HUMAN RESOURCES DEPARTMENT
VOLUNTEER PROGRAM

Announcement

Volunteer Opportunity for the Project:

CONTROL OF THE HIGHLY INVASIVE FLY, PHILORNIS DOWNSI

Application deadline: November 20, 2026

Start date: January 25, 2027

Duration: 6 months

Introduction

Philornis downsi, commonly known as the avian vampire fly, is an invasive species introduced to the Galápagos Islands around the 1960s. In the absence of natural enemies to regulate its populations, this species has become one of the main threats to the archipelago's land birds. The impact of *P. downsi* is due to its blood-feeding larvae, which feed on the blood and tissues of chicks while they remain in their nests. This parasitism significantly reduces chick survival and affects the reproductive success of numerous bird species, including those classified as threatened or critically endangered. To date, no control methods effectively mitigate the impact of this parasitic fly. Despite significant advances through laboratory and field research, knowledge gaps remain regarding fundamental aspects of its biology, physiology, and reproductive ecology, limiting the development of more effective management strategies.

To identify control mechanisms, in 2012 the Galápagos National Park Directorate (DPNG) and the Charles Darwin Foundation (CDF) organized an international workshop attended by specialists in insect biology, management, and control, as well as ornithology. The workshop concluded that developing effective tools to manage *P. downsi* will depend on coordinated efforts among researchers from different disciplines and countries.

One of the main requirements identified was to establish and maintain a colony of the species under controlled conditions to ensure a continuous supply of individuals for research.

Rearing *P. downsi* in the laboratory requires an ongoing commitment to maintaining every stage of its life cycle, from immature stages to adults. This makes it possible to conduct research aimed at optimizing rearing protocols, improving the quality of laboratory-reared individuals, and generating knowledge about the species' biology and behavior.

Therefore, this volunteer opportunity aims to support research into the biology, physiology, and ecology of *P. downsi* through activities that ensure the continuous production and maintenance of individuals in the laboratory. The information generated will contribute to the development of innovative strategies to control this invasive species and, consequently, to the conservation of Galápagos land birds, especially those facing the greatest risk of extinction.

Volunteer Program Conditions

The Charles Darwin Foundation (CDF) will provide the equipment and materials necessary to carry out project activities, as well as logistical support for field trips to other islands, when applicable. Technical guidance will also be provided by the CDF scientific team, in accordance with institutional policies and procedures.

The volunteer will work under the supervision of the scientist responsible for the project and will follow the schedule assigned by CDF.

Volunteers must comply with CDF's Internal Regulations and Procedures Manual, as well as strictly adhere to the regulations established by the Galapagos National Park Directorate (GNPD) and any other applicable regulations to ensure the proper conduct of field activities.

Required Profile

- Bachelor's degree graduate in a biology-related field.
- Interest in insect biology and laboratory activities.
- Experience working with insects or bacteria.
- Experience in research projects.

Desired Skills and Qualities

- Teamwork.
- Resilience during laboratory activities and fieldwork.
- Effective communication.

- A positive attitude and openness to feedback.
- Responsible, proactive, and committed to conservation.
- Openness to the opportunity to participate in fieldwork activities that may takeplace outside regular office hours, including occasionally on weekends.
- Willingness to carry out activities involving animal blood.

Responsibilities

The volunteer will assist with the following key activities under the direct supervision of *Paola Lahuatte*:

- Support in collecting field data and flies.
- Support in collecting data on fly mortality and survival.
- Assistance in preparing materials for field trips.
- Assistance in preparing diets for adult flies.
- Assistance in collecting and processing larval diets.
- Assistance in cleaning and organizing materials.
- Support in the dissection of specimens.
- Participation in laboratory experiments.
- Support in nest inspections.
- Support in sex identification and the separation of newly emerged or collected specimens.
- Assistance in recording observations in the laboratory and the field.
- Support in feeding and handling adults.
- Participation in aerial trap inspections.

Benefits:

- Uniform provided.
- Accident insurance.
- Accommodation (for Ecuadorian or International applicants).
- Food allowance (for Ecuadorian or local applicants).
- Round-trip domestic flights to and from the Galapagos Islands.
- Payment of Residence Card fee.

How to Apply?

Interested applicants must complete the online form available at the following link: https://forms.office.com/r/jf7Y7gAJfm, attaching the requested documentation in accordance with the instructions provided in the form.

Applicants must follow the form completion guidelines, established deadlines, and required formats for attachments.

Only applications that fully meet all established criteria regarding applicant profile, format, documentation, and content will be considered.

Do you have any general questions about this volunteer opportunity?

If you would like more information about this volunteer opportunity, please send your questions to the following email address so that we can respond appropriately:

✉ vol@fcdarwin.org.ec