For most of 2010, Hawk Hill and several miles of Conzelman Road were owned by tractors, earthmovers, and other roadbuilding equipment. The road teams made special efforts to allow GGRO’s hawkwatchers and banders access to Hawk Hill and Hawk Blind whenever conditions were safe. (Photo: Allen Fish)

Contents

DIRECTOR’S NOTE/Allen Fish ................................................................. 5
RESEARCH NOTE/REDTAIL TALES FROM THE HEADLANDS/Buzz Hull ................................................................. 6
2010 TELEMETRY SEASON/FROM BEACHES TO BLIZZARDS!/Libby Rouan, Barb Westree, Lynn Jesus ................................. 8
BANDING 2010/A SEASON FOR OPTIMISTS/Beth Wommack ..................... 12
BAND RECOVERIES 2010/A RETURN FOR THE BEST/Jonathan Stein ................ 14
HAWKWATCH 2010/A YEAR LIKE NO OTHER/Allen Fish ..................... 22
PEREGRINATIONS/THE YOLO BYPASS: AN AVIAN PARADISE ONLY TWO HOURS AWAY/Genevieve Rozhon ................. 26
DONORS ............................................................................................. 28
VOLUNTEERS .......................................................... 29
RAPTOR PLUMAGES/RED-SHOULDERED HAWKS: SPECIES OR SUBSPECIES?/Allen Fish ....................... 30
DIRECTOR’S NOTE  Allen Fish

The Director’s Note and the article by Wayne Swaney have been removed at the request of the Mills family. Please contact the GGRO for the full versions at ggro@parksconservancy.org.
These cryptic, almost code-like numbers, letters, and dates (right) help keep me humble when I think about what we know about that common, ubiquitous raptor, the Red-tailed Hawk. Our hawk-watch team usually counts more Red-tailed Hawks than any of the other 18 species we may see from Hawk Hill during autumn migration, an average of 9,427 Redtail sightings annually—almost 19 per hour—over the 10 year period from 2000 through 2009. It is our third most commonly banded species, at an average of 333 birds banded per season from 1992 through 2009.

The early GGRO banders spent many hours speculating about Red-tails on quiet days in the blind: Why do we see so many more juveniles than adults? Why do we see two seasonal peaks of activity? Are the birds in the first peak from local nests, and are the birds in the second peak coming from the far north? Do the same birds come by repeatedly in the course of a day, or are they cycling through the Marin Headlands multiple times during the fall/winter season? When we see a group of them moving together, are they family groups? Why is there so much plumage variation in the west, compared with Redtails in the east? Where do they spend the winter?

And of course, we always wonder: Where are they coming from? and where are they going?

THE NUMBERS

The greatest number of Redtails banded at the GGRO in a season was 510, way back in 1994. The record for Redtail banding futility at the GGRO is 105 banded in 1998—a number we barely surpassed, by the way, during the 2010 season. Even in 1984, our first full season of banding, we banded 156 Redtails.

The number of adult Redtails banded here has varied from a high of 81 in 2007 to a low of only two in 2010.

THE LETTERS

Since 1994, the GGRO banders have been able to age Redtails fairly precisely by molt status. We do this by paying close attention to which flight feathers are retained, as well as feather wear, fading, and patterns. We use the various Bird Banding Laboratory codes to designate ages, based on the calendar year of birth: HY = hatching year; SY = second year; TY = third year; AHY = after hatching year; ASY = after second year; ATY = after third year.

The Hawkwatch data are recorded under RTHAJUV for juvenile Redtails; RTHAAD for adult Redtails; and RTHAUND for Redtails of undocumented age.

THE DATES

The double-peaked movement of Red-tailed Hawks through the Marin Headlands is striking (as shown by the graph of the count data on page 6), and statistically significant. Understanding this pattern of Redtail movement through the
Headlands required the synthesis of data from all of the study methods we have used at the GGRO: hawk counts, banding and band recovery data, radiotracking data, and laboratory data from collaboration with the Wildlife Genetics Lab at UC Davis.

Banding recovery data show differences in patterns of movement between Redtails banded in the first peak and those banded in the second peak. Birds banded between mid-August and October 1 move to the north about as often as they move to the south, resulting in no net movement in either direction. Birds captured during the second peak show a strong southward bias in the locations where they were encountered during that first fall after banding. This directional difference is also seen with the radiotracking results between first and second peak Redtails, although the sample size is smaller and not statistically significant.

Finally, we discovered genetic differences between the two peaks. Genetic testing revealed that during the first peak, 82% of the Redtails are from the population that breeds in Central California and 18% are genetically like the Redtails breeding in the Great Basin. During the second peak, 60% show Central California genetic patterns and 40% are the Great Basin type.

In retrospect, the endless and somewhat uninformed early discussions among GGRO banders seem to have had a shred of accuracy: Most of the first peak birds are from central California, while a larger portion of the second peak birds are coming a greater distance. Although, to be honest, I remember those discussions as more like: “Birds hatched from local nests are passing Hawk Hill first, and those coming from the far north take longer to get here because they have farther to come.”

