

Project Title: Towards Black-capped Petrel Conservation

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What was the major goal of this project? Did you accomplish what you had planned?

Our group of collaborators began this program with the intention to:

- (1) Use radar technology to survey known Black-capped Petrel nest sites in the Dominican Republic, establishing criteria for future surveys.
- (2) Increase knowledge of Black-capped Petrel ecology and conservation needs among community working and/or living in petrel habitat, fostering stewardship of the petrel.
- (3) Inform conservation action to protect Black-capped Petrel nesting habitat by identifying breeding sites, providing population estimates, and establishing baseline data to monitor population changes.

Our group found great success using radar to survey for Black-capped Petrels. Over 10 nights of surveying in the Sierra de Bahoruco in the Dominican Republic, we established criteria through which future researchers can identify petrels on radar. We located petrel nesting areas, petrel flight paths from the sea to the mountains, and areas where the species stages in the waters off the island of Hispaniola. Additionally, we observed petrel behaviour on radar including the timing of the species' migration from nesting area to the sea, flight behaviours of bird pairs adjacent to the nesting area, and determined habitat of flight paths (Figure 1).

We were able to train biologists from Grupo Jaragua in radar use for surveying petrels. Four biologists were trained in determining appropriate radar sites, the set-up of the equipment, survey methodology, and appropriate data entry. Each trained biologist was able to successfully identify Black-capped Petrels on radar and record accurate measurements of flight speed, flight direction, and behaviour. We feel confident that following a second year of training, the biologists from Grupo Jaragua will be able to independently use radar to accurately survey for petrels.

We had a few research struggles along the way. The most common struggle was finding access to radar observation points. There is a vast area of road-less/trail-less land over which petrels fly and, while we had success locating many strategic survey points, there were many more that we were unable to access. We found the highest concentrations of petrels immediately adjacent to the Dominican Republic/Haitian border and a large number of the petrels we identified on radar were flying over Haiti, a country which we were not permitted to survey.

Our radar data set was shared with conservation agencies in both Hispaniola and the United States. Grupo Jaragua, our partner agency from the Dominican Republic, will be able to use the radar data to cue in on a potential new nesting location due to petrels being observed on radar circling the site. The documentation of these new sites allows agencies such as Grupo Jaragua to target communities in these locations for outreach programs. Additionally, it allows them to highlight these areas as conservation priorities when working with governmental agencies.

Our partner groups in the United States, Cornell Lab of Ornithology and the American Bird Conservancy, both used the data sets in promoting the conservation of petrels through outreach portals and ornithological conferences. The Cornell Lab of Ornithology highlighted our petrel conservation effort in its online newsletter: (<http://www.allaboutbirds.org/Page.aspx?pid=2548>).

Additionally, radar data was shared with the Societe Audubon Haiti. As the only ornithological conservation group in Haiti, this partner group has recently taken the lead role in petrel conservation in the country. Petrel distribution in Haiti is little understood. Incidental sightings in Haiti, specifically in the La Sella and Macaya mountain ranges, over recent decades has led conservationists to believe that Haiti hosts the most extensive Black-capped Petrel colonies in the Caribbean. However, the location of large colonies of petrels remains unknown. The Societe learned of our success using marine radar with petrels in the Dominican Republic and expressed interest in using radar to locate colonies in Haiti. To this end, the Societe and EPIC will be working together in 2013 on the Haitian side of the Hispaniola border searching for petrel colonies.

EPIC promoted the petrel conservation effort by placing daily updates on the organization's Facebook page while in the field doing surveys (www.facebook.com/epicislands) and through a video highlighting our petrel efforts on our YouTube channel (www.youtube.com/epicislands). Our petrel conservation effort, specifically the radar aspect, was further highlighted by NBC News in its science section: (<http://www.nbcnews.com/technology/futureoftech/radar-game-changer-saving-endangered-birds-486014>).

