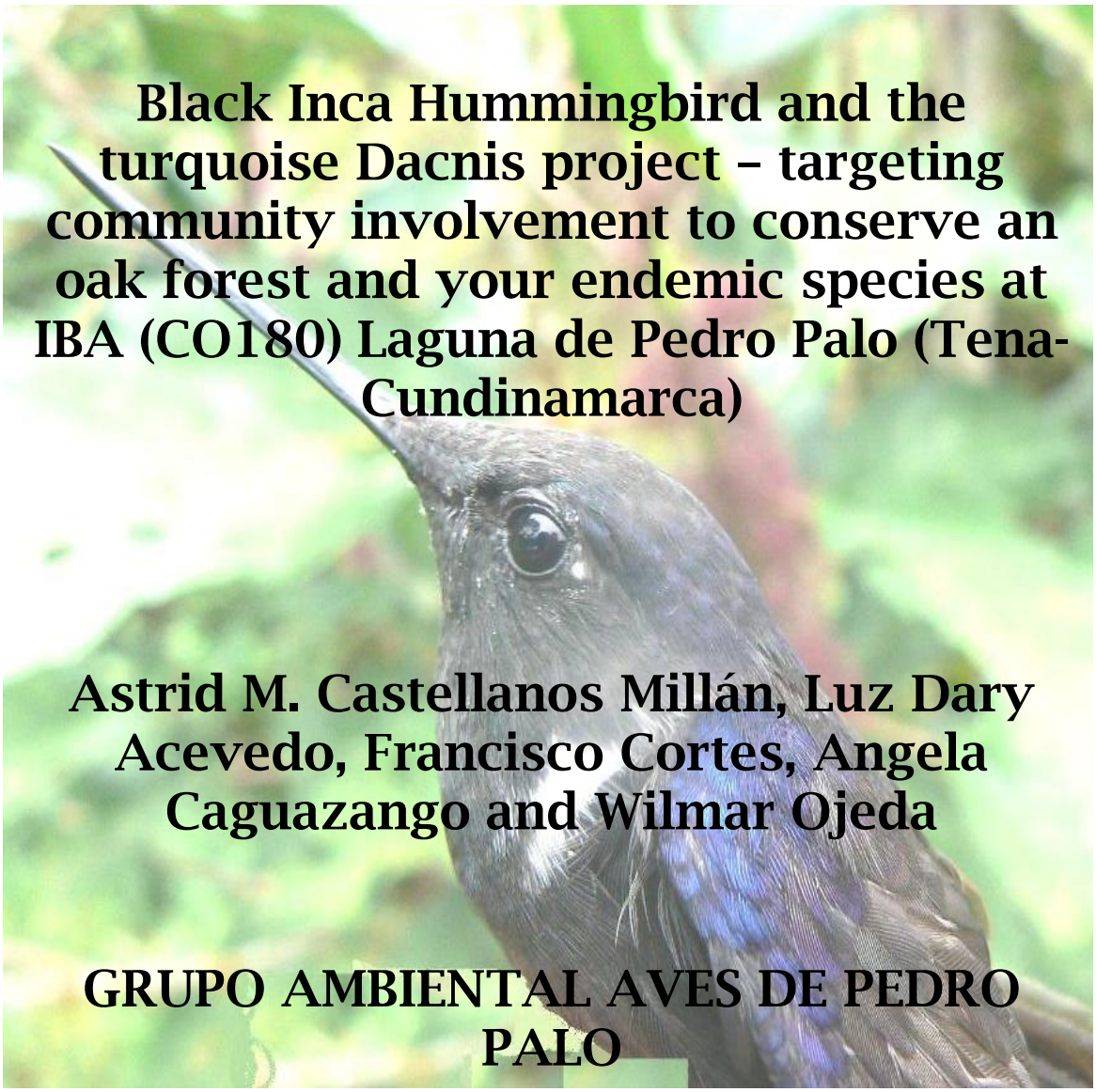

Black Inca Hummingbird and the turquoise Dacnis project – targeting community involvement to conserve an oak forest and your endemic species at IBA (CO180) Laguna de Pedro Palo (Tena-Cundinamarca)

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Birders' Exchange

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Abstract

DiffeMany didactic and playful activities were designed and implemented in order to teach about the recognition of the local birds and promoting their conservancy, with students of third, fourth and fifth grade in the Departmental Educational Institution “Betulia” Catalamonte headquarters, This the only rural school at the area of the Pedro Palo lake Reserve, at small town Tena (Colombia).

Northern Waterthrush (Seiurus noveboracensis), at Reserve Pedro Palo

Introduction

The Pedro Palo Lake Reserve this part of the Important Areas for Bird Conservation System (IBA CO180), in which there are registered almost endemic species with some threat degree, as Black Inca (*Coeligena prunellei)* (Endangered) y Dacnis Turquoise (*Dacnis hartlaubi)* (Vulnerable). However, this area presents have been undergoing habitat loss, fragmentation and alteration since the 1990. The primary causes are human settlement and urbanisation, with associated logging and agricultural land-use including coffee and, to a lesser extent, plantain and sugarcane plantations and pastures.

The Environmental Education is an integration of reflections about the models of the economic development of human societies and the significant impact on the natural environment, while, at the same time, is the organization of methods to ensure that both individuals and communities, understand the complex origin of environment (which is the result of the interaction of different factors such as: physical, biological, social, cultural, economic, etc.) and acquire the knowledge, values and practical skills for participate responsibly and effectively in the prevention and resolution of environmental problems and quality management.

Therefore, as the Pedro Palo Lagoon Reserve represents an important habitat for many bird species and it tolerates severe impacts generated by human activities, then, it is necessary to link school children with the ornithologist knowledge, through of teaching strategies such as workshops, days of observation and problem situations, with the aim of promoting awareness process about birds and their preservation.

