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## Eye on the Environment

### From the Rainforest to Our Backyards: Neotropical Migrants Return to the Seeley Swan

By Mike Palladini

Last April my wife and I were lucky enough to spend a week in Soberania National Park in central Panama. Being the bird enthusiasts that we are, we spent much of our time hiking through the rainforest, attempting to glimpse as many of the country's 900 bird species as we could. Though many of the 230 species we spotted that week were residents that make their year-round home in the tropics, we were also excited to see several species we've come to know and love from right here in the Seeley Swan.

These sightings reminded us of the amazing journey these birds (known as Neotropical migrants) undertake each year, one that leads them from the temperate forests and riparian areas of places like the Swan and Clearwater Valleys, thousands of miles south to the jungles of Central and South America, and back again. We felt a renewed sense of awe in thinking about the fact that many of these birds would find their way back to the same forest or river system they were born or nested in the year before. It was a wonderful and humbling experience to see some of the birds that, for us, have come to symbolize summer in the forests and wetlands of western Montana making their way through Central American jungles on their return journey.

One of the first birds we spotted after arriving in Panama was the Swainson's Thrush, whose hauntingly beautiful song has come to define warm summer evenings in the woodlands of northwestern Montana for us. This turned out to be one of the birds we most commonly glimpsed foraging high in the rainforest canopy.

Each evening, while enjoying the sights and sounds of the jungle from an observation deck perched just above the canopy, we watched in amazement as wave after wave of northward-bound Barn Swallows flew overhead in unbroken lines that lasted for minutes on end. We couldn't help but wonder whether these flocks contained the pair that nested under our eaves and fledged four young last summer.

Encounters with Yellow Warblers, one of the most common breeding birds in many riparian areas within the Clearwater and Swan Valleys, inevitably put us in a reflective mood. Could the individual we sighted flitting around the canopy amidst a group of raucous howler monkeys, or the one we heard singing from a thicket on the bank of the Panama Canal be the same whose "sweet-sweet-sweet-sweeter-than-sweet" song has been drifting through our bedroom window on the cool morning breeze for the last few weeks?

On several occasions, we gazed in disbelief as thousands of migrating birds of prey drifted northward on masses of hot air rising from the steaming jungle. These immense groups included Swainson's Hawks on their way from their Argentinean wintering grounds to their breeding areas in the intermountain west of the United States. Some of these hawks would find their way back to the same nest tree, and in some cases, the same nest they utilized in previous breeding seasons.

The enormous scope of bird migration in terms of the number of individuals involved and the distances

covered is difficult to fathom. This likely contributed to the fact that humans did not come to a basic understanding of this incredible natural phenomenon until the 19<sup>th</sup> century. Prior to this time, it was believed that many bird species hibernated. Swallows, for example, were thought to winter in mud under ponds and marshes. Early naturalists wrote of people claiming to have seen large numbers of swallows congregate in marshes until their reed perches gave way under the accumulated weight, submerging them and initiating their winter hibernation. In other records, fishermen in northern latitudes claimed to have reeled in their nets to find a catch of both fish and hibernating swallows. We now know that, rather than braving northern winters underwater and underground, swallows travel as many as 7,000 miles to southern wintering areas.

Despite the impressive distances traveled by migrating swallows, other bird species engage in still longer annual journeys. The Arctic Tern travels approximately 16,000 miles between its breeding and wintering areas each year. Each fall, Red Knots fly from their breeding grounds on the Baffin Islands within the Arctic Circle to Tierra del Fuego at the southern tip of South America. In 2007 scientists, with the help of satellites, tracked a Bar-tailed Godwit on the longest sustained bird flight ever recorded. This individual set out from its breeding ground in Alaska's Yukon-Kuskokwim Delta and flew nonstop for eight days until it reached its wintering ground in New Zealand, a distance of 7200 miles. This is the equivalent of flying from San Francisco to New York and back again without stopping. As remarkable is the fact that this godwit ended up just eight miles from where it was captured the year before.

So how do godwits and other long-distance migrants navigate thousands of miles with uncanny accuracy? It turns out

that the answer to this question is as extraordinary as the distances they travel. Researchers have found that birds use a staggering array of environmental cues to find their way, including landmarks on the Earth's surface, magnetic lines running between the poles, the position of the sun, the orientation of the stars, prevailing wind direction, and even odors.

Each year Neotropical migrants fly thousands of miles back to the Swan and Clearwater Valleys because of the rich biological resources and intact natural systems these areas offer. Recent research suggests that many species of Neotropical migrant are experiencing rapid decline, primarily due to habitat destruction and fragmentation. The reproductive success of these species, as well as of our hardy resident birds, depends heavily on the availability of high quality nesting and foraging habitat. As we celebrate the long-awaited return of our warblers, tanagers, vireos, flycatchers, hummingbirds and others, we should recognize that their continued presence each season depends greatly on our efforts to maintain the ecological values that make the Seeley Swan the unique and spectacular place it is.