EPIC partnered with Grupo Jaragua to host two Black-capped Petrel themed camps for children in regions around petrel habitat in the Dominican Republic. The first was in Puerto Escondido along the north slope of the Bahoruco mountain range. Fifty-six children attended this three-day camp. The second camp was held in Oviedo on the south slopes of the Bahoruco range and 100 children attended for 3 days. Children attended the camp from the villages all along the south slope including Oviedo, Los Tres Charcos, La Colnia, Manuel Goya, and El Cajuil (Figure 2; please see newspaper article attached)

During the camp, the children were provided with introductory information on the petrel. We highlighted the global importance of Black-capped Petrel habitat and its close proximity to the children's villages. We focused on ways the children could work to protect their village habitat through good conservation ethics. The children took part in activities regarding the petrel, including art projects. Local artists from both locations taught the children how to draw Black-capped Petrels and the children were able to draw their own birds. Many of the children were remarkable artists as can be seen in photos attached to this report.

At both locations, the children went on field trips where bird observation skills were taught and practiced. Researchers, who worked with EPIC on the Black-capped Petrel project, trained the children on how to spot a variety of local birds, how to locate them with binoculars, and how to take field notes by making field drawings on birds observed. The children left the camp with the ability to identify Black-capped Petrels and to tell people key facts about a petrel's life including habitat, behaviour, and life history.

What were your key accomplishments?

- Identified potential new nesting area for Black-capped Petrels in the Dominican Republic; if confirmed it would be only the second known nesting area in the country.
- The first snap-shot of the population of Black-capped Petrels at the only known nesting area in the Dominican Republic.
- The first successful use of radar to monitor Black-capped Petrels.

- First to identify the flight corridors that Black-capped Petrels use in the nightly migration between the nesting grounds and the ocean.
- Through the use of radar, identified imperilled critical habitat in Haiti that was associated with flying Black-capped Petrels.
- Provided critical Black-capped Petrel population and habitat association data to leading local, regional, and international conservation groups.
- Presented the newly collected radar data on Black-capped Petrels to a group of leading researchers and conservationists at a global conference on tropical seabird conservation.
- Successfully trained four Dominican Republic biologists to use radar to accurately survey for Black-capped Petrels.
- Hosted two Black-capped Petrel themed camps for children who live in or near petrel habitat, impacting 156 children.

What will it take to ensure the long-term success of your project?

Overall, the largest conservation issues that plague the endangered Black-capped Petrel are related to its nesting habitat. The largest threat is land clearing for the agricultural production of cash crops and for the production of charcoal, which is the main means of cooking and heating in Haiti. The clearing of the land leads to deadly landslides which destroy burrows of nesting petrels. Furthermore, the development of these areas for farms often leads to the introduction of mammals such as rats and cats which are known predators of ground-nesting birds such as the Black-capped Petrel.

Initial research monitoring petrels with radar has been very successful. It allowed researchers to track petrels to their nesting areas, identify new nesting grounds, as well as monitor populations at known nesting colonies. Through tracking population trends, conservationists will be able to identify nest site specific issues that are affecting the population such as introduced predators, the clearing of land, and human disturbance.

Continued use of radar as a monitoring tool is critical to the conservation of the species. Currently, it is the only known conservation tool that can successfully identify and track Black-capped Petrels to nest colonies. Additionally, it is the only tool that allows conservationists to monitor the population of petrels at known colonies.

Big picture issues that address objectives of the Black-capped Petrel Conservation Plan and will ensure long term success of Black-capped Petrels:

1. Identify and use tools that allow conservationists to monitor populations of Black-capped Petrels (completed 2012)
2. Identify all known nesting areas for the Black-capped Petrel (process began in 2012)
3. Protect the habitat that the Black-capped Petrels nest in through:
 - a. Education and outreach. Creating a region-wide outreach program
 - b. Social and economic programs that allow the residents that live in petrel habitat to thrive without altering critical nesting habitat
 - c. Create a successful long-term economic plan for residents that live in petrel habitat

Share a meaningful experience or learning from your involvement with this program, or an example of how the project affected people or wildlife.

