

Tracking the Devil:

Radar Surveys for Black-capped Petrels on Hispaniola



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Black-capped Petrel Range



Nesting Range

Foraging Range

Diablotin

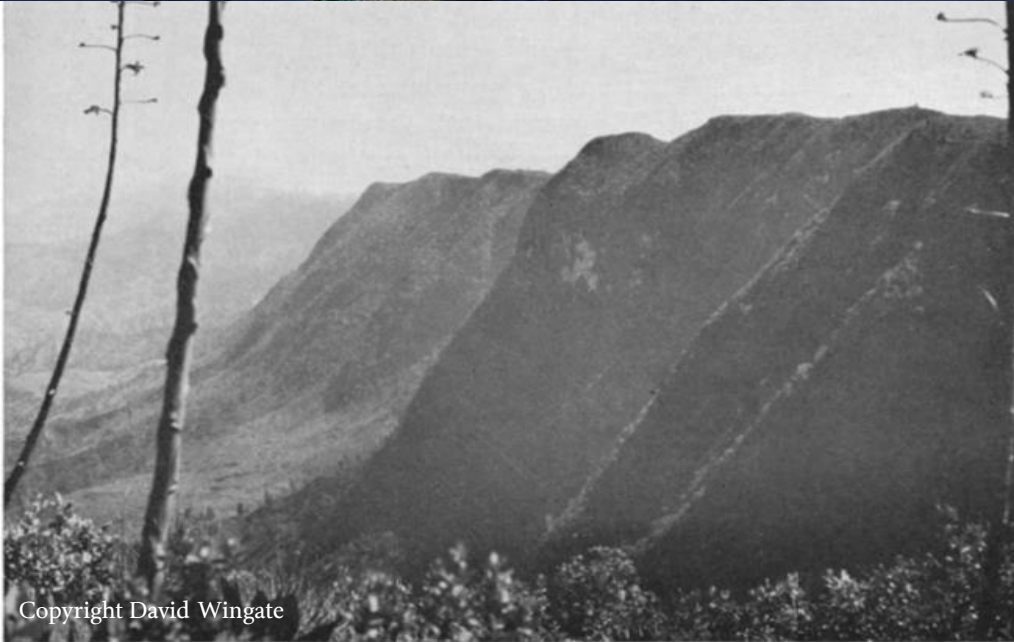


THREATS



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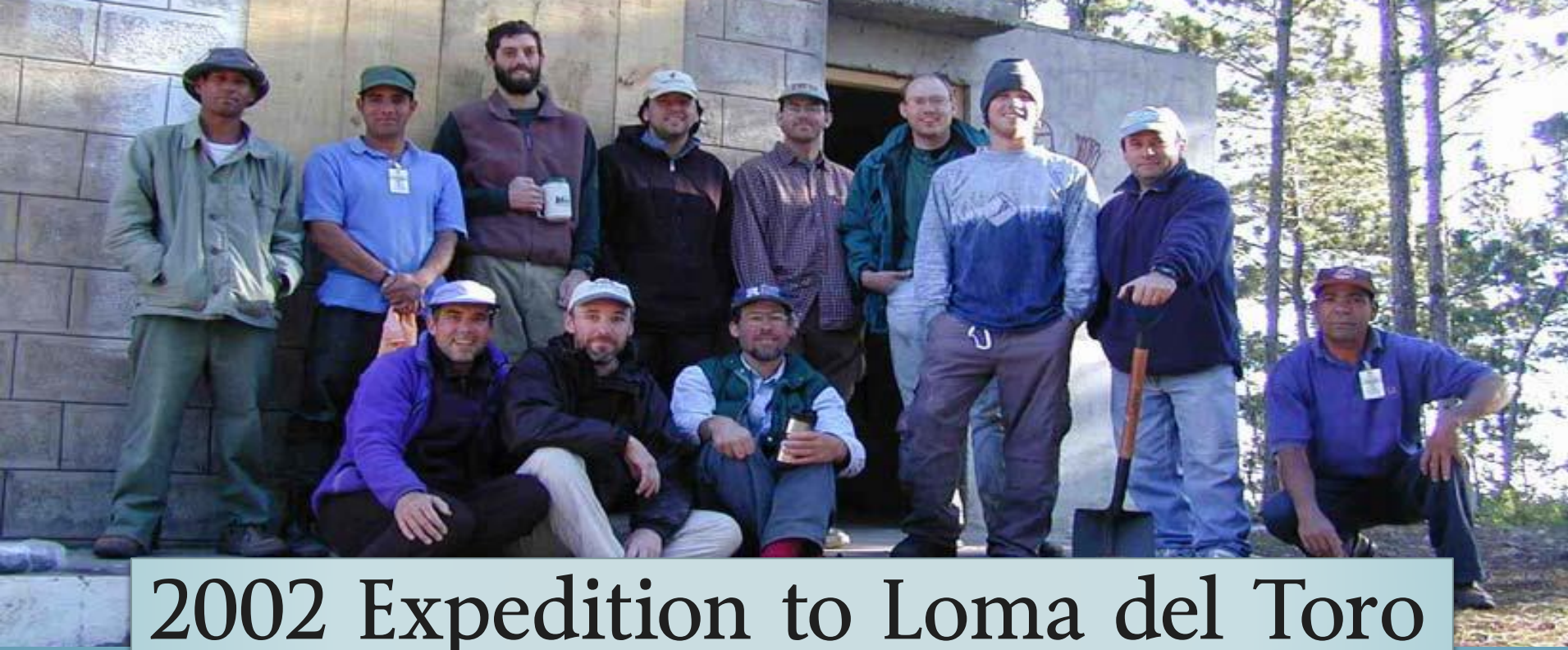


