

A vibrant Green-headed Tanager is perched on a textured, brown branch. The bird's plumage is a mix of bright blue, green, and yellow, with a distinctive black stripe through its eye. It has a black beak and is looking towards the right. The background is a soft, out-of-focus green, suggesting a forest environment.

Green-headed Tanager. *Serra Bonita Reserve, Bahia, Brazil; 31 January 2011.*
Photo by © David J. Krueper.

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Brazil's “Beautiful Mountain” Serra Bonita

At dusk, we are just passing through Camacan, in the state of Bahia, on Brazil's east coast. Up ahead we can see the Serra Bonita mountain range, and with much hand waving and rapid Portuguese (which we do not understand), our driver indicates that the Serra Bonita Reserve complex, with its research station and lodge, is located somewhere on that slope above. It is January 30, 2011, and Lukas Daneu, a friendly university student, has picked us (the two of us and our friend Dale Stahlecker) up at the small airport in Ilhéus, carefully secured our luggage to the top of his “classic” (old) Toyota Land Cruiser, and driven us 120 kilometers (75 miles) from Ilhéus on the coast gradually inland and southwest through Itabuna, São José da Vitória, and finally now through Camacan, the town closest to Serra Bonita.

Lukas apparently drives the truck by instinct because the gas gauge stays firmly stuck on completely empty and the speedometer spins wildly back and forth between 20 and 60 kilometers (12–37 miles) per hour. At the turnoff from the “main” dirt road out of Camacan, Lukas locks down the hubs, and uses four-wheel drive for the steep, muddy road. It is getting dark rapidly. Two nightjar species flush from the road as we bounce and rattle upward. After much discussion, we decide that those with white in the tail are Common Pauraques and those without are probably Short-tailed Nighthawks.

We arrive at Serra Bonita in the dark, and Vitor Osmar Becker is waiting for us. He and his wife, Clemira Ordoñez Souza, are the powerhouses behind the Serra Bonita Reserve. Vitor is a world-famous entomologist, having spent his entire career in the study of Lepidoptera, especially moths. Clemira used to manage an elementary school at the University of Brasília, and she worked with adult literacy projects. Clemira also assisted Vitor on collecting trips. During these trips, they witnessed the rapid, drastic destruction of habitats throughout South America and concluded that there was no point in preserving dead specimens in museums if nothing was being done to keep species alive in nature. They decided that when they retired they would purchase some forest and dedicate the rest of their lives to preserving it.



Vitor Becker (back) and Clemira Souza (front) began acquiring land to create the Serra Bonita Reserve in 1998 using their retirement benefits, savings, and the proceeds from selling their home in Brasília. *Serra Bonita Reserve, Bahia, Brazil; 10 January 2010. Photo by © Karen Koltes.*



The reserve overlooks the lowlands and the city of Camacan below. *Serra Bonita Reserve, Bahia, Brazil; 8 March 2005.*
Photo by © John Tschirky.



The Serra Bonita Research Center is situated on the slopes of the Serra Bonita mountain range. *Serra Bonita Reserve, Bahia, Brazil; 5 November 2011.* Photo by © John Tschirky.

Because the Atlantic Forest is the most threatened biome in Brazil, Vitor and Clemira located their project here. They began acquiring land in 1998, and in 2003 they began building a research station and lodge. These facilities have two main purposes: to provide good accommodations and resources for research and ecotourism, and to generate income for the reserve. After dedicating 10 years to this endeavor, the couple received both the 2009 Ford Prize for Environment Conservation and the 2010 National Geographic Society–Buffett Award in recognition of their leadership in Latin American conservation. We have known Vitor for about 20 years, and we have been in touch over the

past five years about Vitor and Clemira's interest in making connections with the international birding community.

We settle into the lodge, about a half mile from the research station. The rooms are comfortable with a double bed, or two singles, a tiled bathroom with hot shower, a desk nook, and a large window and door opening onto the balcony, looking out into the rain forest. After unpacking, we head up to the research station, where we have the first of many wonderful home-cooked meals and conversations with Vitor and Clemira about the wildlife-viewing opportunities at Serra Bonita and their visions for this private reserve.