We had numerous meaningful experiences while in the field. However, one stands out as the most meaningful to the conservation of the Black-capped Petrel. In January 2012, our team reached a good lookout point high up near the crest of the Sierra de Bahoruco. From the lookout point, we were able to see a peak across the valley from the only known nest area for petrels at Loma del Toro.

This peak was mostly covered in old-growth Hispaniolan Pine trees; however there were some cleared cliff areas that looked very promising for nesting petrels. No petrels had ever been located on that peak before due to its remoteness and difficult access. Radar would allow us to survey this promising habitat from over a kilometer away. As day turned to night we started the radar unit and began monitoring the habitat at Loma del Toro as well as at the remote peak across the valley.

Birds began streaming from the sea, up past our high lookout, about an hour after sunset. The first few birds stayed near Loma del Toro; however, some birds began flying towards the remote peak. As the night darkened, more birds began working their way over to the remote peak and began circling the area, indicating landing behaviour. It appeared to us that petrels were targeting this new area and were in fact landing near there. We watched the radar and observed dozens of birds circling over this new location.

The radar project was a success. We were able to positively identify petrels on radar and then use that new knowledge to watch petrels target an area previously unknown to petrel conservationists. The biologists we were working with from Grupo Jaragua, who work tirelessly trying to find petrel nesting locations on Hispaniola, were very excited to hike into this potential nest area and intend to find the nests of the petrels we observed targeting this area.

Any supporting findings or outcomes?

Figure 1.

Radar station locations along the Pedernales flyway in the southwest corner of the Dominican Republic. Black-capped Petrels were recorded flying past these locations and following this drainage from the Caribbean Sea up to 7,600 ft on top of Loma del Toro. The smaller inset figures show petrel activity recorded each hour at each site from 7:00pm through midnight.