Copyright David Wingate



- 1963 Survey Locations
- Early 1980's Survey Locations

David Wingate's Expeditions



2002 Expedition to Loma del Toro

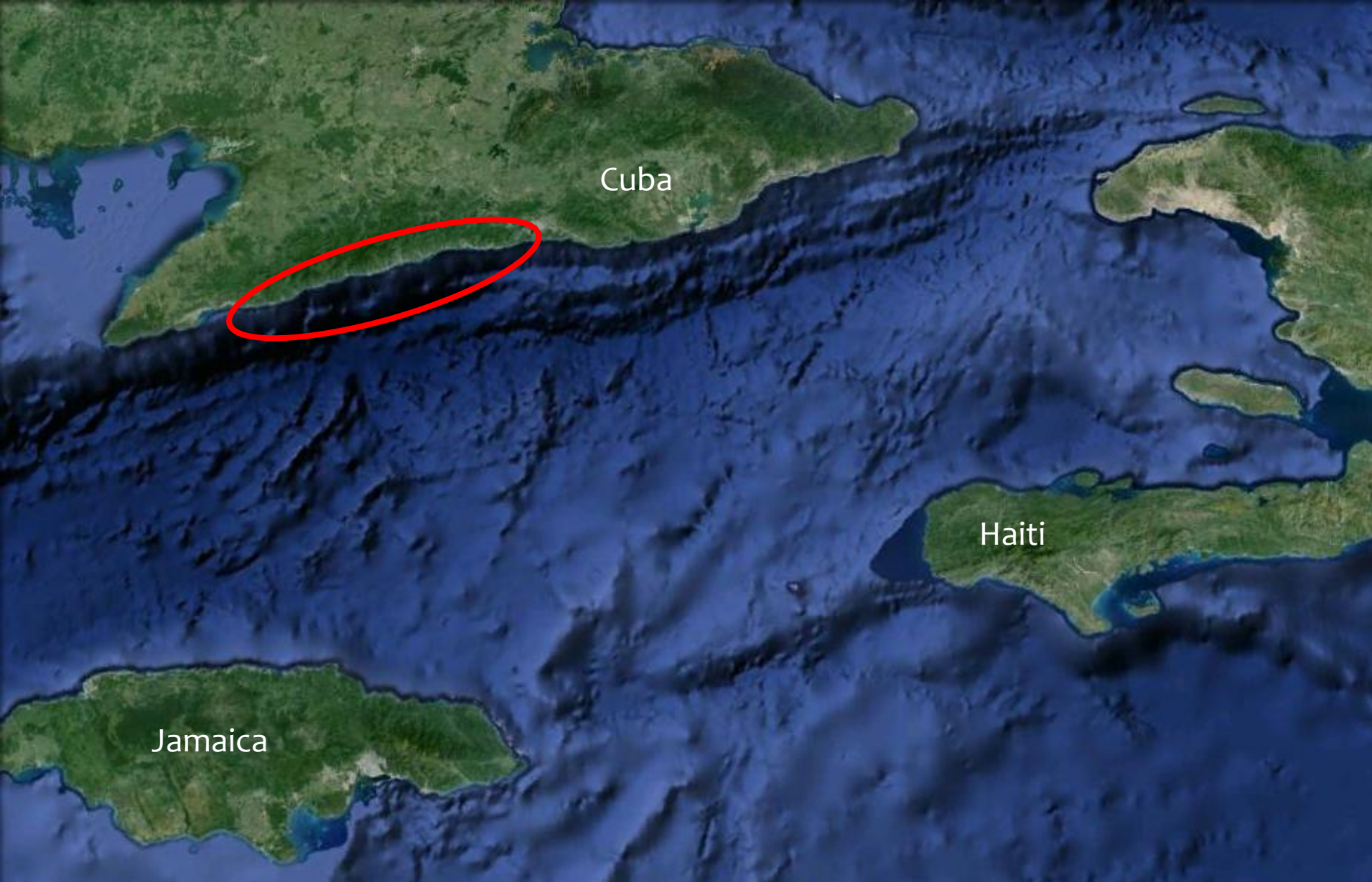




2009 Offshore Petrel Expedition

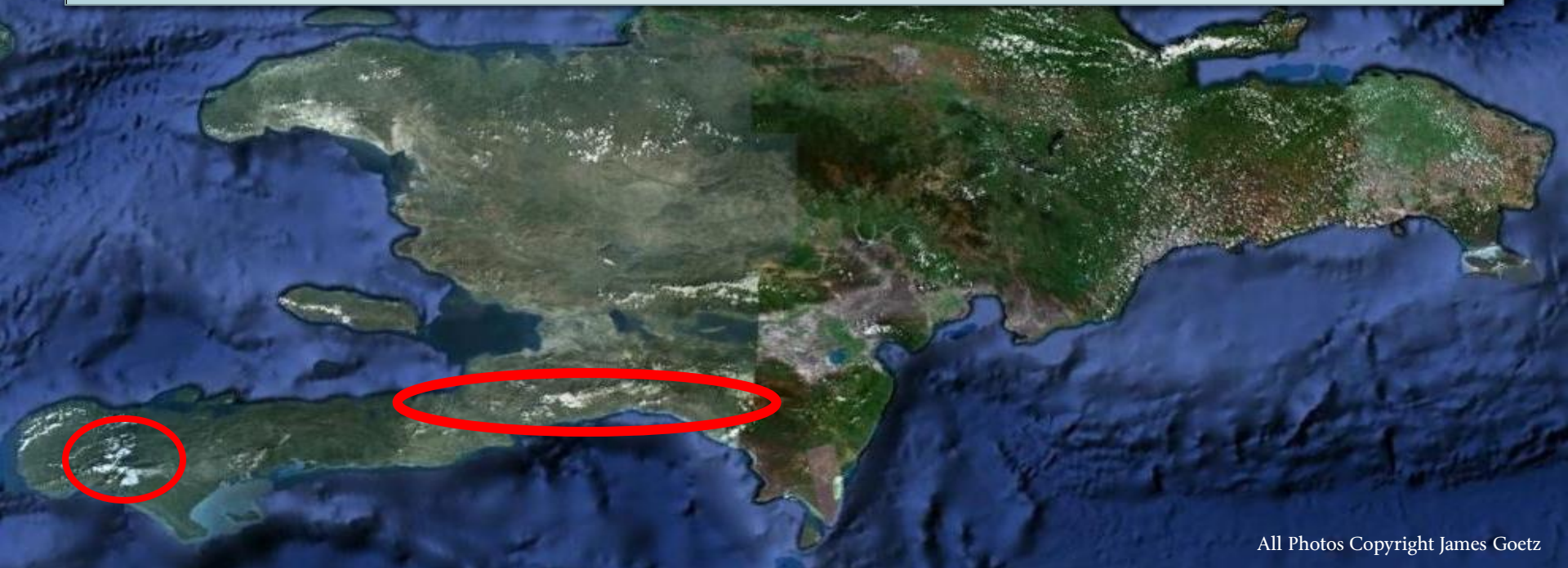
Dominica





Expeditions to Pico Turquino and Offshore Cuba

Black-capped Petrel Expeditions to La Selle and La Hotte



All Photos Copyright James Goetz



January 2012

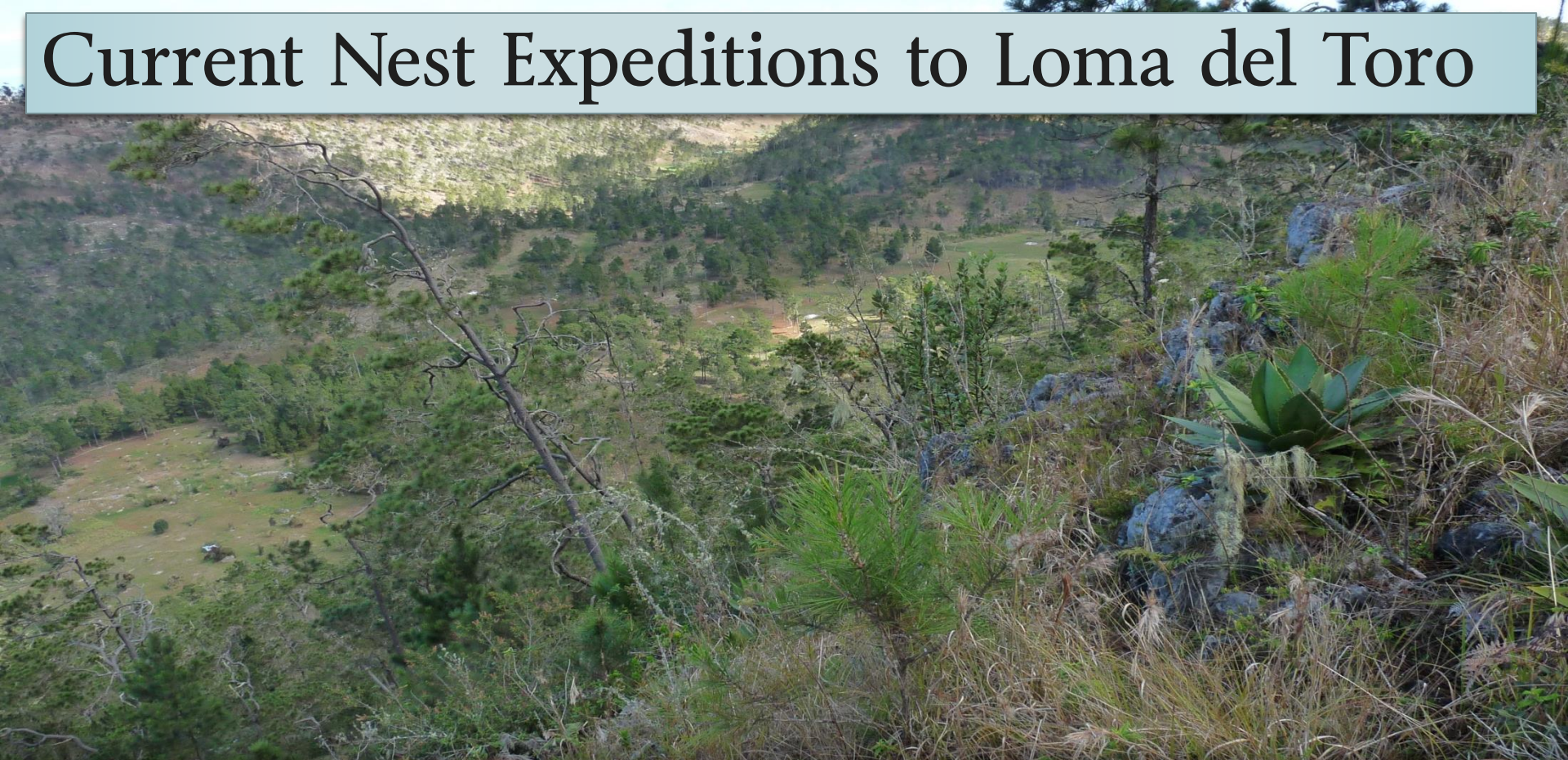
Conservation Action Plan *for the* Black-capped Petrel

