

# LIGHTHAWK

## WAYPOINT

SUCCESS STORIES FROM ABOVE

July 2009, Issue 31

LightHawk's monthly update, WayPoint, was created to highlight the impact of our work. Each edition covers one specific flight, or series of flights, and illustrates how LightHawk advances conservation efforts throughout North and Central America through the unique perspective of flight. We hope you enjoy WayPoint and will share with others our success stories from above.

### Bringing Focus to an Underwater World from High Above LightHawk and the Reefs of Belize



Twin Cays, a small mangrove archipelago about 7.5 miles off Belize, sits just inside the crest of the barrier reef in the distance. Studied by scientists for almost 30 years, the islands are being eyed by real estate developers. LightHawk flights locate and track illegal clearings to protect the islands. *Photo: Ilka Feller/Smithsonian Institution/LightHawk*



Stark white patches are a tell-tale sign of vegetation clearing and filling for tourist developments near the Mesoamerican Barrier Reef. *Photo: Nadia Bood/WWF/LightHawk*

*If you can't see the forest for the trees, then it should come as no surprise that you can't see the reef for the water. Without still, glassy conditions creating a window to the reef from the water's edge, the only way a reef comes into clear focus is either under the water's surface or from high above in the air. Likewise, those who enjoy the peaceful underwater realm cannot see the much larger ecosystem that feeds the health of the reef - communities of seagrass beds, mudflats, and mangroves. For well over 20 years, LightHawk flights over the Mesoamerican Barrier Reef system in Belize - the second largest in the world after Australia's Great Barrier Reef - have helped bring into sharp focus the health of the reef and the undersea inhabitants that depend on the health of its larger ecosystem.*

A bulldozer rumbles along clearing mangroves away for new tourist developments...a farmer sprays crops with pesticides, herbicides and fertilizers...improperly treated sewage discharge and land clearing leads to soil erosion. These are among the threats that are putting the reef system off Belize at risk. This spring, LightHawk volunteer pilots flew our conservation partners in Belize to monitor, protect and manage the Belizean portion of the Mesoamerican Barrier Reef and its associated communities.

In March, volunteer pilot and veteran Meso pilot Chuck Schroll took LightHawk partner Ya' Axche Conservation Trust (YCT) aloft to survey local rivers and streams. The mission brought an important aerial perspective to a YCT project which monitors the quality of fresh water that flows into the coral reef and directly influences its health.

*"As part of our program to monitor and manage the health of rivers in and around our protected areas, we wanted to have the opportunity to see wider land-use and human activity other than normally observed immediately next to the river. LightHawk enabled us to do this. In the upper parts of the rivers the terrain and forest means access is difficult and time consuming. LightHawk flyovers allowed us to see the upper extent of human impacts so we target our*



Volunteer pilot Chuck Schroll reviews the flight plan with conservation partners. Photo: Derric Chan/Friends for Conservation and Development/LightHawk



Aerial views of the Monkey River delta allow researchers to survey and track recovery patterns of mangroves in areas devastated by Hurricane Iris which made landfall five years ago. Photo: Ilka Feller/Smithsonian Institution/LightHawk

*field efforts. The flyovers allowed our rangers to see the area they have lived and worked their whole lives from a wider perception, which puts specific parts of their jobs in perspective..."*

- Rachel Carrie, Freshwater Ecologist, Ya' Axche Conservation Trust

One month later, Utah-based volunteer pilot Skip Slyfield took a break from flying 777s on Delta's long haul to Asia and flew World Wildlife Fund (WWF) staffers to assess human and natural threats along Belize's coast. The LightHawk flight enabled WWF to look for potential impacts to the Mesoamerican Reef such as cleared or lost mangroves forests, land reclamation, shoreline erosion, marina construction, shrimp farms, agricultural fields, and other coastal developments. Information gathered during the flights helped to inform WWF's climate change adaptation initiatives and to address negative agricultural and aquaculture impacts on the reef.