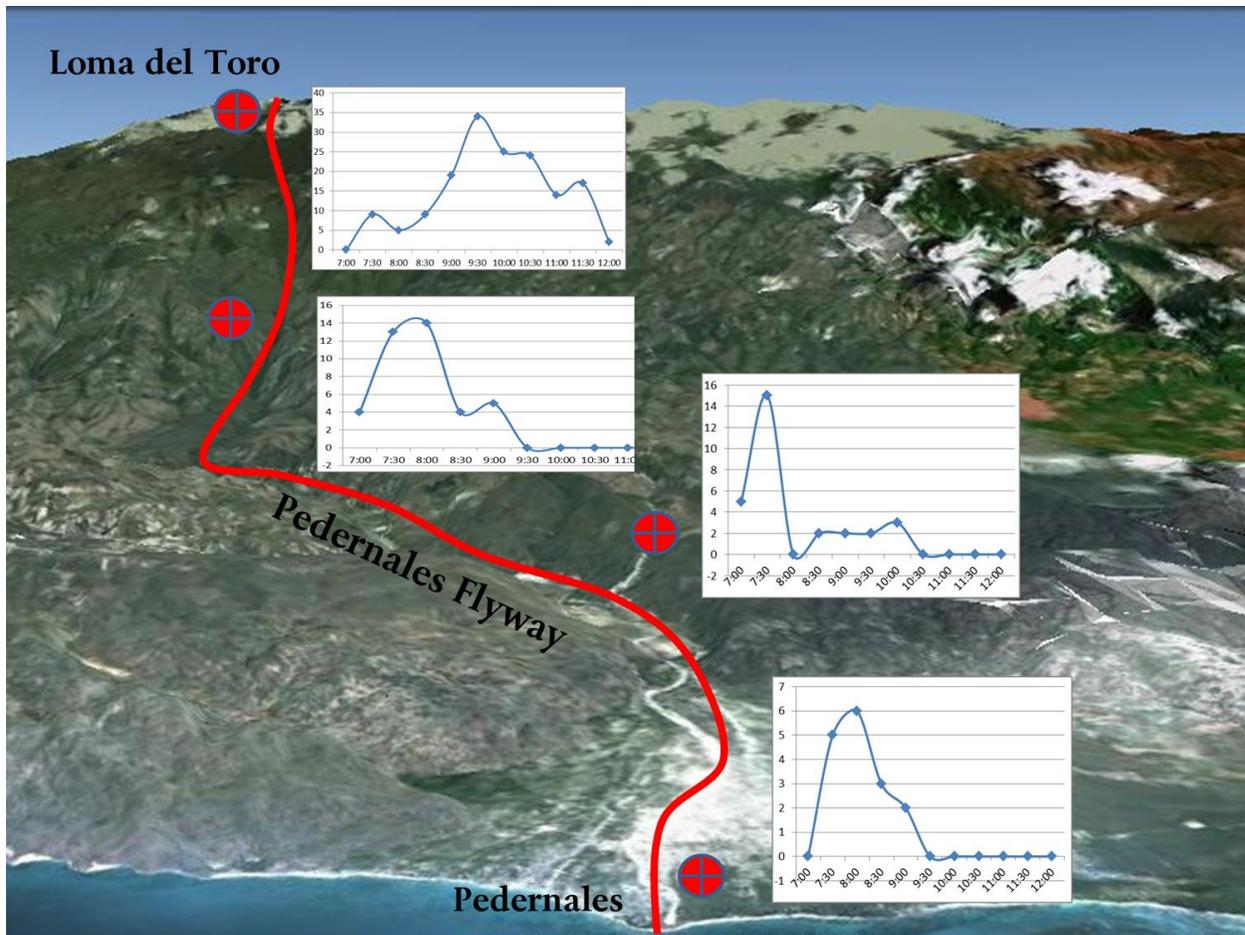


Figure 2.

Newspaper article in the Dominican Republic newspaper *Listin Diario* regarding the Black-capped Petrel themed camps that took place in the Dominican Republic. This article noted that the camp was funded in part by the Disney Worldwide Conservation Fund.

CAMPAMENTO

Grupo Jaragua realiza su XVI Campamento

MOTIVAR A LOS NIÑOS A CONOCER Y CONSERVAR LOS RECURSOS NATURALES, ES EL OBJETIVO DE ESTA ACTIVIDAD

JOSÉ MIGUEL ÁNGEL/GRUPO JARAGUA

(*) El campamento estuvo dedicado al Diablottín, ave marina que anida en la Reserva de la Biosfera y que se encuentra en peligro de extinción, debido a la transformación de su hábitat.

Santo Domingo

ción comunitaria, la tolerancia, la disciplina, la honestidad y el respeto por la diversidad de ideas. Para facilitar el aprendizaje también se incluyeron fichas, videos, ponencias, música, juegos y competencias durante todo el campamento.

El XVI Campamento de Verano Jaragua fue celebrado en Ovidio, Pedernales, los días 1, 2 y 3 de agosto en el Centro Comunitario Amaury Villalba.

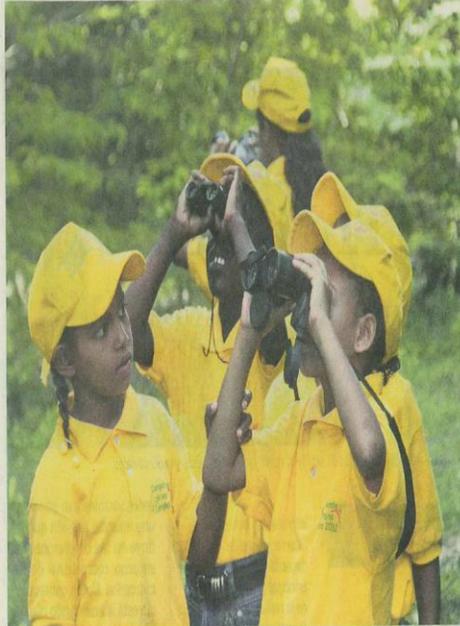
La actividad educativa gratuita es organizada desde el año 1997 por el Grupo Jaragua y los Voluntarios Comunitarios de Jaragua, con el apoyo de la administración del Parque Nacional Jaragua, el Ministerio de Medio Ambiente y la aprobación de padres y madres de las comunidades involucradas.