(Pterodroma hasitata)



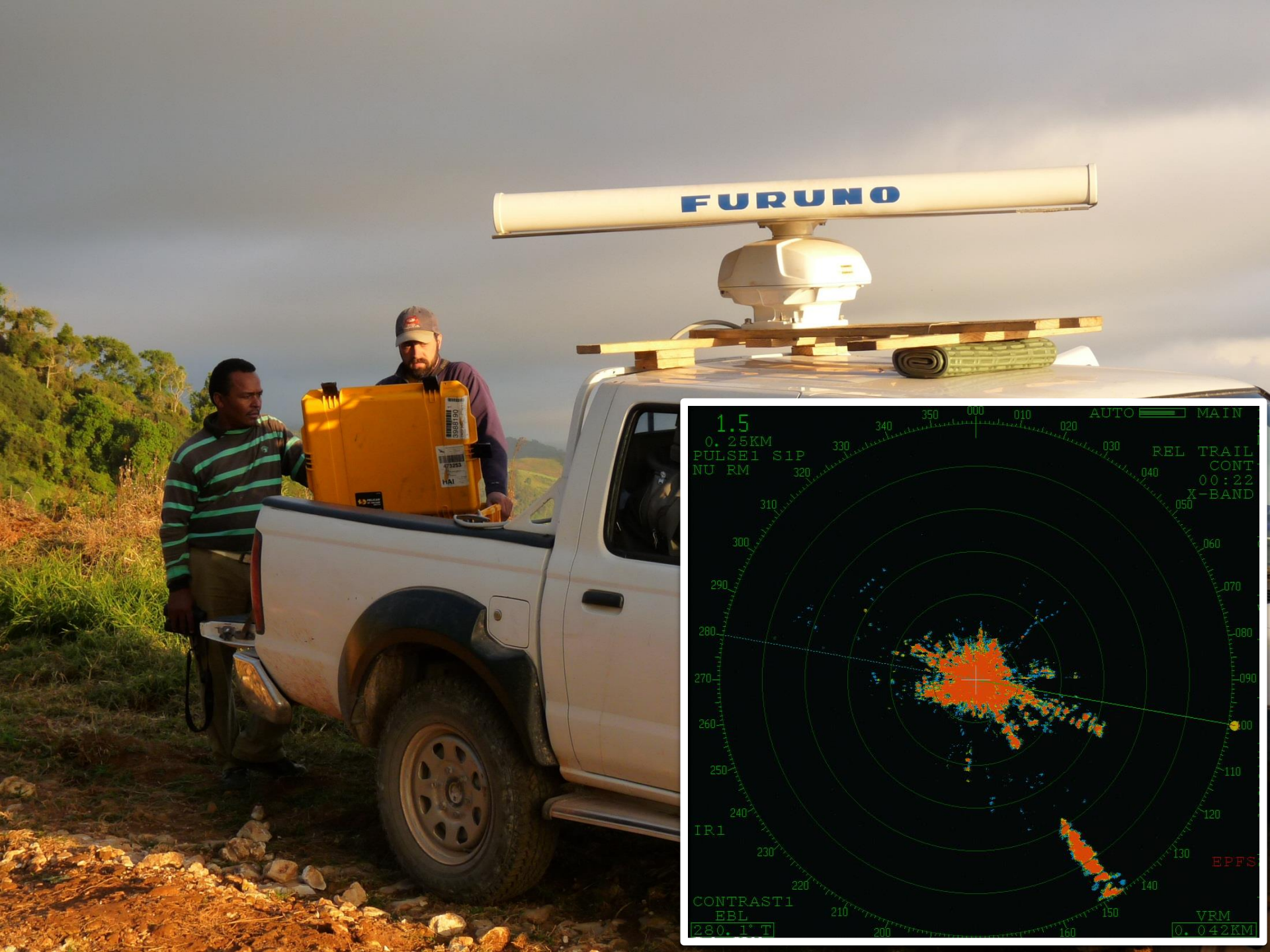
Edited by James Goetz, Jessica Hardesty Norris and Jennifer Wheeler

Current Nest Expeditions to Loma del Toro

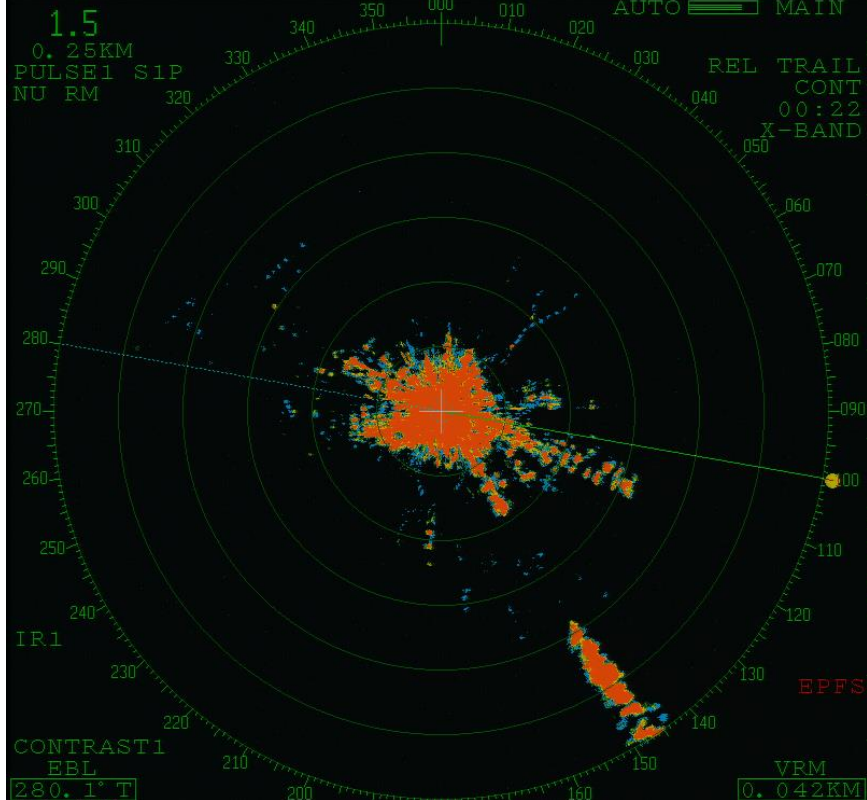




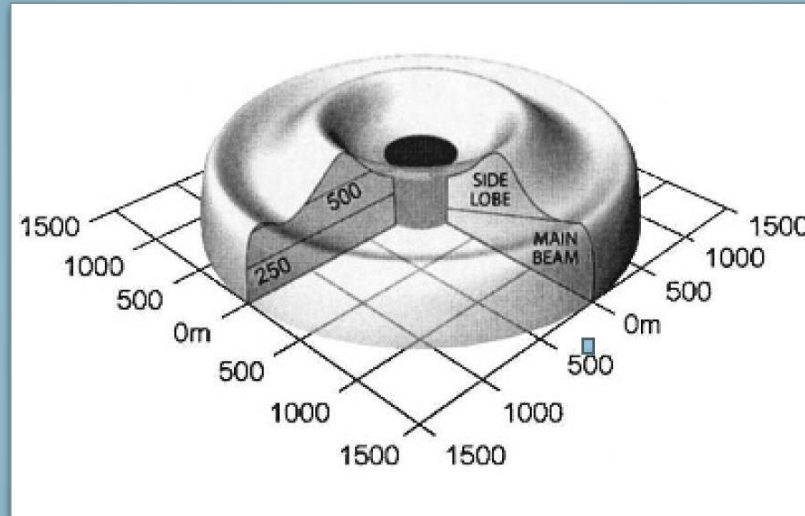
2012 Black-capped Petrel Radar Expedition to the
Dominican Republic



FURUNO



How Does Radar Work?