*"I was able to see the coastal vegetation clearing and tourism developments. I was also able for the first time to fly over the Bacalar Chico Marine Reserve. I took a lot of photos that will be used in my communication program. The data obtained in this flight will certainly contribute to our lobbying efforts for coastal mangrove conservation and wise planning."*

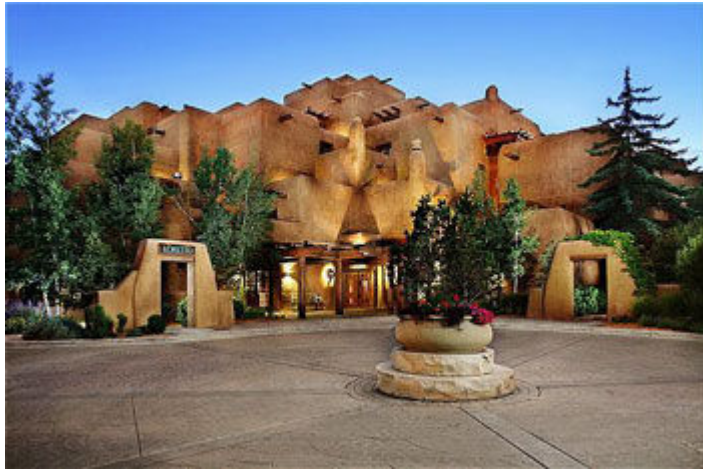
- Nadia Bood, WWF

Later that same month, Skip flew one of LightHawk's oldest partners in Belize, the Smithsonian Institution. For many years, Smithsonian, along with the University of Belize, has been investigating direct and indirect effects of human activities and natural disturbances on mangrove ecosystems in Belize. Comparing their data with historical images going back as far as 1945 provides a telling look at how the areas have changed.

*"Clearing of mangroves and filling with material dredged from the adjacent seafloor is by far the greatest source of damage. We saw several new cleared areas at Turneffe, all of this for tourism development, either resorts or vacation houses. The overflight allows us to see exactly where the cutting and dredging has occurred. We will use the photographs to inform the public, NGOs, and policy makers of what is going on."*

- Dr. Ilka "Candy" Feller, Smithsonian Institution

When LightHawk's volunteer pilots, partners, donors and alumni fly in to celebrate LightHawk's 30th anniversary, we'll also celebrate more than 20 years of flying partners in Belize to help protect the Mesoamerican Barrier Reef. So, as we toast 30 years past, we will also raise a glass to more decades soaring the skies of Belize to protect and preserve the magnificent underwater world of coral reefs and the communities associated with them.



## *Celebrate 30 Years* **On the Wings of LightHawk**

Come join us where it all started 30 years ago and meet an adventurer who traveled the entire length of the Colorado River by kayak and local experts who will illuminate what's at stake in this part of the West and how LightHawk missions make a difference. You'll also hear stories about the early days of LightHawk and a plane named, "Emily," reconnect with fellow flyers and enjoy the beauty of Santa Fe, New Mexico a city celebrating its 400th anniversary.

**October 9-11, 2009. Santa Fe, New Mexico**

Join us at the renowned Inn and Spa at Loretto, our home base for the Fly-in.

~Call Bev at 207-699-4145 or email [bgabe@lighthawk.org](mailto:bgabe@lighthawk.org) to reserve your spot today.~

We'll be mailing invitations and details of our 30th Anniversary LightHawk Fly-In over the next few weeks, but we suggest you reserve your hotel space early. ([www.innatloretto.com](http://www.innatloretto.com))

### **About LightHawk**

What started in 1979 with one man and a vision has grown to almost 150 volunteer pilots flying missions across the U.S., into Canada, through Mexico and down to Panama. Today, LightHawk is the oldest and largest nonprofit, volunteer pilot-based organization flying environmental missions in collaboration with hundreds of partner organizations.

At LightHawk we believe the view from the window of a small airplane provides a powerful and effective platform for research, groundtruthing, environmental awareness, and education.

### **Contact Information:**

International Headquarters  
LightHawk  
304 Main Street, Suite 14  
PO Box 653  
Lander, WY 82520

Tel.: (307) 332-3242  
Fax: (888) 297-0156  
Email: [info@lighthawk.org](mailto:info@lighthawk.org)

Copyright 1998-2009 LightHawk  
All Rights Reserved