The Atlantic Forest is one of the most diverse biomes on Earth, and only 8% remains of the portion found in Brazil. The Serra Bonita mountain range, covering approximately 7,500 hectares (18,525 acres), supports one of the last remnants of native Atlantic Forest in the southern region of the state of Bahia. Vegetation ranges from evergreen forest with components of moist lowland deciduous forest up a gradient of 160–900 meters (525–2,950 feet) elevation to moist submontane forest near the summit. About half of the

land cover is pristine forest, and the remainder is a forest-dominated landscape mosaic of different successional forest stages and cabruca (a system by which cocoa trees are planted under thinned

The Black Jacobin is one of the most common species at the feeder at the reserve. *Serra Bonita Reserve, Bahia, Brazil; 4 February 2011.*
Photo by © David J. Krueper.



natural forest canopy). These remaining forests are high conservation priorities, as they support some of the highest species diversity and endemism in the world.

By 2001, Vitor and Clemira had purchased nearly 50 properties. They created the Instituto Uiraçu, a non-government organization whose mission is to preserve, restore, protect, and conserve Atlantic Forest ecosystems in the Serra Bonita mountain range. Uiraçu is taken from the Tupi Indian word for Harpy Eagle, a species that was found here until the 1970s, but is nearly extirpated in the Brazilian Atlantic Forest. Vitor and Clemira hope to restore this rare species to Serra Bonita by protecting and restoring habitat.

Through the efforts of Vitor and Clemira and the institute, the Serra Bonita Reserve complex has come into being—a private conservation initiative consisting of a consortium of privately owned properties today totaling about 1,800 hectares (4,446 acres). The institute conducts integrated management of the reserve; its ultimate goal is to include the entire Serra Bonita mountain range under its protection. In 2004, more than 1,200 strictly protected hectares (2,965 acres) of the reserve were converted to Private Natural Heritage Reserve status, which provides official protection under Brazilian law and limits use to research, environmental education, and ecotourism. The reserve is patrolled by a team of four park rangers. The institute also supports research to increase knowledge about the flora and fauna of Serra Bonita. The reserve has excellent facilities; the research station includes six laboratories, two collections rooms, a scientific library, an auditorium, and a preparation room. It houses the Becker Collection of Lepidoptera, Vitor's private collection of Neotropical moths—more than 250,000 specimens that represent more than 25,000 species!

The lodge is available to researchers, ecotourists, and birders; there is additional, “basic” housing for students. Vitor told us, “Money should not be a problem for students to be able to conduct their research here. If the student's project funding includes support for lodging, we ask them to pay. But there is always housing even if they cannot pay.” Finally, the institute supports environmental education for its members and the local community.

Although little inventory or research has been conducted at Serra Bonita, that is changing as international researchers and students work here. Available field guides frequently map species distributions that stop in the state of Espírito Santo to the south; however, many of those species are now being documented at Serra Bonita. The cur-

The Pink-legged

Graveteiro was only discovered in 1996; it is classified as “vulnerable” on the IUCN Red List. *Serra Bonita Reserve, Bahia, Brazil; 15 November 2011. Photo by © Luiz Claudio Marigo.*



rent reserve species list includes more than 450 trees, 680 vascular plants, 70 frogs, 80–100 mammals, 5,000 moths and butterflies, and 75 bees.

Birdlife International/SAVE Brasil has designated the reserve as an Important Bird Area. A preliminary study estimated that 350 species of birds inhabit the mountain range; nine of these have threatened status and 59 are endemic to the Atlantic Forest. There are two still-undescribed bird species at the reserve. One is a tapaculo (family Rhinocryptidae), and the other is a treehunter (family Furnariidae). One of our target species for the trip is the Pink-legged Graveteiro (*Acrobatornis fonsecai*), which we call the PLG for short. The species (and genus) was confirmed in 1996 (Pacheco et al. 1996, Whitney et al. 1996), and the Serra Bonita Reserve is the only designated protected area that preserves habitat for this Brazilian endemic. Its primary habitat is subtropical/tropical lowland moist forest, but it has also been found in plantation habitats.