So, what questions are left to answer about the Redtails moving through the Marin Headlands?

We still don’t understand why we have such a large variation in the numbers both counted and banded from year to year. It is especially puzzling in those years, like 2005 and 2010, when the first peak is of the expected magnitude and the second peak fails to appear. And the related question, “Why did we only band two adults in 2010 when we banded 81 three years earlier with similar effort?” also remains unanswered at this point.

Also, we can only continue to speculate as to why western Redtails show more plumage variability than do eastern Redtails. Migration counts and banding may never be able to address this question.

The one certainty is that the GGRO will continue to ask questions and search for the answers.

Research Director Buzz Hull bands his 28th season this fall, and celebrates two decades on staff at the Golden Gate National Parks Conservancy.
The 2010 Radiotelemetry season was fun and successful, kicked off by again brainstorming names beginning with “A.” This means that we had completed tracking 26 juvenile Red-tailed Hawks since the radiotelemetry program began in 1990. This year, two additional tracked Redtails actually cooperated with our plans and flew south!

For those who have not witnessed GGRO telemetry firsthand, each team (there are three tracking each bird) packs an amazing assortment of tools to track their prey. Most important are two antennas—a directional antenna called a Yagi, and a non-directional antenna called an Omni. Other tools of the trade include the radio signal receiver, a GPS unit, two-way radio, cell phones, and a beeper. Then there is the paper: a binder listing all known accessible high points, information for restricted areas in which we are permitted access, a book of maps showing every inch of California from Oregon to Mexico, and forms, and more forms. Remember, we rarely see the bird. Instead, three two-person teams are tracking the radio signal by triangulating bearings toward the source. Recording accurate data is essential.

Here, we report the truth about the search for that ever-elusive transmitter beep, and resulting compass readings and bearing plots showing where the hawk moved and how it got there. And, like the postal workers, neither rain, nor sleet, nor snow, nor hail kept us from trying to pinpoint the hawks’ whereabouts. And if you don’t believe me... just keep reading.

ATHENA

On Wednesday afternoon, November 10, the telemetrists released a female juvenile Red-tailed Hawk we named Athena from Hawk Hill. After being dive-bombed by a raven, she settled for the night in the Gerbode Valley of the Marin Headlands.

The next morning, Athena rose very early and shot south of the Golden Gate before 8 AM. To stay ahead of the bird, the team on San Pablo Ridge in the East Bay came off their high point and relocated to Loma Prieta Peak in the Santa Cruz Mountains, arriving by noon. And by 10:05 AM, the team on San Bruno Mountain, just south of San Francisco, headed to a more southerly high point, Black Mountain in the Monte Bello Mid-peninsula.
Regional Open Space Preserve, stopping along Skyline Ridge/Highway 35 for readings on the way. Neither team had signals from Athena from their new locations.

The third team chased Athena through San Francisco, getting bearings along 19th Avenue and further south on Highway 1. Then, from the intersection of Highway 92 and Skyline Ridge in San Mateo County, their readings showed that Athena was headed west toward Half Moon Bay. Once on Highway 1 south of Half Moon Bay, the team had signals to the west. Ultimately, by the late afternoon, all three teams converged on Athena, triangulating on her bearings and pinpointing her south of Half Moon Bay, near Martin’s Beach, approximately 33 miles south of the Marin Headlands. Martin’s Beach, by the way, is one of the few privately-owned beaches on the West Coast. Nice digs, for a hawk! A little sun, a little sand...

The next day, the distance Athena traveled from her morning to evening roost was a mere 200 yards. The day after that, it was less than half a mile, when she crossed the road to Bob’s Pumpkin Farm. Bob, an admirer of Redtails, graciously allowed the telemetrists to track from his farm’s parking lot on Highway 1. Telemetrists also tracked from a bluff overlooking San Gregorio State Beach. During this time, the teams observed many Redtails in the area. Apprentice tracker Mike Hall noted that it’s “easy to stay on the bird when the bird stays on the perch.” The teams even recorded a visual sighting of Athena on November 13, witnessing her circling above a cow pasture and a grove of eucalyptus trees as she worked her way across the highway. Finally on Sunday, November 14, our last day of tracking her, Athena did not travel any notable distance at all.

**BONNIE**

With Athena sedentary at Martin’s Beach, the telemetrists opted to start tracking another hawk. Bonnie, our second female juvenile Red-tailed Hawk, began her telemetry exploits at about noon on Sunday, November 14, when she was trapped at Hawk Blind. After enduring the usual indignities of being banded, examined, weighed, measured, sexed, and having a radio transmitter glued to her central tail feather, she was released from Hawk Hill at 3:40 PM. Her initial flight was north to the FM towers on Wolfback Ridge, and then she headed for the spas and comforts of Sausalito, spending the night in a tree overlooking the city.