AREA STUDY

Fig 1. Map of study area: IBA: Bosques de la Falla del Tequendama, where is located the Pedro Palo Reserve.

Located on the east slope andes of the department Cundinamarca. .

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Fig 2. Children Catalamonte School, within the area of Pedro Palo Reserve.

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Methods & Results

Education and Public Awareness programme

Project has made conservation education is a major aim of this project and continues to work with schools (Fig 2) this work is leader for Astrid Castellanos whom did Meetings and conversations with local people around each of selected sites at vereda Catalamonte with the aim of public awareness were conducted. Additionally coloured bird's field guides on birds pedro palo and other nature conservation production (posters, brochures, newsletters etc.) were distributed at the places for agitation. This was important part of this project as development of IBA (Falla del tequendama) caretakers network in Rural area tena is one of priority nature conservation tasks here. Conversations with local people during this project' field trips let identify some caretakers which will be involved in future IBA (Falla del Tequendama) network.

To date the Project has been involved several formal and informal education programmes and workshops where the theme has been one of conservation of biodiversity. The target demographic so far has been 18 and under, (typical demographic found within the group found within primary and secondary schools). Wider audiences have been targeted through various public symposiums (Fig 3) on the state of vanishing species in Laguna de Pedro Palo. It is hope that other conservation based

interest groups and stakeholders will get involved in this endeavour. A series of posters has also been developed and distributed to schools and through the Environmental Management Authority about the Black Inca and Dacnis tanager, local biodiversity in Pedro Palo, threats facing biodiversity and how everyday citizens can assist in conservation of the natural environment.

Figure 4. Social context Reading with parents, through surveys and assemblies. According to the Environmental Management Plan, adults do activities such as “agriculture and livestock”[1], which involve natural resources directly.

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In these workshops (Fig 4), we introduced its mission, and the Black Inca Project and its goals. Information was gathered on: (a) the community’s idea of nature; (b) the changes that they have observed in nature during their lifetime; and (c) actions that they propose to conserve their natural environment. We also shared an overview of the results of our study on the abundance and distribution of the Black Inca and Truqouoise Dacnis tanager. The consultation activity usually lasted 2-1 hours.

Learning Ornithological Terms

Conservation actions will focus on different awareness-raising programs to reach all groups in the communities where the birds are found Figures 5 to 8

Fig 5. Team the work Students and Group the ornithlogy

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Fig 6. Students practiced what they learned in bird watching sessions, using optics instruments such as binoculars.

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Fig 7. Students identified the bird species using guides.

Astrid

Fig 8. Socialized community and the learning feedback

A

Monitoring and conservation of birds globally threatened species in Pedro Palo area

Here cloud forest at Pedro Pale were spent in surrounding of oak forest (high mountain of the Falla del Tequendama), which is one of key sites for this project. Practical work for birds identification and counting, determine one's position in the field conditions with topographical maps and indication of key spots for bird part was conducted in Reserve Catalamonte by the main reason of the same time group of ornithological students and students work for the birds ringing at this place.

Fig. 10 training census birds

Within this part of camp students visited the wetlands and oak forest of the reserve, watched many different species of oak forest and wetlands birds as well as population of Globally Threatened Turquoise dacnis tanager and Black Inca. Very important part of this training was study of methodology of catching and ringing of earlier migrant species of birds. This gave interesting and important results like determination of new species for study area in migration period

Data and methods

During the search of *Coeligena prunellei* and *Dacnis hartlaubi*
we used these methods:

The analysis of the literature sources regarding the distribution of *Coeligena prunellei* and *Dacnis hartlaubi*
in the past.

1. We decided to conduct our surveys first in the places where these birds had been ever recorded.
2. Meeting with local specialists to discuss the plan of searching birds. We met with professor the loca university and student the masther in ecology. He offered the information where there was the higher probability to find these bird species.
   Evaluation of the environment in local habitats. We picked out the habitats that could be inhabited by *Coeligena prunellei* and *Dacnis hartlaubi*

3. or other rare bird species given their ecological preferences.

A   B  C

Figura 9.

A. Monitoring birds with mist nets; **B.** Migratory birds Scarlet tanager (*Piranga rubra*); **C.** Endemic and endangered bird, Black Inca Hummingbird (*Coeligena prunellei*)

Figure 10. Birds census and monitoring Black Inca and Turquoise Dacnis Tanager

Coeligena prunellei (Black Inca)

During the period of our investigations (Fig 10) we found total 4 Black Inca; 1 of them were young. This bird species was found only around 1 of 4 transects. The abundance of this bird was on lakes Pedro Palo.

Table 1. Abundance of *Coeligena prunellei* during census the four months

Transect	**Distance (long the transect)**	**Abundance of *Coeligena prunellei* number per Km2**
Patio Bonito	2 km	0
Laguna de Pedro Palo	2 km	2.5
Cabañas Central Juventudes	3 km	1.5

This specie foraging on *Aboutilon sp*, *Palicourea sp* and *Besleria solanensis fig 11*



Figure 11. Flowers for *Coeligena prunellei*: **A.** *Aboutilon sp*, **B**. *Besleria solanoides*, **C**. *Palicourea*

The expected results of this project are:

- A detailed and updated information is collected and a data base on the status of breeding and migrating bird species at IBA Pedro Palo
- A standardized and comprehensive monitoring method is applied by local scientists, data is professioanally and well managed.
- Sustainability of monitoring activities in the project region is promoted by training and supporting young local researchers and rural school Catalamonte.

Poster for local public of informational poster about birds Pedro Palo were published. The information on key species and sites is given in the poster as well as main aspects of the project activity.