On our drives up and down the mountain, Vitor shows us three different nests. During our visit, we center part of each birding day on these sites and other promising locations. We look, we wait, we listen, we look some more, but no sign of a smallish gray bird with pink legs. One day our friend Dale hitches a ride with Vitor and Clemira to the “PLG nest spot”; we stay up at the research station birding. Within five minutes of dropping Dale off, the PLGs show up in the nest tree! That turns out to be the last, best, and only view of this target species. Oh well, that's the tradeoff, because, while Dale is viewing the PLGs, we see a Sharpbill—which would have been a lifer for him.

But the PLG is not our only target. Birding opportunities

For those who love to travel to exotic places and want to spend their money on a good cause, the Serra Bonita Reserve welcomes you <uiracu.org.br/en/visite.html>. For those who cannot or do not want to travel, but would like to support a place that may one day welcome back Harpy Eagles, Red-billed Curassows, and brown howler monkeys, there are many ways to contribute. Contact Vitor Becker directly <becker.vitor@gmail.com> or visit Serra Bonita's website <uiracu.org.br/en/serrabonita.html> and become a member of the institute. Help purchase land through the “Save an Acre of Serra Bonita” campaign, help manage the reserve complex through their “Adopt an Acre of the Serra Bonita Reserve Complex,” or help pay for the salary, equipment, and uniforms of the trained park rangers based out of Camacan.



are many, and we do not have time to take advantage of all of them in our seven days. The roads are excellent places to bird, giving us more space to see up into the canopy or down into the underbrush than if we were on a smaller trail. We walk the road down the mountain and up to the communication towers. We hitch a ride down to Fazenda Paris, a separate unit of the reserve complex, where we walk a loop trail through the forest. And we spend a lot of time birding from the back terrace of the research station, where there is a fruit feeding tray, a hummingbird feeder, and a beautiful view down the mountain toward Camacan; on a clear day, the Atlantic Ocean glints on the horizon. The reserve has 10 kilometers (6.2 miles) of maintained trails, but we don't have time to explore them on this trip, which means that we'll miss some of the secretive forest "ant-things," as we lovingly call them.

There is not enough space to describe everything we saw, so here are a few glimpses—enough to whet your appetite. Species marked (E) indicate Brazilian endemics.

- *One afternoon we're headed* from the station to the lodge for a shower and a nap. We never make it. We come upon a huge mixed feeding flock, consisting of these highlights: Spotted Piculet (E), Yellow-throated Woodpecker, Long-tailed Tyrant, Rufous-winged Antwren, Streaked Xenops, and Rufous-headed Tanager (E). We switch between binoculars, madly writing notes, and flipping through the field guide...

- *We have only one really rainy day*—more than just the usual tropical afternoon shower. The clouds coalesce in the valley and rise up the mountain to engulf us, lifting like fog, drifting up and past the station. The light rain gradually becomes heavier. The hummingbirds, especially the Black Jacobins, are undeterred. They perch, fan their tails, and flutter their wings as the rain comes down. So much for thinking that they'd quickly try to find shelter! We even see a Violaceous Euphonia throw its head back, open its beak, and catch raindrops...