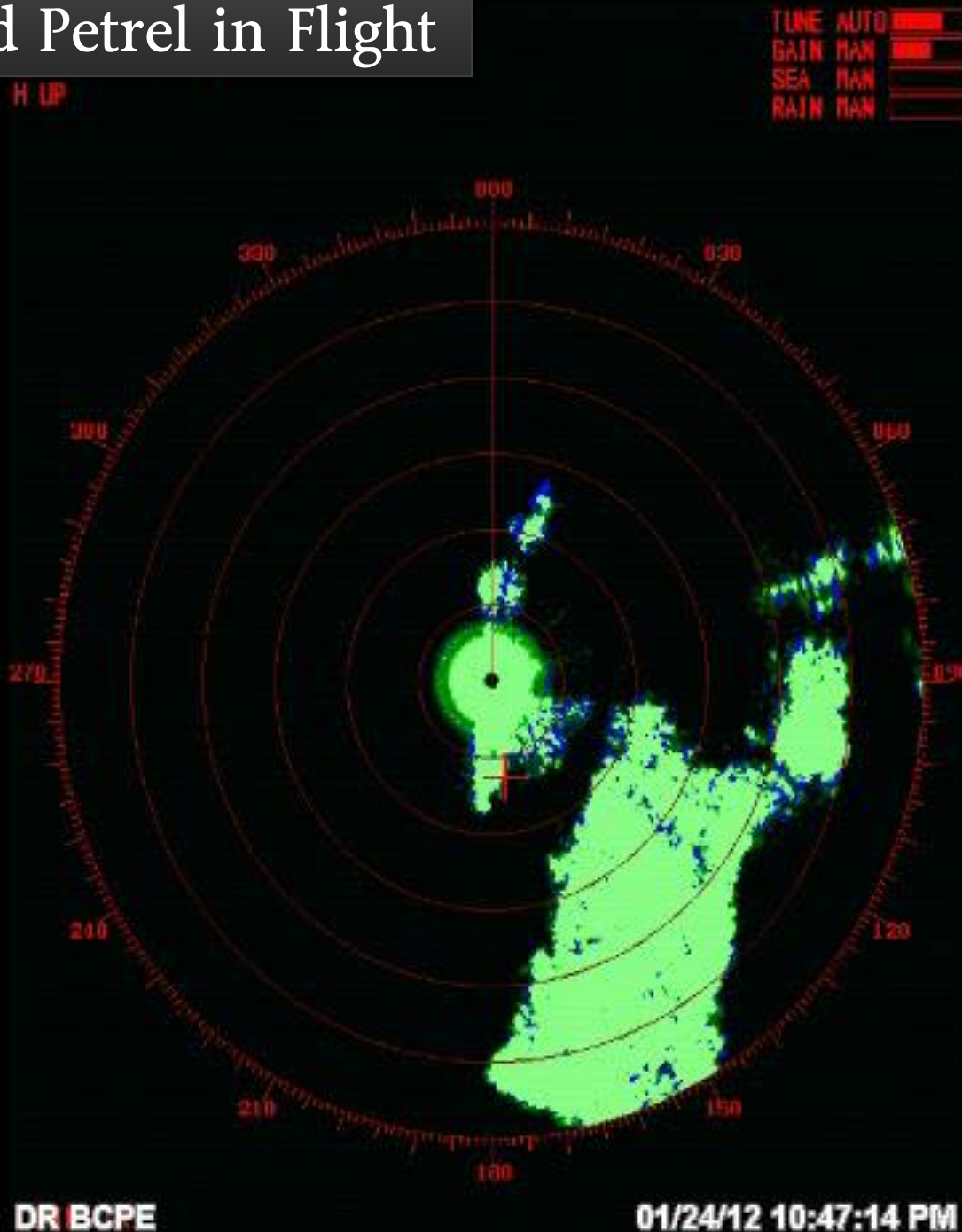


- Radar is set to detect any movement out to 1.5 km
- A radar wave is sent out from unit, bounces off object and a target signal is returned
- Speed of moving object is determined by measuring space between targets

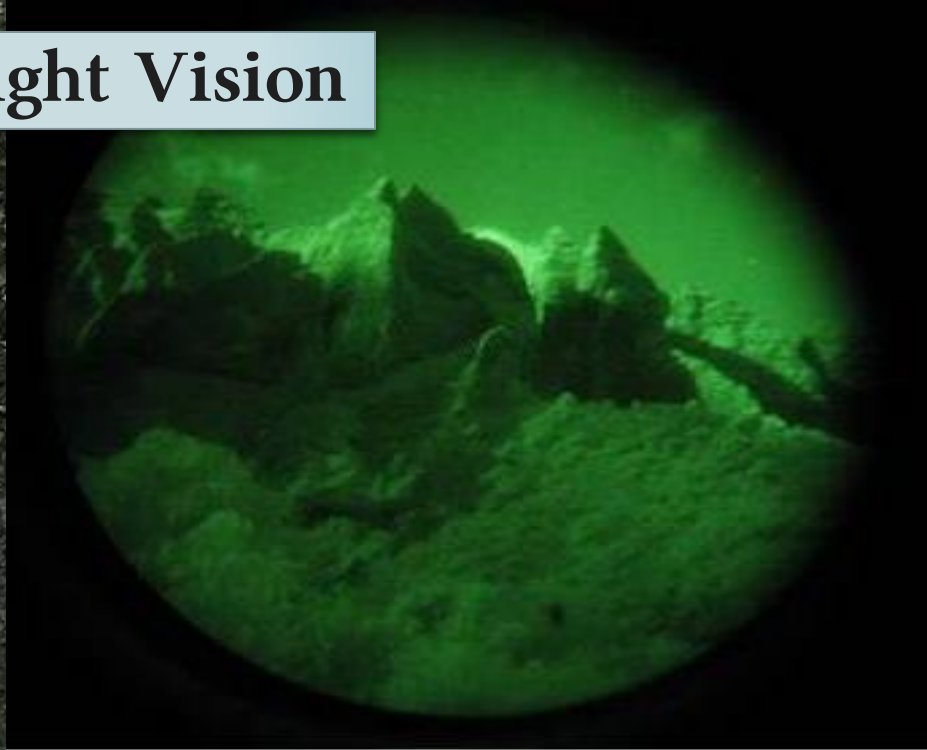
Petrels are identified on radar by:

- Flight Speed
- Flight Direction
- Flight Behavior

Black-capped Petrel in Flight

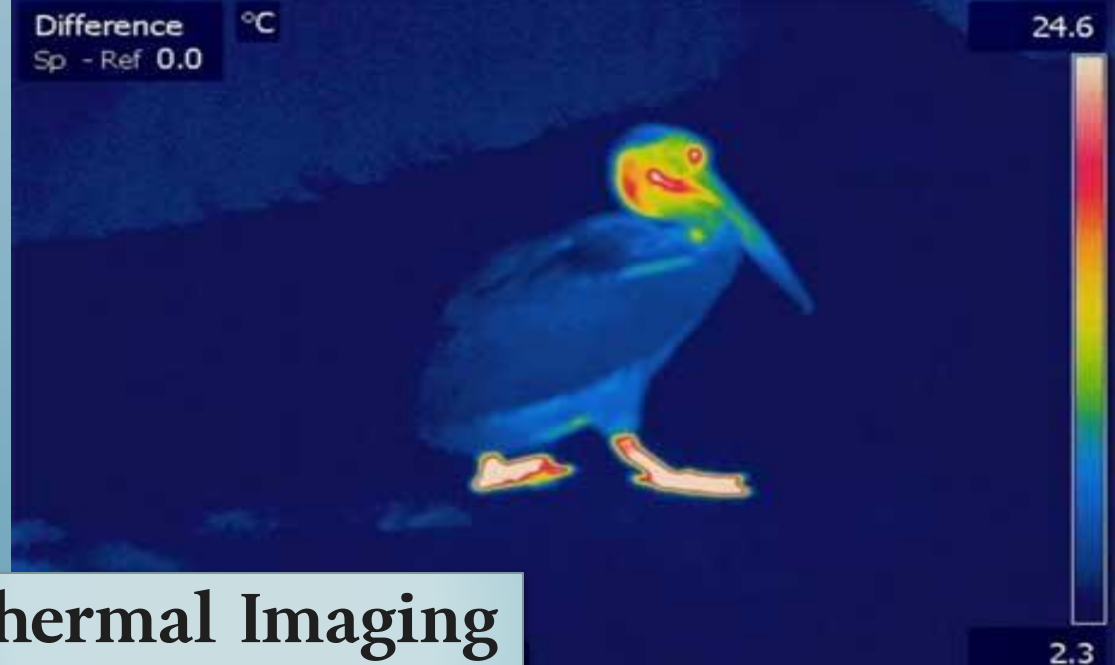


Infrared Night Vision



Difference
Sp - Ref 0.0

°C



Thermal Imaging

Acoustic Monitoring

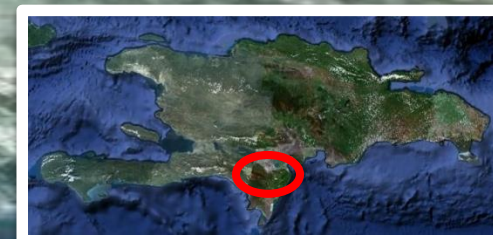


Loma del Toro; elev 7,655ft



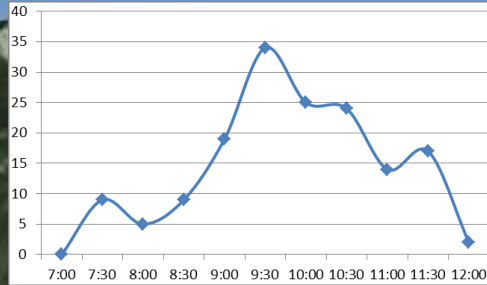
Pedernales Flyway

Pedernales

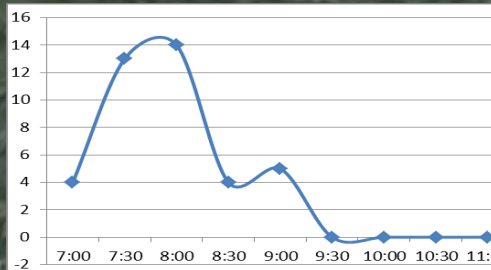


Loma del Toro

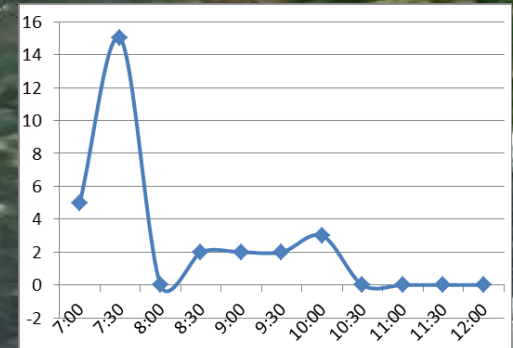
n=135



n=27



n=28



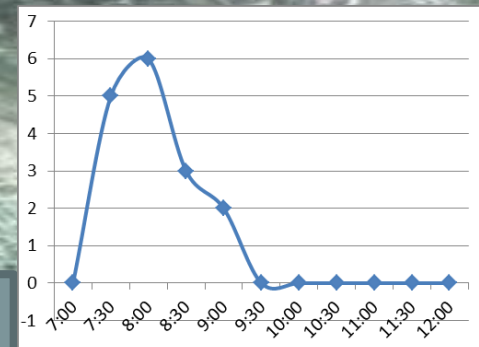
Verified:

- Flight speed >50km/hr
- Flight behavior was straight-line
- Flight direction was between colony and sea
- Petrels almost exclusively used valleys as flyway