Bonnie departed for Half Moon Bay the next morning around 10 AM, flying directly there as the telemetrists thought: “How does she know where Athena is?” But she ended the day along Highway 92, about one mile east of Half Moon Bay—close to, but not quite with, Athena and her fellow neighborhood Redtails.

As November 16 dawned, Bonnie went southward to Pescadero, keeping to the coast. The weather was unseasonably hot and the telemetrists were hoping to follow her to the beach, but Bonnie headed inland and ended the day southeast of Santa Cruz. The following day, she started from her roost in the Forest of Nisene Marks in Aptos, about five miles west of Santa Cruz. Bonnie began to explore the rugged innards of the Coast Range despite the heat, and ended the day near Paicines Reservoir, about 10 miles south of Hollister on Highway 25, about a 40 mile flight from Aptos.

On the November 18, Bonnie meandered from Paicines Reservoir about 25 to 30 miles southwest to Panoche Valley, and then looped...
around to end the day south of the San Luis Reservoir, perhaps 20 miles northwest of her morning location. The following day, Bonnie found a place that could only be “heard” by the team on Mount Hamilton. She was somewhere to the southeast, perhaps down in a valley or behind a ridge so that her signal was blocked from all but one team. To find the bird, the telemetrists climbed to every logical high point in Santa Clara and Santa Cruz counties: Fremont Peak, Mount Madonna, Mount Hamilton, and Pacheco Pass immediately west of the San Luis Reservoir. But Bonnie was hiding, and doing so very well. Meanwhile, the weather became more November-like, turning very cold.

On November 20, the teams again ascended Mount Madonna, Fremont Peak, and Mount Hamilton. While climbing Mount Hamilton, we rose through changes in habitat with elevation, from grassland to chaparral, to digger pine, to oak woodland. We observed a Golden Eagle, other Redtails, a Kestrel, turkeys, quail, and the other usual suspects such as jays and juncos, chickadees and kinglets. And as we rounded a curve, the golden-leaved oaks were suddenly blanketed in fresh white snow. The trees were lovely, but the cold and snow made the roads treacherous. The team tracked as the snow fell all day long on Mount Hamilton. And all day long, Bonnie was silent except for one short interval around lunch-time indicating her direction still to the southeast.

Finally, on Sunday, November 21, the last day of our season, the team stationed on Fremont Peak tracked in bitter cold and freezing rain and hail. A second team headed back to Mount Hamilton, this time encountering closed, snow-covered roads. However, with the assistance of UC Law Enforcement Officer McDonald, the team drove to the base of the unplowed driveway of the observatory. As the snow continued to fall, apprentice tracker Mike Hall wrote “At times we experienced near-whiteout,” but were able to get a signal. Between 10 AM and 1:30 PM, the team recorded multiple bearings showing that Bonnie was soaring in the same southeasterly direction as the previous days. Still, the teams were unable to get cross-bearings to triangulate Bonnie’s location, and the record-breaking wintry weather was not improving.

And so the 2010 radiotelemetry season officially ended and the teams descended their frozen high points for some drier indoor warmth.

POST-SEASON TRACKING

During post-season tracking, Athena’s signal was still beeping in the Half Moon Bay area as late as January 9, 2011. And on January 10, hawkwatcher Keith Gress unknowingly watched Athena through his binoculars in the same area, and then called the GGRO to report his sighting of a juvenile Redtail with an antenna extending from its tail! Maybe Keith will join the telemetry program next season.

As for Bonnie, there were several post-season attempts to locate her, but her signal was never heard again. Whereas Athena became stationary and was “easy” to re-locate, Bonnie was true to her name. The banders had suggested the name “Bonnie,” thinking we could name the next Redtail “Clyde.” She indeed succeeded in finding the perfect hideout!

SUMMARY

The 2010 GGRO radiotelemetry season was truly fun and successful. In starting again with an “A” bird, it brought all the adventure and curiosity back to a new beginning. Athena’s early morning flight was certainly a big surprise, and her choice of beachfront property populated with fellow Redtails was a wise residential investment. Bonnie’s successful concealment somewhere southeast of Mount Hamilton, taking refuge in the freezing wet and white weather, was confounding.

Yet we continued tracking, in heat, cold, rain, hail, and snow, just like the postal worker delivering the mail. I’m sure you are wondering—marveling even—at why. Why do these volunteers do this under such extreme conditions? Well, it’s simple. It is all due to our dedication to the program that tries to answer our most basic question about these raptors within the framework of the overall GGRO mission: Where are the hawks going, and how are they getting there? It is our need to know that drives us, and radiotelemetry is how we find out, regardless of the weather. We look forward to whatever adventure “Clyde” will take us on next season!

