



# FULL MOON

Visitor's Program Newsletter

Barro Colorado Nature Monument, Panama

Comes out every full moon...

## The Blue Butterfly... that's not blue!

The sight of a *Morpho* butterfly gliding through the tropical forest causes almost any visitor to pause. A pilot friend told me that you can see their flashing blue wings when you fly low over the forest. But you don't need to fly overhead to appreciate an event that's exciting even when walking a forest trail. After working on Barro Colorado for two decades, I still stop to watch a *Morpho* whenever one appears.

something good is about to happen.

Morphos have "aerial trails" that they follow in search of food and females. If you wait around in a place where you have seen a *Morpho*, chances are that it will pass that way again a few minutes later. Female Morphos are most active at mid-day, when they

look for places to lay their eggs. We don't know very much about which plants provide food for the larvae (caterpillars) of most species. We do know that they choose legumes (trees and lianas in the same family as beans and lentils). The larvae of *M. peleides* pass through five stages, and their life cycle from egg to butterfly takes nearly six months.

When I went to talk to her, Annette Aiello, STRI butterfly specialist, immediately told me: "Make sure to clarify that the blue color of this butterfly is structural. It is not a pigment." That is, the color blue that we see is a result of an interference filter effect of the scales on the butterfly's wings, and is not a chemical pigment. Like all butterflies, Morphos are covered with tiny overlapping scales. The undersides of *Morpho*'s wings are cryptic (blend in with their environment) and brown in color with



(Foto: Nicholas Smythe)

three or four "eyespot" on each wing. We see this coloration when the butterfly poses with wings folded or raised (see photo). But on its dorsal side, the scales are completely transparent: the whole spectrum passes through them, except for the blue which bounces back into our eyes and makes the wings look blue.

The abundance and diversity of nature in Panama, especially apparent in places like Barro Colorado—is real; it's what we see. But also, as in the case of *Morpho* butterflies, it is what we don't see.

**Colors are movements of eye molecules touched by light. And we see only 30% of the light. Single celled creatures see complete sunlight: they see the world as it is!**

**Ernesto Cardenal**

Five species in the genus *Morpho* occur in Panama: *M. peleides* (upper left), *M. anathonte* (lower right) and *M. theusis* are the most common, especially *M. peleides*. They fly along trails, streams and roads that pass through forested areas. In the last few weeks we have seen huge numbers of Morphos on the road between Summit Gardens and Gamboa, where the boat leaves for Barro Colorado. Although they also fly in open areas, Morphos are found only where there are forested areas nearby. Sometimes they arrive on the inhabited islands of San Blas, hundreds of meters from the forested coast. The Kunas take this as a signal that

### Editorial board:

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# Enhancements to BCNM Visitors Programs

As of Nov 1, STRI added two weekdays to the schedule of public visits to the BCNM. The Visitors Program also opened up the visits to all interested parties: schools, operators and the general public, who may call in directly and book a reservation through the Visitors Office. Interested parties may book guided visits on Tuesdays, Wednesdays, Fridays, Saturdays and Sundays. The fee structure subsidizes students, which continues to be a priority for this program. Fees are:

Local students with ID	\$10
Panamanian residents	\$35
International students with ID	\$35
International visitors	\$70



Recently, Mr. Ivan Maiza visited Barro Colorado Nature Monument and sent a photograph he took during the occasion to *Full Moon*, along with some of his thoughts.

*The majesty and luxuriousness of our tropics, with its endless capacity to overwhelm us with its beauty, acquires an ethical component when human presence is added, and this doesn't destroy the respect that the environment inspires.*

*Is in this respect that the visit to Barro Colorado differs from other visitor's options. In the end, the sunset occurred in several places at the same time. The magic is in the place, and in what is done there. Ivan Maiza*

*"The moon is receding from the Earth at about 4 centimeters a year, as measured by laser reflectors left there by astronauts."*

Cover illustration of the moon: Cientec.  
Excellent information on the moon at:  
[www.cientec.org.cr](http://www.cientec.org.cr)



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## This moon's visitors

- Nov 11 Celosan  
Interamerican University
- Nov 12 Cambridge Institute
- Nov 14 Marynoll Sisters  
INTERVET
- Nov 15 Galeta guides
- Nov 18 U. of Panama (West)  
U. of Panama (San Miguelito)
- Nov 19 St. Mary's School
- Nov 21 Receptours/Iguanatours
- Nov 24 U. of de Panama (B.A. students)
- Nov 25 Pedro P. Sánchez School  
Anastasia Mitre Highschool
- Nov 26 Simón Bolívar Institute
- Nov 28 STRI employees' children
- Dic 1 U. of Panamá (West)
- Dic 2 Tecnological University
- Dic 3 Turista Internacional Agency
- Dic 9 National Lotery
- Dic 11 *Full Moon!*



## How to reach us

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