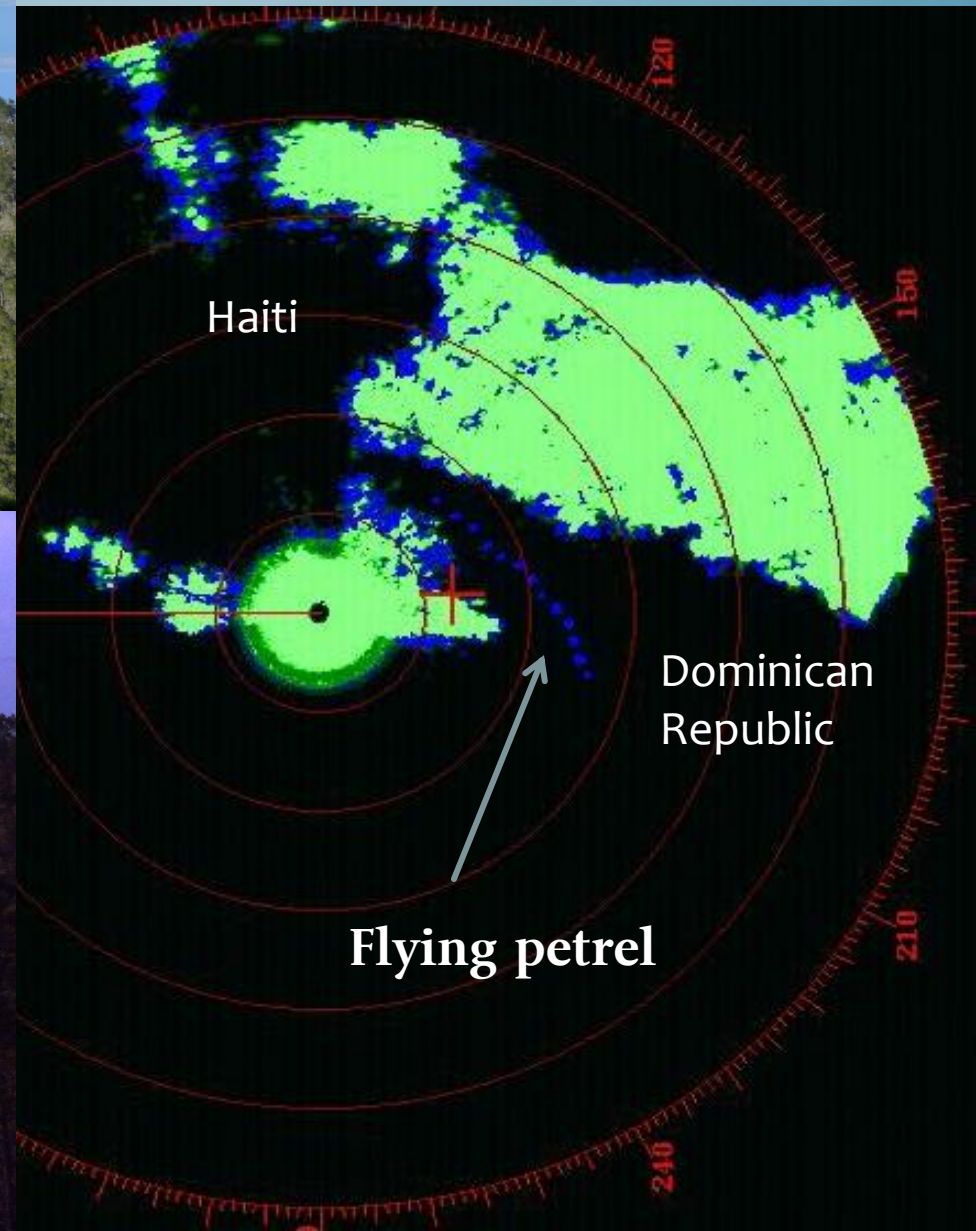
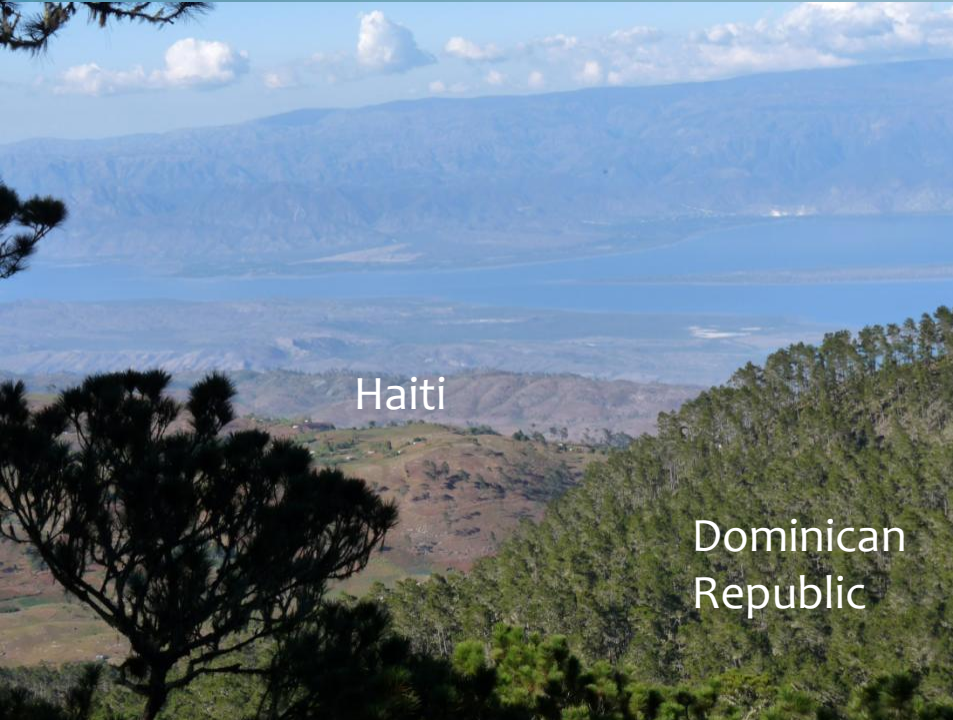
Pedernales Flyway

Pedernales

n=18



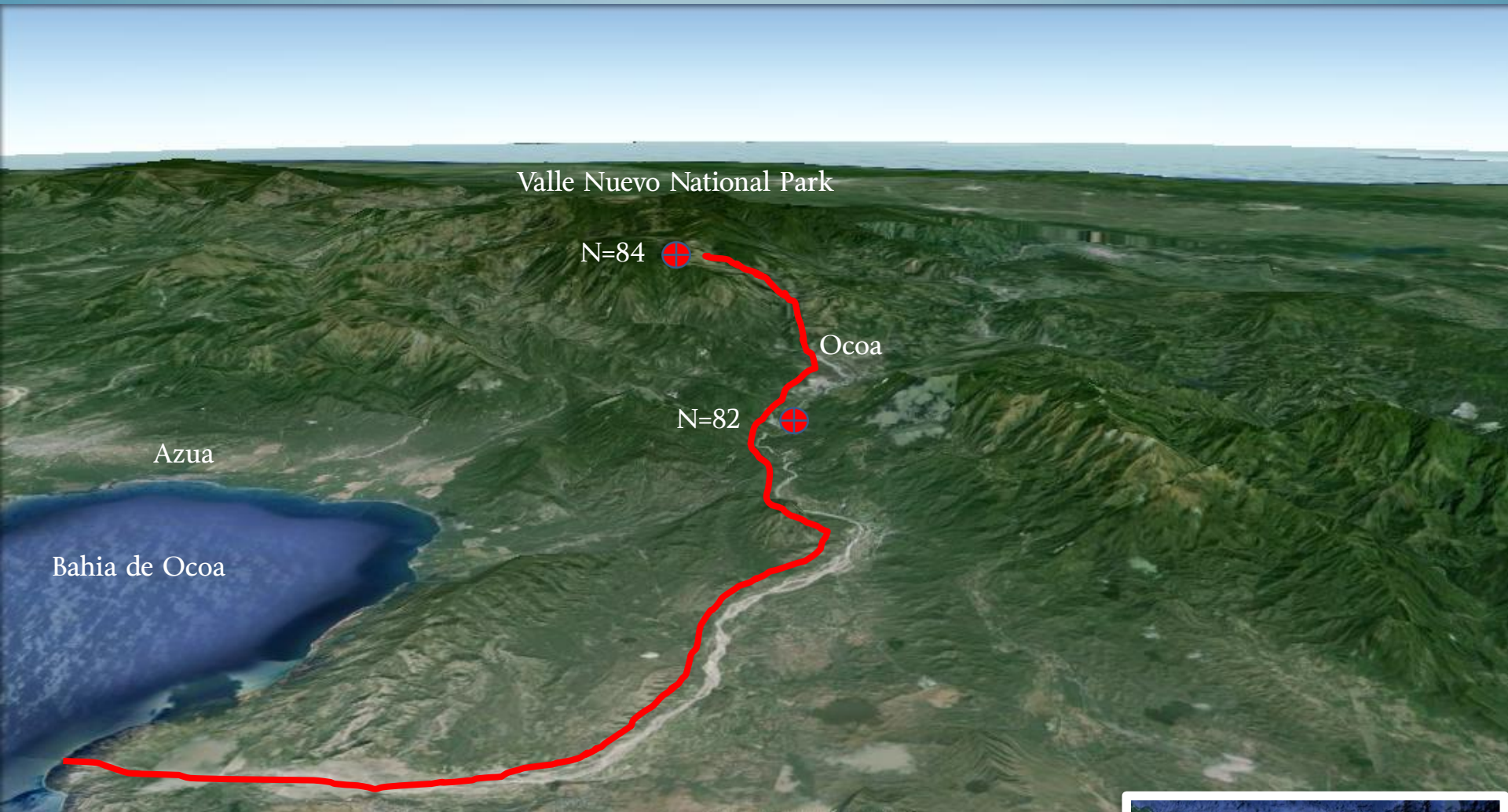
Petrel leaving Loma del Toro nest colony on radar