Distance cyclist Libby Rouan starts her 20th season with GGRO this year. Now in her 9th year of Golden Gate raptor-dom, Barb Westree is an environmental engineering consultant in her real life. Telemetry Director Lynn Jesus makes the whole thing work like a well-oiled machine.
SOME PEOPLE MAY HAVE HEARD ME SAY THIS BEFORE, but I believe that there is no one more optimistic than a bander. When your success is dependent not only upon the whims of Mother Nature, but also on the actions of a wild animal, the outcome of your endeavor can be largely out of your control. It becomes even more difficult if you are attempting to collect systematic data, for the opportunity to choose advantageous conditions is often taken away from you. What you have left is an amalgamation of grit, experience, training, and luck (hopefully a lot of luck). There is a certain amount of optimism that has to drive this mix. Experience, determination, and dedication can get you a long way, but in order to be successful at accumulating long-term data sets, you have to have the utmost confidence and faith in your success. You have to believe in that “five o’clock bird.”

Part of the importance of optimism for a bander is that no matter the circumstances, we keep our equipment and ourselves prepared at all times. If we are going to be in the field, then we need to be ready at all times. We were certainly ready for this season. Our siteleaders were trained, the apprentices and journeymen were all primed, our dayleaders were well-organized, and our hopes were flying high. It all seemed to come together and 2010 definitely opened with a bang. In August and early September the season seemed to unfold before us, full of Red-tailed Hawks and American Kestrels. By the second week we had caught almost quadruple the number of Redtails for the date, compared to the figure from the previous year (42 to 11). You could hear the excitement in the blinds, and the assurances to the apprentices that this was only the first wave—just you wait, it’ll get better!

Into late September we soared, and our spirits were still flying high. We outlasted the fog, we outlasted the heat, and the Cooper’s Hawks rewarded us with happy waves of feisty accipiter action. The Sharp-shinned Hawks were a little slow, but with the American Kestrels continuing to hover over the banding sites, and the Merlins coming to town, no one was really complaining. We weren’t matching the numbers we had seen in the blockbuster years of 2006 and 2007, but that didn’t mean we weren’t going to have a respectable season, and it definitely did not mean we were not going to catch birds.

Yet by mid-October, we began to really feel those missing Sharpies, and the buteos seemed to have deserted us. Only one Redshoulder had been banded by the end of October, and the number of Redtail captures diminished steadily. Still, the Cooper’s Hawks were flying strong, and falcons were hitting nets and biting fingers. Even though numbers were lower than we had hoped for, expectations were still high for the second wave of Redtails in November.

Unfortunately, the fabled second wave never arrived and we ended the season with the third lowest number of Red-tailed Hawks caught in the history of the GGRO (115). We seem to have repeated the same problem as last year, again missing those late-season buteos. Perhaps it stung just a little more than the year before, because we had such wonderful cap-
ture success in the first two to three weeks. Yet this is one of the inevitable consequences of working on a long-term study. Each year will be different and, unfortunately, the ability to understand the nuances that result in fluctuations of raptor migration only comes after we collect the data, if at all.

Still, when I think about those last few days of banding, though I remember the grumbling, I also remember the optimism. Every siteleader had at least one story to tell their blind-mates about an improbable capture, a day when optimism had waned just as a hawk came crashing through the fog or streaking out from behind the blind into a net. Bander attendance at the blinds did not falter, no matter the poor capture numbers or weather—because, as banders, the chance of that one improbable bird drove us on.

Looking back at the year, I think it is also safe to say it was not all gloom and disappointments. We finished off with a total of 1,142 birds banded, which, while not spectacular, is still comfortably above 1,000 birds. We caught a total of 10 different species of raptors—about average for a season. Our little falcon numbers were very respectable, with 82 Kestrels (third highest for the program) and 52 Merlins. Those elusive and highly coveted adults were caught in mixed numbers, with accipiters and falcons showing average attendance (13 Sharp-shinned Hawks, 15 Cooper’s Hawks, 11 American Kestrels, and one Merlin). Buteos unfortunately trailed way behind, with only two adult Red-tailed Hawks with which to practice molt charts.

For my personal season, well... I never caught more than 10 birds in one day, but I still came away with some great memories. I double-bagged a couple of Sharp-shinned Hawks at Hill 88 Blind, and caught a female kestrel by one loop of a net at Hawk Blind. Perhaps best of all, I garnered one more improbable story. On a day when the weather was poor and the flight of raptors had been awful, I went up to Slacker with Steve O’Neil and Jonathan Stein. We were hoping for a Northern Harrier, a species which had not been caught yet that season, though Jonathan and I had a close try previously at Hill 88.

Steve, Jonathan, and I were happily swapping harrier stories, comfortably full of brownies and Halloween candy. In the middle of one story, without warning or preamble, a Peregrine came streaking over the main lure pole into a net, and Jonathan and I got caught in the door in our rush to get out of the blind! We had no hint of the bird before it entered the site, and if we had not been ready I do not know if we would have caught the falcon. Yet we had that crucial optimism that we would catch something spectacular that day, and perhaps, for a bander, that’s all the warning you need.

