zone.

The project has received the overwhelming support and cooperation of local communities in the study area who are keen to assist in the protection of the species. The regional environmental agency Corporación Regional del Quindío (CRQ) are to collaborate with the project by distributing up to 1,500 *Ognorhynchus* conservation posters in the study area.

Threats to *Ognorhynchus*

Presently, within the study area, there appears no shortage of potential nesting sites, and plentiful seasonal fruiting booms of wax palms provide an occasional food source. Hunting does not appear to be a threat, at least in living memory and certainly

not in the past decade. The astonishing decline of *Ognorhynchus* this century is probably attributable to montane forest loss. From observations in Ecuador, NK discovered that *Podocarpus* spp. is a seasonal food source, strongly correlating with our observations in Colombia from elfin forests. The catastrophic loss of montane forest throughout the northern Andes, estimated at 90–93% in Colombia alone⁶, has virtually extirpated a crucial seasonal food source for *Ognorhynchus*. The lack of young wax palm recruitment is of considerable concern, as an ageing palm population is resulting from cattle eating seedlings in pastures and forest patches. Although forest clearance rarely results in palms being felled, as their trunks damage chain saws, the effect of logging surrounding trees is to greatly increase the palms' susceptibility to fatal parasites and fungal disease⁴. The occurrence of three threatened psittacids within the unprotected study area emphasises the area's global conservation importance.

Clearly, locating all *Ognorhynchus* foraging areas throughout the year must be vital to the establishment of effective protective measures. Attempting to locate and follow a single flock possibly throughout the Cordillera Central is impractical. However, recent technological advances in satellite transmitter tags may prove invaluable. A tag at-



Figures 1–2. Habitat of Yellow-eared Parrot *Ognorhynchus icterotis* in Colombia (Project *Ognorhynchus*)

tached to a single fledgling could permit the entire flock to be followed over mountainous terrain that would greatly impair the effectiveness of radio-transmitter tags. For any protective measures to stand a chance of succeeding, we must seek information on the movements and habits of this poorly understood species.

Proyecto Ognorhynchus in 1999

Further surveys in 1999 will seek to establish the status and distribution of *Ognorhynchus*, as well as *L. branickii* and *B. ferrugineifrons*. Fieldwork will focus on locating the breeding colony and surveying fruiting wax palms and elfin forest across the study area. A student assistant will work with BLL. The project hopes to use knowledge of the synchronised fruiting of wax palms, anticipated in February, and the species' breeding season in March–April to maximise encounters. Studies of the wax palm population, density, age structure and distribution will also be undertaken.

The project will continue its community liaison and education campaign to strengthen local people's links with the project. The involvement of regional and national conservation organisations with the project will increasingly be targeted. Ultimately, we hope to determine areas of primary importance for the survival of *Ognorhynchus*, and work with conservation organisations toward immediate protective measures. Sadly the species' extinction is a strong possibility given its specialised habits, continuing deforestation and its drastic population crash this century.

During mid-January 1999, the project was severely disrupted by a major earthquake centred close to the study area, although fieldwork was able to continue. Full details and recent reports of the project can be viewed at the Yellow-eared Parrot Conservation homepage on the internet at: <http://www.proaxis.com/~salaman/>

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You can help: we are seeking volunteers to assist BLL with fieldwork for at least six weeks. Please contact PS for further information.

For the safety of the species, the exact location of the *Ognorhynchus icterotis* study site has not been disclosed.