2013 Black-capped Petrel Radar Expedition to the Dominican Republic and Haiti

Rio Ocoa Flight Corridor



Radar Station



Petrel Flight Corridor



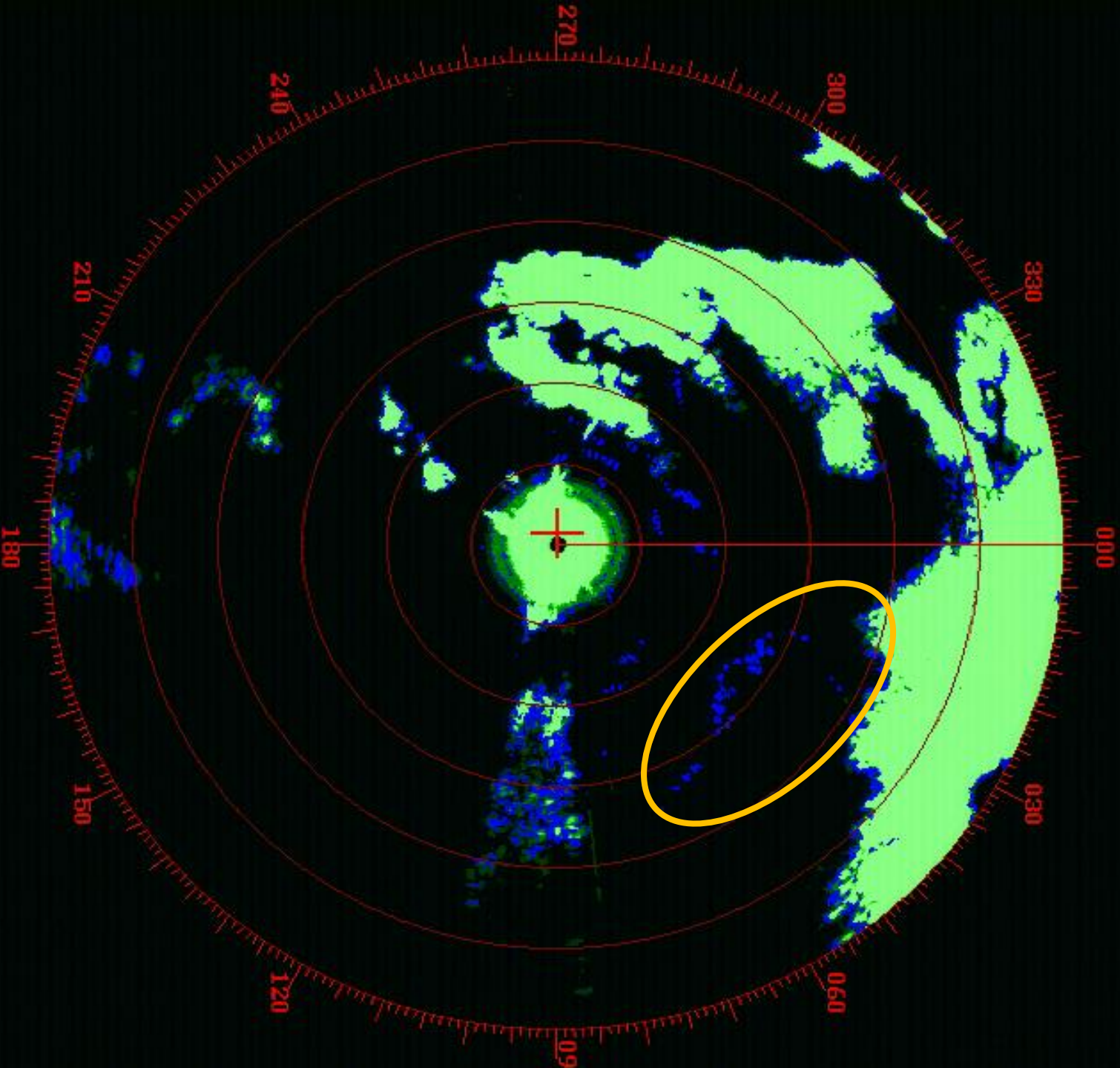
Upper Ocoa Nest Habitat



1.5
SP
H UP

0.25
KM

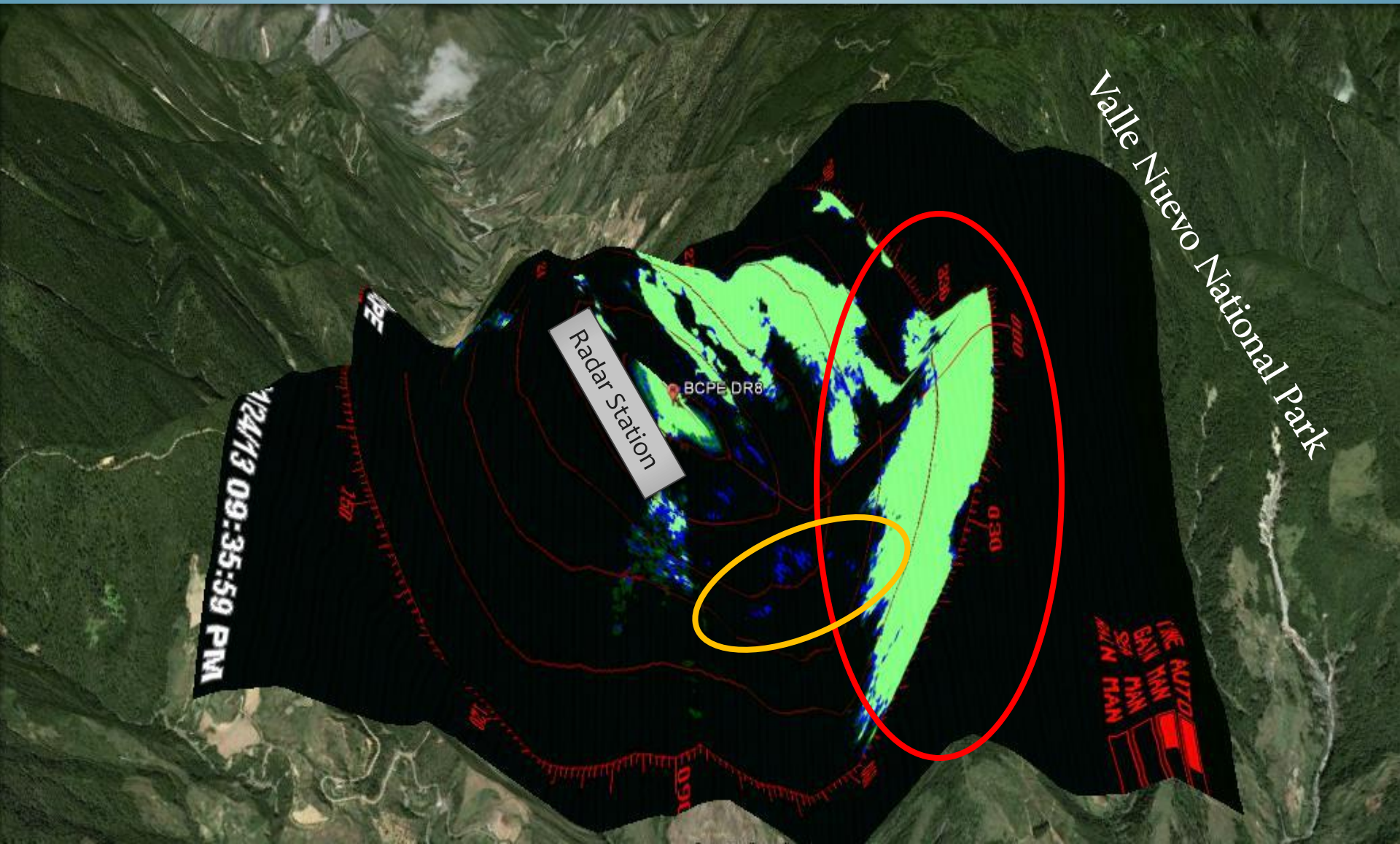
TUNE AUTO
GAIN MAN
SEA MAN
RAIN MAN



DRBCPE

01/24/13 09:35:59 PM

Upper Ocoa Nest Habitat



Sierra de Bahoruco Activity Centers



Radar Station



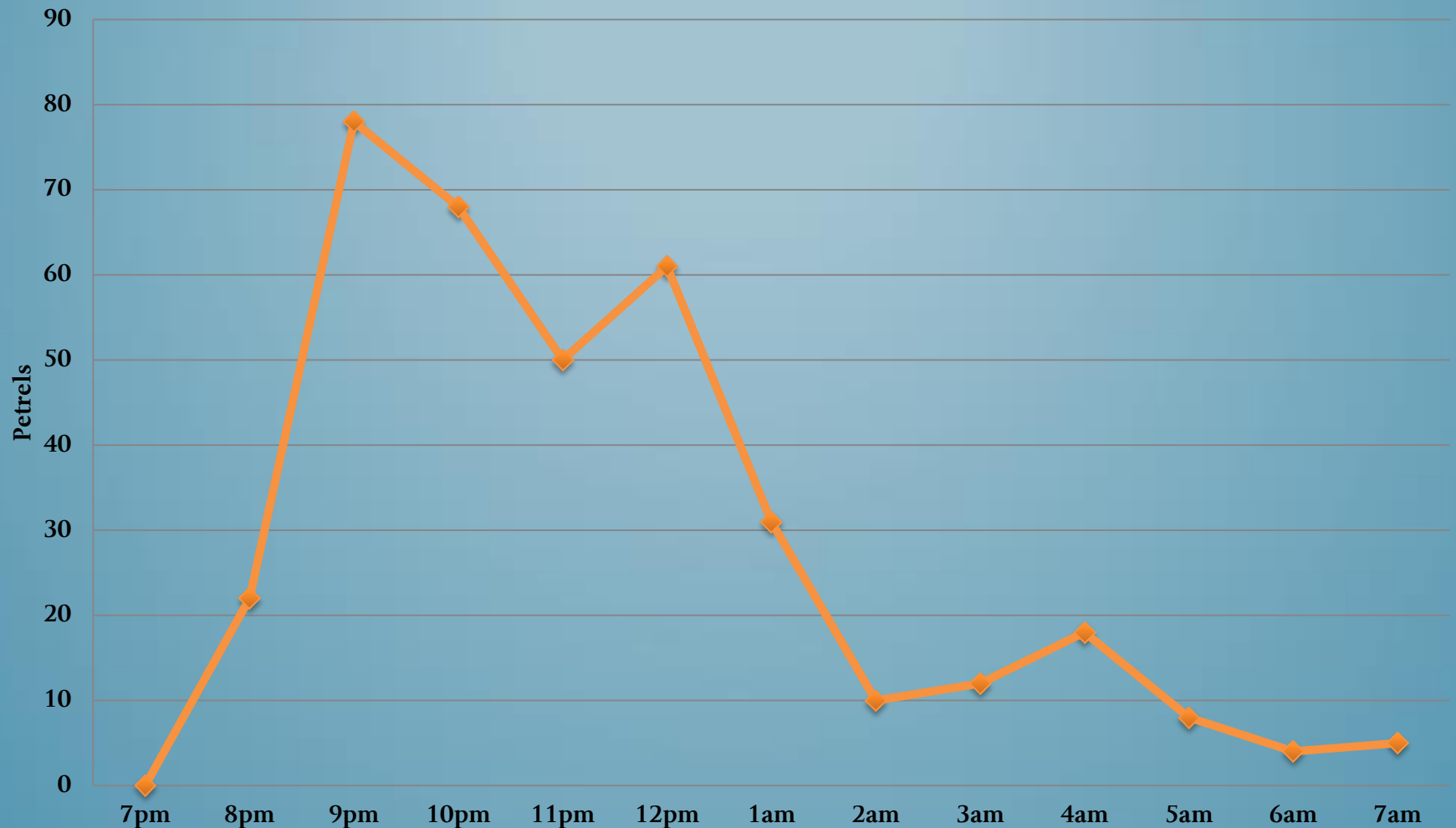
Petrel Flight Corridor



Dominican Republic / Haiti Border



Petrel Activity From Sunset to Sunrise at Loma Del Toro 30-31 January 2013



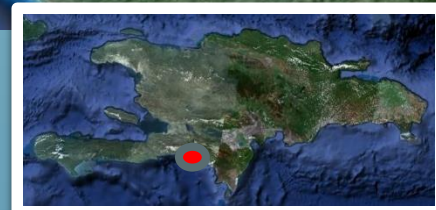
Massif de La Selle Activity Centers



Radar Station



Petrel Flight Corridor



Savane Zombi Flyway

1,570 Petrels Detected



La Visite Escarpment

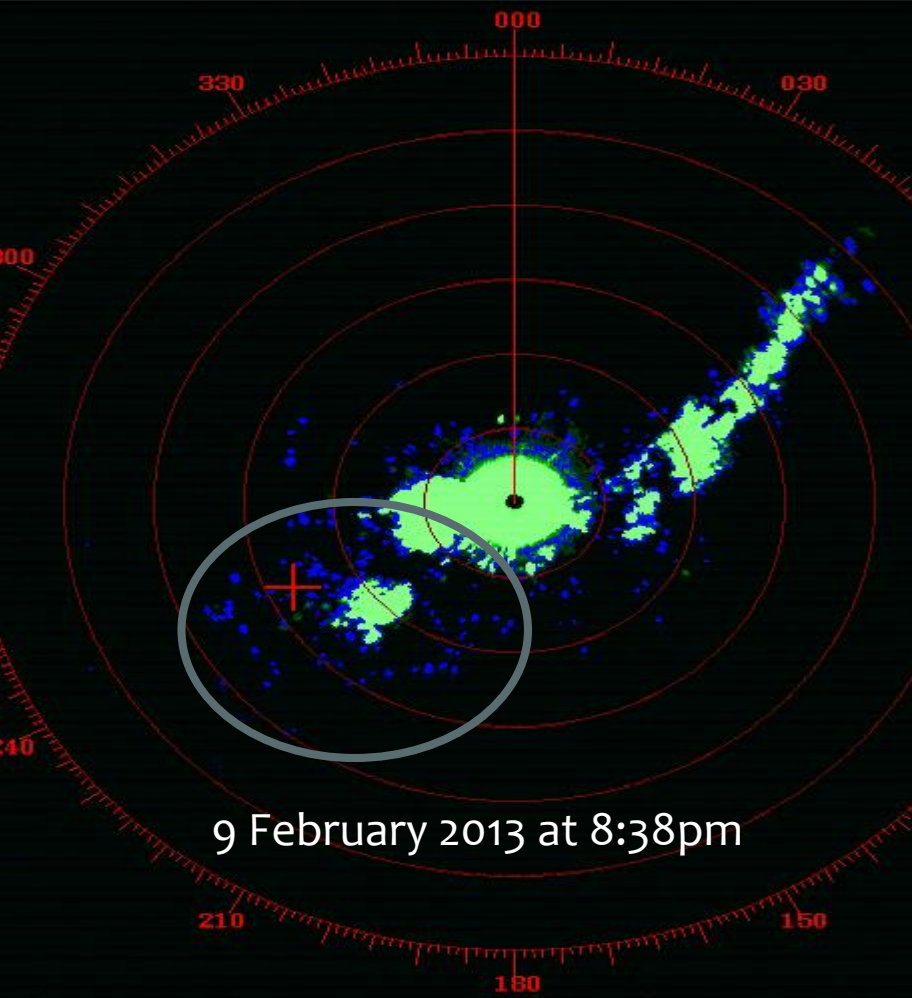
1,054 Petrels Detected



9 February 2013

- 3 Black-capped Petrels were found alive
- 2 Black Petrels were found dead
- Dozens of other petrels were recorded striking the guy wires attached to the towers.

Communication Towers on Tet Kay Jak



Black-capped Hispaniola Radar Surveys in 2014





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Environmental Protection in the Caribbean

www.epicislands.org

Thank You

Disney Worldwide Conservation Fund

Grupo Jaragua

Societe Audubon Haiti

American Bird Conservancy

US Fish and Wildlife Service

Birdlife International

Pelican Inc.

Kestrel Shipping

Ministerio de Medio Ambiente y Recursos Naturales de la República Dominicana

Ministère de Agriculture de Haiti

Fondation Seguin

Cornell Lab of Ornithology

International Black-capped Petrel Working Group

ABR Inc.

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Peter Sanzenbacher

James Tietz