One of our 2006 Interns and a long-time GGRO bander, Beth Womack is working on her Ph.D. at UC Berkeley in her spare time. Her research: the significance and variability of the white outer tail marks in male American Kestrels.

### RAPTORS BANDED IN THE MARIN HEADLANDS DURING AUTUMN

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Harrier</td>
<td>1</td>
<td>11</td>
<td>257</td>
</tr>
<tr>
<td>Sharp-shinned Hawk</td>
<td>362</td>
<td>483</td>
<td>9,584</td>
</tr>
<tr>
<td>Cooper’s Hawk</td>
<td>524</td>
<td>568</td>
<td>12,006</td>
</tr>
<tr>
<td>Northern Goshawk</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Red-shouldered Hawk</td>
<td>2</td>
<td>15</td>
<td>305</td>
</tr>
<tr>
<td>Broad-winged Hawk</td>
<td>0</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Swainson’s Hawk</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Red-tailed Hawk</td>
<td>115</td>
<td>333</td>
<td>8,111</td>
</tr>
<tr>
<td>Ferruginous Hawk</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Rough-legged Hawk</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Golden Eagle</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>American Kestrel</td>
<td>82</td>
<td>54</td>
<td>1,158</td>
</tr>
<tr>
<td>Merlin</td>
<td>52</td>
<td>26</td>
<td>522</td>
</tr>
<tr>
<td>Peregrine Falcon</td>
<td>2</td>
<td>4</td>
<td>77</td>
</tr>
<tr>
<td>Prairie Falcon</td>
<td>1</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>Eurasian Kestel</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,142</strong></td>
<td><strong>1,497</strong></td>
<td><strong>32,102</strong></td>
</tr>
</tbody>
</table>

* 1992 through 2009 are used for this comparison due to similarities in banding methods and efforts in those years and the approaches in 2010.
FO R A GGRO BANDER, few actions are more enjoyable than releasing a healthy raptor with a shiny new band around its tarsus back into the wild. It is the most important act we undertake. Only one endeavor can be said to eclipse that particular feat: the re-release of a returning raptor back into the wild.

A returning raptor is one originally banded by GGRO volunteers in the Marin Headlands and then trapped again by GGRO volunteers in the Headlands during a subsequent season. We then can read and report its band number, knowing it is still alive—a happy addition to our recovery database, since most hawks that have their band numbers reported are found dead.

Returns represent a distinct subset of GGRO band recoveries. A banded raptor caught in the Headlands by GGRO volunteers but previously banded elsewhere is not a return but a “foreign recovery.” A raptor banded in the Headlands by GGRO volunteers and subsequently trapped at another site is counted as a recovery for the GGRO.

Returning raptors are rare. In the banding program’s 26-year history, only a small percentage of our band recoveries (2.5%) are returns. The 2010 season brought us two returning rapto rs: Our first-ever returning female Sharp-shinned Hawk and a returning 10-year-old female Cooper’s Hawk banded as a second year bird in 2002.

Of the more than 1,000 band recoveries in the program’s history, 27 are returns. A significant majority of them, 22, are female Cooper’s Hawks. The remainder comprises one male Cooper’s Hawk, one male Sharp-shinned Hawk, one female Sharp-shinned Hawk, and two Red-tailed Hawks.

Most of these hawks returned within three years of their banding and were never heard from again. Others, such as this year’s returning female Cooper’s Hawk, came back after lengthier absences. One Red-tailed Hawk banded as a hatching year (HY) bird in 1998 returned five years later in 2003. One female Cooper’s Hawk banded as an HY in 1996 returned six years later in 2002. One female Cooper’s Hawk banded as an after hatching year (AHY) bird in 1991 returned 13 years later in 2004. Only one raptor in the program’s history returned more than once. A female Cooper’s Hawk banded as an AHY in 1987 returned twice, once in 1988 and again in 1990.

I was lucky enough this year to be in the blind with the returning female Sharp-shinned Hawk (Recovery Number 1071). Banded as an HY in 2009, she returned in 2010 showing all the hallmarks of an adult accipiter. Her lack of juve-
nile feathers meant that we had no other clues to her age until after Buzz looked up her band number. The band was fresh and smooth and the bird was fit and vibrant. She was big, well above the average weight for female Sharp-shinned Hawks, and right at the maximum for wing chord. Re-releasing her was one of the high points of my GGRO tenure.

The 10-year-old Cooper’s Hawk (Recovery Number 1069) caused quite a stir when she was caught. There was a lot of interest in finding out how old she really was. The band was ragged and the numbers worn down, indicative of an older band and an older bird. Mid-molt, she had striking red eyes and a feisty demeanor. She became our fourth raptor to return after an absence of longer than three seasons.