- *At about 4:00 p.m. each day*, the hummingbirds begin hanging around the terrace as if they can tell time—4:30 is when the hummingbird feeder is refilled. Vitor pours some of the sugar water into his hand and holds it out; a few hummingbirds sit on his hand to drink. When he finally hangs the feeder, there is a buzzing, whirling feeding frenzy as the birds swarm in and jockey for position. Sombre Hummingbirds (E), Black Jacobins, and Violet-capped Wood-

The banana feeding trays at the reserve are festooned in a noisy kaleidoscope of tropical plumage—scarlet, turquoise, gold, malachite green, and sky blue. From top to bottom: **Red-necked Tanager**; **Golden-chevroned Tanager**, a Brazilian endemic; and **Maroon-bellied Parakeet**. Serra Bonita Reserve, Bahia, Brazil; 31 January 2011. Photos by © David J. Krueper.

nymphs are most common. Swallow-tailed Hummingbirds, Black-throated Mangos, Frilled Coquettes (E), and Brazilian Rubies (E) also frequent the feeder and the flowering lantana. The hermits—Rufous-breasted, Scale-throated, and Reddish—are seen most often in the forest along the roads...

- *The banana feeding tray is mobbed* by Maroon-bellied Parakeets, Sayaca, Azure-shouldered (E), Golden-chevrons (E), Green-headed, and Red-necked tanagers, Green Honeycreepers, and Violaceous and Orange-bellied euphonias. In contrast, the drab Rufous-bellied Thrushes are very furtive; they grab pieces of banana that drop to the ground and fly off to eat them in secrecy. But the bananas are not just for the birds. We frequently see a family of crab-eating foxes that lives in the rocks below the terrace. Four of the six primate species historically found in this region can still be found at Serra Bonita; we are fortunate enough to observe one. A troupe of 10 Wied's black-tufted-ear marmosets is seen regularly: adults, at least three small babies, and two teenagers. The southern Bahian masked titi monkey, and the endemic and endangered yellow-breasted capuchin and golden-headed lion tamarin are also present. One of the goals of the reserve is to reintroduce the locally extirpated northern muriqui and brown howler monkeys...

- *There is a completely different set of birds* seen elsewhere on the reserve, or in the near vicinity, adding to our trip list. Along the roads in the forest some of the highlights are: Golden-capped Parakeet (E), Yellow-eared Woodpecker (E), Crescent-chested Puffbird (E), Green-backed and Chestnut-crowned becards, Cinnamon-vented Piha (E), Gray-headed Tody-Flycatcher (E), Gray-hooded Attila (E), Spot-breasted Antvireo (E), Ferruginous Antbird, White-shouldered Fire-eye, Bahia Spinetail (E), and Planalto Woodcreeper. We believe we saw the Gray-capped and Bahia tyrannulets, but we had some problems identifying small flycatchers. In the open country at the base of the mountains, we find Brazilian Teal, Guira

Cuckoo, Black-necked Aracari, White Woodpecker, Swallow-wing Puffbird, White-headed Marsh-Tyrant, Band-tailed (E) and Rufous horneros, Rufous-fronted Thornbird, Thrush-like Wren, Chestnut-capped and White-browed blackbirds, and Red-cowled Cardinal (E)...

To us, one of the best parts of tropical birding is not so much checking off another lifer, although that is exciting, but the opportunity to observe some little vignette in the life history of an unfamiliar species. Sometimes we understand what is happening; sometimes not. We spot a Black-and-white Hawk-Eagle that soars across the slope in front of the station and lands in the top of a tree along a ridgeline against the sky. While we watch, the bird flaps its wings, fans its tail, and proceeds to tumble forward on the branch while holding on with its talons, so that it hangs upside down, fluttering and fanning its tail for a few seconds. Then it lets go, drops into flight, and is gone over the ridge.

We had a fabulous time familiarizing ourselves with species that we never see at home, and have been amazed by others with such broad distributions that we have seen them

The Witness Tree is a bapeba tree, endemic to Brazil. The species is on the IUCN Red List. Serra Bonita Reserve, Bahia, Brazil; 31 January 2011. Photo by © Janet Ruth.



