



## BEYOND THE SCIENCE

# parrot conservation through education in Costa Rica

By Christine Dahlin

When I flew in to Costa Rica in January of 2006 I was both thrilled and terrified. I was finally beginning my PhD project researching wild Yellow-naped Amazons. It was the experience of a lifetime; watching parrots every day in field sites abounding with other wildlife such as monkeys and iguanas. Yet I was responsible for my first field project in a foreign country and I didn't want to screw up!

Soon nesting season was in full swing and my assistants and I were ecstatic when the first chicks hatched. They were tiny, pink and naked except for a few feathery tufts. They were still adorable, however, and we eagerly anticipated our next visit. That visit brought an awful reality; the chicks from all seven nests we were observing were gone. My doctoral advisor, Dr. Timothy Wright, had documented high rates of poaching for the pet trade in the mid-1990's, and sadly the situation appeared unchanged. In Costa Rica, although poaching is illegal, there is not enough money allocated to the national park system to adequately control poaching and poachers are skilled at evading detection. The fact the poaching has continued unchecked for so long was too much

for us; we needed to do something to help the parrots.

In response to the poaching, members of our laboratory at New Mexico State University, including Dr. Wright, fellow doctoral student Alejandro Salinas-Melgoza, and myself, have partnered with the World Parrot Trust and the Area de Conservación Guanacaste (ACG) to develop a multi-pronged conservation strategy focused on the three species of parrot being poached in Guanacaste province, the Yellow-naped Amazon (*Amazona auropalliata*), White-fronted Amazon (*Amazona albifrons*) and Orange-fronted Parakeet (*Aratinga canicularis*). The heart

### ◀ Viewing an amazon nest with the cavity camera.

of this effort is an education program designed to instill community pride in the parrots and foster a desire to conserve them by teaching students parrot ecology and appropriate conservation strategies.

Our program began in Escuela Irigiray, the school closest to our study site. Overall, we had six main components to the program, including nest adoption, a mural, education materials, nest visits, a parrot art exchange program and nest protection. We began with a nest adoption component. In February 2007 children "adopted" four Yellow-naped Amazon nests, to learn the disastrous impacts of poaching. If nests fledged the World Parrot Trust donated \$100 to the school. If the nests were poached the money was redirected to conservation efforts in the ACG. We designed the component such that the more people refrained from poaching, the more the community would benefit. Our efforts were a partial success; two nests were successful and two nests were poached.

While the nest adoption got underway, I painted a parrot themed mural in the gathering hall at the school. It is already a source of parrot pride for the community. It depicts the dry forest ecosystem of northern Costa Rica and all three parrot species that live there. Children were involved throughout the program, and contributed by painting their hands onto the adjacent walls, which also say "Protect the Parrots" and "Love the Parrots" in Spanish.

We also created education materials including a



Chris Dahlin and students listen to Yellow-naped Amazon calls.

Powerpoint presentation and parrot worksheets, which members of the Wright laboratory co-designed with ACG education staff including Rosibel Elizondo. Main points of the education module include:

1. Basic ecology of dry forest parrots,
2. Why parrots are special and should be protected,
3. Why parrots are at risk: poaching and deforestation,
4. What kids can do to help: e.g., Do not buy or own a parrot.

Students also visited an actual nest with chicks and viewed the nest with a nest camera, while at the same time learning why chicks should stay in the wild. During the nest visit they learned

about our scientific research and practiced their parrot call imitations.

Children reinforced the information they acquired through the program by drawing a picture of Yellow-naped Amazons and writing a message about them. We had beautiful sunny days to sit and draw our parrot pictures outside beneath the trees. My mother, Deb Dahlin, an art teacher, facilitated an exchange of drawings and messages with her 6th grade students at Elmcrest Elementary in NY State.

We decided it was vital to increase nest protection in tandem with the educational aspects of the program, so we partnered with the ACG to begin our first year of nest monitoring. We showed park rangers where all our nests were so they could monitor them throughout the nesting season and they intercepted one poacher on their first day on patrol.

Our first effort was a mixed success. Students' were very enthusiastic throughout the program and thrilled to learn about the parrots. However, poaching continued in 2007 in our field site. In 2008 we will extend our program to more schools and plan to expand the nest adoption component generously sponsored by the WPT. The ACG also plans to bring our parrot education presentation to schools throughout northern Costa Rica. We are confident that with the partnership between the WPT, the ACG and NMSU our program will begin to meet its primary objective of reducing levels of parrot poaching. We also hope our program can serve as a model for other education programs directed at parrot conservation throughout the world.



5th and 6th graders wearing their WPT wrist bands with NMSU researchers and ACG staff in front of the mural.