A quick note on the injured American Kestrel (Recovery Number 1046) banded in 2007 and recovered by GGRO volunteers at Fort Cronkhite in 2009. That recovery does not constitute a return. Though the bird was recovered by GGRO volunteers in the Headlands during a subsequent season, it was not trapped by GGRO volunteers in a banding blind and therefore is not considered a return.

Band recoveries are the capstone of the GGRO banding program. They are the reason we affix the bands to the raptors’ legs in the first place. They are a vital window into the life and movements of these boundless and unpredictable creatures. The unfortunate fact is that most of our recoveries occur after injury or death. Returning raptors are not included among that grim majority, however. Returning raptors are full of life, exuberant as ever. Returns represent an opportunity for GGRO banders to reassess, reacquaint, and re-release a raptor, secure in the knowledge of its health and well-being.

*Delaware native and former newspaperman Jonathan Stein interned with GGRO for the 2010 season and now studies Prothonotary Warblers in Illinois.*

## Band Recoveries

*Marion Weeks*

**984** Juvenile female Cooper’s Hawk banded on 9/20/07 by Josh Hull; reported as a “sight record band read by telescope while bird was free” on 11/7/07 at Arroyo Grande, San Luis Obispo Co., CA by Rocio Najera.

**985** Juvenile Red-tailed Hawk banded on 9/5/00 by John Payne; found on 11/13/08 as partially buried bones with band, 36 meters from a wind turbine near Altamont Pass, Alameda Co., CA, reported by Levin Nason. He stated, “This bird was found as part of an effort to document turbine-related fatalities at the Altamont Pass Wind Farm. We assume that RTHAs (Red-tailed Hawks) are a non-predated species and thus the cause of death was from a turbine strike.”

**986** Juvenile Red-tailed Hawk banded on 9/2/94 by Randall Watkins; reported as found 12/12/08—date given on the Bird Banding Laboratory (BBL) report—or “October 2008” as written on questionnaire returned to us by Tony Wilson. He found skin, bones, and feathers at the base of a tree in his yard at Discovery Bay, Contra Costa Co., CA.

**987** Juvenile female Cooper’s Hawk banded on 9/24/07 by Claire O’Neill; found dead one mile west of Petaluma, Sonoma Co., CA on 7/23/09; finder unknown.

**988** Juvenile female Red-tailed Hawk banded on 9/13/08 by Walter Kitundu; found 7/11/09 dead of unknown cause but “fairly fresh” in a backyard at Pacifica, San Mateo Co., CA residence; reported by Ryan McCoy of the Department of Fish and Game.

**989** Adult female Peregrine Falcon banded on 9/24/03 by Craig Nikita; found dead on highway at Riverbank, Stanislaus Co., CA on 7/13/09 and reported as dead by Darin Smallen. No further information available.

**990** Juvenile Red-tailed Hawk banded on 9/9/97 by Claire O’Neill; found 8/5/09 alive in a tree at edge of a farmer’s field outside of LaPine, Deschutes Co., OR but emaciated due to injuries. Gary Landers of Wild Wings Raptor Rehabilitation believes if found earlier, the Redtail could have been saved. The hawk was euthanized.

**991** Adult female Cooper’s Hawk banded on 9/30/04 by Russ DeLong; found dead 8/20/09 near a campground one mile northeast of Easton, Kittitas Co., WA “with very little tissue left... and what little tissue was left was desiccated from the hot dry summer conditions in the mountains.” Reported by Kurt Strand who speculated that it might have been hit by a vehicle.

**992** Juvenile male Cooper’s Hawk banded on 9/15/08 by Helen Davis; found dead 10/5/09, in Loren Neufeld’s backyard in Briceland, Humboldt Co., CA; no signs of injury were noted.

**993** Juvenile female Cooper’s Hawk banded on 10/7/08 by John Ungar; found injured 11/4/09, but later died, at San Miguel, San Luis Obispo Co., CA; finder unknown.

**994** Juvenile female Red-tailed Hawk banded on 11/14/08 by Candace Davenso “band with skeleton or bone only” found 9/15/09 at Redwood City, CA. However, the BBL states Redwood City (San Mateo Co.) as located in Yuba County with latitude and longitude co-
BAND RECOVERY BY SPECIES

- Red-tailed Hawks
- Sharp-shinned Hawks
- Cooper's Hawks
- Merlins
- Red-shouldered Hawks
- Peregrine Falcon
- American Kestrels
ordinates that place the recovery nearer to Marysville in Yuba Co., CA; finder unknown, unable to verify any information.

995 Juvenile male Red-tailed Hawk banded on 11/15/08 by Lynn Schofield; found 11/17/09 with injured left wing on the south side of Redding, Shasta Co., CA. Reported by Judy Beethner of Shasta Wildlife Rescue and Rehabilitation Center. The hawk was euthanized 11/20/09.

996 Juvenile female Cooper’s Hawk banded on 10/11/01 by Buzz Hull; found 10/31/09 alive in roadway near Lincoln Airport, about two miles west/northwest of Lincoln, Placer Co., CA; reported by John Irwin who wrapped the bird in a towel and took it to a vet where it died within hours. John said the bird “appeared well and healthy except for the apparent gunshot, not thin or undernourished.”