Scientific Names of Neotropical Bird, Mammal, and Plant Species Mentioned in this Article

BIRDS

Red-billed Curassow (*Crax blumenbachii*)
 Brazilian Teal (*Amazonetta brasiliensis*)
 Harpy Eagle (*Harpia harpyja*)
 Black-and-white Hawk-Eagle (*Spizastur melanoleucus*)
 Golden-capped Parakeet (*Aratinga auricapillus*)
 Maroon-bellied Parakeet (*Pyrrhura frontalis*)
 Guira Cuckoo (*Guira guira*)
 Short-tailed Nighthawk (*Lurocalis semitorquatus*)
 Rufous-breasted Hermit (*Glaucis hirsutus*)
 Scale-throated Hermit (*Phaethornis eurynome*)
 Reddish Hermit (*Phaethornis ruber*)
 Sombre Hummingbird (*Aphantochroa cirrochloris*)
 Swallow-tailed Hummingbird (*Eupetomena macroura*)
 Black Jacobin (*Florisuga fusca*)
 Black-throated Mango (*Anthracothorax nigricollis*)
 Frilled Coquette (*Lophornis magnificus*)
 Violet-capped Woodnymph (*Thalurania glaucopis*)
 Brazilian Ruby (*Clytolaema rubricauda*)
 Black-necked Aracari (*Pteroglossus aracari*)
 Spotted Piculet (*Picumnus pygmaeus*)
 White Woodpecker (*Melanerpes candidus*)
 Streaked Xenops (*Xenops rutilans*)
 Yellow-eared Woodpecker (*Veniliornis maculifrons*)
 Yellow-throated Woodpecker (*Piculus flavigula*)
 Crescent-chested Puffbird (*Malacoptila striata*)
 Swallow-wing Puffbird (*Chelidoptera tenebrosa*)
 Green-backed Becard (*Pachyrhamphus viridis*)
 Chestnut-crowned Becard (*Pachyrhamphus castaneus*)
 Sharpbill (*Oxyruncus cristatus*)
 Cinnamon-vented Piha (*Lipaugus lanoides*)
 Gray-capped Tyrannulet (*Phyllomyias griseocapilla*)
 Bahia Tyrannulet (*Phylloscartes beckeri*)
 Gray-headed Tody-Flycatcher (*Todirostrum poliocephalum*)
 White-headed Marsh-Tyrant (*Arundinicola leucocephala*)
 Long-tailed Tyrant (*Colonia colonus*)
 Gray-hooded Attila (*Attila rufus*)
 Spot-breasted Antvireo (*Dysithamnus stictothorax*)
 Rufous-winged Antwren (*Herpsilochmus rufimarginatus*)
 Ferruginous Antbird (*Drymophila ferruginea*)
 White-shouldered Fire-eye (*Pyriglena leucoptera*)
 Band-tailed Hornero (*Furnarius figulus*)
 Rufous Hornero (*Furnarius rufus*)
 Bahia Spinetail (*Synallaxis whitneyi*)
 Rufous-fronted Thornbird (*Phacelodomus rufifrons*)
 Planalto Woodcreeper (*Dendrocolaptes platyrostris*)
 Thrush-like Wren (*Campylorhynchus turdinus*)
 Rufous-bellied Thrush (*Turdus rufiventris*)

Chestnut-capped Blackbird (*Chrysomus ruficapillus*)
 White-browed Blackbird (*Sturnella supercilialis*)
 Red-cowled Cardinal (*Paroaria dominicana*)
 Sayaca Tanager (*Thraupis sayaca*)
 Azure-shouldered Tanager (*Thraupis cyanoptera*)
 Golden-chevrons Tanager (*Thraupis ornata*)
 Green-headed Tanager (*Tangara seledon*)
 Red-necked Tanager (*Tangara cyanocephala*)
 Green Honeycreeper (*Chlorophanes spiza*)
 Rufous-headed Tanager (*Hemithraupis ruficapilla*)
 Violaceous Euphonia (*Euphonia violacea*)
 Orange-bellied Euphonia (*Euphonia xanthogaster*)