Su objetivo es motivar a niños y niñas de las comunidades aledañas al Parque Nacional Jaragua, a conocer y conservar los recursos naturales y culturales de la Reserva de la Biosfera Jaragua-Bahoruco-Enriquillo, para contribuir con el desarrollo humano sostenible de sus comunidades.

Este año participaron 100 niños y niñas de las comunidades de Ovidio, Los Tres Charcos, La Colonia, Manuel Goya y El Cajuil, los que recibieron el apoyo de facilitadores, quienes les enseñaron a aprender a través del entretenimiento. Durante las actividades se promovió la búsqueda de soluciones a través del consenso, la equidad social y el respeto por la cultura

Programa
El programa incluyó los temas siguientes: La higiene para mantener la buena salud; Los valores éticos y morales; La Reserva de la Biosfera Jaragua-Bahoruco-Enriquillo y servicios ambientales; Especies en peligro de la Reserva de la Biosfera Jaragua-Bahoruco-Enriquillo; La historia del campamento de verano; El Año Internacional de Energías Sostenibles y el Año Internacional de las Cooperativas; Los residuos sólidos y su impacto sobre el medio ambiente; Reúso de residuos sólidos para la producción de zafacones y bebederos para aves; La conservación del Diablottín, especie bandera del campamento; Talleres de lectura, escritura y desarrollo de la creatividad a través del uso de periódicos.

El campamento fue apoyado por el Ministerio de Medio Ambiente a través del proyecto Araucaria XXI, la Agencia Española para la Cooperación Internacional; Environmental Protection in the Caribbean (EPIC), Fundación Disney; American Bird Conservancy; el Gobierno dominicano; la Fundación MacArthur; Geovida TV; BirdLife International; el Ministerio de Salud Pública y Plan



Los niños realizaron una excursión al sitio importante para la biodiversidad en el país, Fondo Paradi.



41 voluntarios apoyaron el campamento.



Participantes, mientras trabajan con el periódico.

(+) LOS NIÑOS SE EXPRESAN SOBRE EL DIABLOTTÍN

"QUERIDO DIABLOTTÍN
lamentaría mucho que tu especie desapareciera. Quiero decirte que voy a luchar por ti y por todos los diablottines; haremos lo posible para tu especie no se pierda. Yo y todos los amigos del Grupo Jaragua estamos dispuestos a luchar por ti". (Fermin A. Pérez, 6° grado, Ovidio).

"El Diablottín es un ave pequeña que vive aquí en la Loma del Toro. Esta ave está en peligro de extinción. Va al mar para comer peces. Muchos lo quieren atrapar y tenemos que ayudarlo. Es un ave muy bonita que mide de 35 a 41 cm. Tiene los ojos rojos y una nariz púda". (Lissa Mary Félix, 6° grado, La Colonia).

"Ahi en la Loma del Toro yo vi algo en el día. Era blanco como la nieve, con un poquito de negro. Ahi estaba con sus ojos rojos. Traté de mirarlo más cerca, pero antes de poder, se fue". (Camille Eynard, 5° grado, Miami).

"Mami en la Loma del Toro hay un ave que se llama el Diablottín, es muy bonita y se alimenta de insectos, peces y camarones. Mami, contigo quiero protegerla". (Cindy Melissa Matos, 6° grado, Ovidio).

DEJE SU COMENTARIO
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