997 Second-year female Sharp-shinned Hawk banded on 11/9/07 by Amber Nordby; found dead 12/22/09 by Katie Donovan in her backyard two miles south of Gonzales, Monterey Co., CA.

998 Juvenile male Red-tailed Hawk banded on 12/22/08 by Claire O’Neill; caught due to injury 12/27/08 at the San Francisco Civic Center, San Francisco Co., CA per BBL report. Described as “thin but no injuries” by Peninsula Humane Society personnel; was released 1/17/09.

Reported by Teressa Boyer.

999 Juvenile female Cooper’s Hawk banded on 9/23/08 by Mark Sutherland; found 1/4/10 by John Broadstock, fire chief of Scotia, Humboldt Co., CA inside a warehouse where a population of starlings reside. Reported by Mary Maloney of Humboldt Wildlife Care Center. The hawk was paralyzed in the lower body possibly after hitting a window while chasing a starling. It was given supportive therapy for several days without success, and euthanized.

1000 Juvenile male Cooper’s Hawk banded on 10/1/08 by Galen Leeds; found 1/7/10 minutes after it died by Shane Hansen at his home five miles west of Visalia, Tulare Co., CA. The hawk flew through his garage, struck the window of the back door and was still warm when found.

1001 Juvenile female Red-tailed Hawk banded on 10/18/06 by John Keane; trapped and released 11/26/09 three miles west of Cotati, Sonoma Co., CA by Stan Moore.

1002 Juvenile female Cooper’s Hawk banded on 10/7/06 by jenn Cutler; found 1/17/10 at Renton, King Co., WA; reported by Nicki Rosenhagen. The BBL stated the hawk was “caught by hand” and the final status as “dead,” no further information.

1003 Juvenile female Red-tailed Hawk banded on 10/14/08 by Lynn Bantley; found dead 1/6/10 on electric wire inside electric fencing at Solano State Prison, Vacaville, Solano Co., CA; reported by James Hamilton. This hawk is now stuffed and part of our GGRO collection used for teaching purposes.

1004 Juvenile female Cooper’s Hawk banded on 9/18/05 by Randy Breaux; was trapped and released at HawkWatch International’s banding station at Bonney Butte, Hood River Co., OR on 9/14/09; reported by Jeff Smith.

1005 Juvenile female Cooper’s Hawk banded on 10/1/09 by Lisa Harn; Amy Morse reported hearing “a big thud” on 12/6/09 when this bird hit a window at her home at Nicasio, Marin Co., CA. “There it was... broken neck, beautiful, gorgeous bird.”

1006 Juvenile female Cooper’s Hawk banded on 9/23/09 by Randy Breaux; found dead 9/30/09 at San Rafael, Marin Co., CA; reported by Pablo Gonzalez. No other information available.

1007 Juvenile female Cooper’s Hawk banded on 9/30/09 by Bill Barnaby; reported dead 10/14/09 by George Johnson who may have flushed the raptor when he stopped at the edge of Highway 101 to watch the waves at El Capitan State Beach, Santa Barbara Co., CA. It flew, turned left, and was hit by a car.

1008 Juvenile male Cooper’s Hawk banded on 8/27/09 by Calvin Horn; died 11/10/09 when it flew through a window pane at Sausalito, Marin Co., CA; reported by WildCare.

1009 Juvenile male Red-tailed Hawk banded on 9/4/09 by Eddie Bartley; found 12/30/09 at San Francisco, San Francisco Co., CA with neurological damage and unable to stand. The Redtail could grip and had pain response but just laid in the kennel and was euthanized 1/2/10; reported by Rachel Blatt of the Peninsula Humane Society.

1010 Juvenile female Red-tailed Hawk banded on 12/3/09 by Eddie Bartley; found 1/17/10 “freshly dead” in the old abandoned residential area of Skaggs Island Naval Reservation near the barracks, Sonoma Co., CA; reported by Diane Gonzales. She had no idea why the hawk died.

1011 Juvenile female Red-tailed Hawk banded on 11/8/09 by Ron DeLeon; only a few feathers, some bones, and one foot found 1/25/10 at the base of eucalyptus trees near the Monterey Regional Water Pollution Control Agency located approximately five miles north of Marina, Monterey Co., CA; reported by Jami Davis.

1012 Juvenile male Red-tailed Hawk banded on 11/11/09 by Zeka Kuspa; found dead 2/1/10 two miles west of Los Alamitos, Orange Co., CA; finder unknown.

1013 Juvenile female Red-tailed Hawk
Red-tailed Hawks
Sharp-shinned Hawks
Cooper’s Hawks
Merlins
Red-shouldered Hawks
American Kestrels
banded on 11/13/09 by Carmen DeLeon; found at San Francisco, San Francisco Co., CA; caught by hand on 12/5/09 and found to have no apparent injuries, released on 12/7/09. Reported by Siobhan Corey of the Peninsula Humane Society.