MAMMALS

Wied's black-tufted-ear marmoset (*Callithrix kuhli*)
 golden-headed lion tamarin (*Leontopithecus chrysomelas*)
 yellow-breasted capuchin (*Cebus xanthosternus*)
 southern Bahian masked titi monkey (*Callicebus melanochir*)
 southern brown howler monkey (*Alouatta guariba*)
 northern muriqui monkey (*Brachyteles hypoxanthus*)
 crab-eating fox (*Cerdocyon thous*)

PLANTS

bapeba tree (*Pouteria bapeba*)

The Brazilian endemic **Crescent-chested Puffbird** perches quietly under the canopy at Serra Bonita. Well camouflaged, it is a "sit-and-wait" predator. Serra Bonita Reserve, Bahia, Brazil; 3 February 2011. Photo by © David J. Krueper.

elsewhere in the Americas. But Brazil, to a more unrecognized extent, also plays host to Neotropical migrants that breed in North America. Although we did not see any definite northern migrants, the following species have been recorded in southeastern Brazil: Dusky-capped and Brown-crested flycatchers, Bank Swallow, Purple Martin, Barn and Cliff swallows, Veery, Swainson's Thrush, Blackpoll, Blackburnian, Cerulean, Black-throated Green, and Canada warblers, and Bobolink. Only the Swainson's Thrush has been recorded at the reserve, so there are many opportunities to increase our knowledge of how the Atlantic Forest supports northern migrants.

There are magical places all around the world that protect resident and migratory birds, and the habitats on which they depend, and offer birding opportunities like these. People can contribute in many ways to bird conservation in these places. Shire (2010) wrote about "conservation birding" and the opportunity to see rare species in exotic places while contributing to the conservation of these birds and their habitats. In September 2011, *National Wildlife* magazine published an article by Laura Tangley titled "Conservation: Birders Saving Birds (and More)." Several programs now certify lodges and reserves that provide great birding opportunities and are conservation minded; these include Conservation Birding (American Bird Conservancy) and Neotropical Birding Lodges Network (Neotropical Bird Club).

Serra Bonita is one of the new places where birders can contribute to the conservation of tropical birds in the Brazilian Atlantic Forest, and we have nominated it for certification by both of these programs. Since we submitted these nominations, the Instituto Uiraçu has formalized partnerships with the American Bird Conservancy and with the World Land Trust. The current focus of these partnerships is to continue acquiring key parcels of adjoining land for Serra Bonita Reserve. What we find most compelling about Vitor and Clemira's efforts at Serra Bonita is that this is truly a place where all the money you spend goes toward the acquisition of land, conservation easements, support of education, outreach, and research, and building of a basic infrastructure (for example, a reserve manager's house, a cantina to feed visitors, and a road paved with local rock) to support reserve activities. This is a nonprofit effort aimed at saving a place and its inhabitants, and establishing a pro-



Wied's black-tufted-ear marmosets of all ages look like wizened old men with hair growing out of their ears; they also sport orange thighs and long, striped tails. *Serra Bonita Reserve, Bahia, Brazil. 4 February 2011. Photo by © David J. Krueper.*

gram that will outlive its founders. See the sidebar, p. 49, for information on how to contribute to conservation at Serra Bonita Reserve.

The Witness Tree is a huge tree dominating the ridgeline above the research station. It stands head and shoulders above the surrounding younger trees, documenting what this forest looked like before much of it was cut down. The reserve protects it as a reminder of what is being saved and restored. Another sign of hope: A student conducting a study of the mammals of Serra Bonita incidentally captured a photo of a recently fledged Harpy Eagle (Sánchez-Lalinde et al. 2011) on 12 November 2010, suggesting that there is a breeding pair

nearby! Given that the Harpy Eagle is nearly extirpated from the Atlantic Forest, this is exciting news for an organization that has chosen the species for its logo.

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This young **Harpy Eagle** image was captured by a surveillance camera trap. *Serra Bonita Reserve, Bahia, Brazil; 12 November 2010. Photo by © Catalina Sánchez-Lalinde.*