1014 Juvenile male Cooper’s Hawk banded on 10/21/09 by Marc Blumberg; found dead on 12/15/09, “stiff and didn’t appear to have any obvious injuries—did not appear emaciated…on back deck by fish pond at Napa, Napa Co., CA. Reported by Diane Mathieson.

1015 Juvenile male Red-tailed Hawk banded on 12/18/09 by Jill Harley; found dead 2/8/10 one mile east of Niles Junction, Alameda Co., CA in the foothills “lying face up on a cattle trail…” did not appear to have died by hostile human agency…the bird perished within the territory of a nesting pair of Golden Eagles, and within the wintering grounds of several Ferruginous (and) Rough-legged (Hawks), but competition from these great birds rarely extends to lethal violence. Cattlemen in the area…do not use poison…it would appear the cause of the untimely death of this young Redtail must remain, at least at this writing, a mystery.” Reported by Don Ice.

1016 Juvenile female Sharp-shinned Hawk banded on 9/26/09 by Diane Horn; found dead 11/21/09 at San Diego, San Diego Co., CA; reported by Carolyn Goben of Project Wildlife, who believes it probably hit a window.

1017 Juvenile male Red-tailed Hawk banded on 11/29/09 by Diane Horn; found emaciated and weakened 12/6/09 at Mill Valley, Marin Co., CA and taken to WildCare in San Rafael. Cindy Dicke reported the bird was released 1/13/10.

1018 Juvenile female Red-tailed Hawk banded on 12/5/09 by Jeff Acuff; found dead on 1/15/10 at Santa Cruz, Santa Cruz Co., CA; reported by Chris Lynch.

1019 Juvenile female Cooper’s Hawk banded on 10/24/09 by Steve Rock; found on 12/3/09 decomposing on side of road, about 20 miles east of Creston, San Luis Obispo Co., CA; reported by William Palmer.

1020 Juvenile male Cooper’s Hawk banded on 10/17/05 by David Fix; found dead on 11/8/09 on trail overlooking Tomales Bay about two miles northwest of Point Reyes Station, Marin Co., CA; reported by Patty and Don Neubacher.

1021 Juvenile Red-tailed Hawk banded on 10/31/04 by John Ungar; trapped and released two miles north of Sebastopol, Sonoma Co., CA on 11/15/09 by Stan Moore.

1022 Juvenile female Cooper’s Hawk banded on 9/22/08 by Teresa Ely; trapped and released 9/25/09 at HawkWatch International’s raptor migration project site at Bonney Butte, Hood River Co., OR; reported by Jeff Smith.

1023 Juvenile female Red-tailed Hawk banded on 11/12/07 by Mark Jasper; carcass found 10/7/09 under oaks in a side canyon off San Juan Creek two miles from the entrance of Caspers Wilderness Park, seven miles northeast of San Juan Capistrano, Orange Co., CA; reported by Donna Krucki.

1024 Juvenile female Cooper’s Hawk banded on 9/23/05 by Buzz Hull; discovered, dead, face down near the wheel of a parked car in San Francisco, San Francisco Co., CA on 11/8/09 by Doug Miller. He reported it to GGRO volunteer Walter Kitundu who then reported it to the BBL. Injuries and location point to probable vehicle strike.

1025 Juvenile Red-tailed Hawk banded on 11/28/09 by Nancy Mori; found dead 12/3/09 at San Rafael, Marin Co., CA; reported by Maureen Groper.

1026 Juvenile male Red-tailed Hawk banded on 9/20/08 by Rosemary Andrade; found dead on side of road 3/3/10 at Golden Gate Park, San Francisco, San Francisco Co., CA; reported by Joanne Rowan.

1027 Juvenile female Merlin banded on 11/4/09 by Allison Levin; reported by the BBL as found 12/7/09 “injured on highway” at Lake Forest, Orange Co., CA; was taken to a local veterinary hospital. Kristi Krause, DVM, reported the Merlin was “very wet—possibly caught in a storm.” It was kept at the hospital until 12/16/09, then transferred to their rehabilitation hospital and released March 2010.

1028 Juvenile female Cooper’s Hawk banded on 9/26/05 by Claire O’Neill; found dead 3/24/10 five miles southwest of Hillsboro, Washington Co., OR; reported by Jesse Valle.

1029 Juvenile female Peregrine Falcon banded on 9/26/00 by Alec Hoffmann; found 11/9 (exact date unknown) dead on side of road at Langley, British Columbia, Canada; reported by Ken Moore. Ken described the bird as “a big, big female falcon…about four pounds!” He checked with local falconers who told him she was “a really big bird.”

1030 Juvenile Red-tailed Hawk banded on 10/14/1992 by David Jesus; found alive 2/13/10 almost 18 years later “near road in Shasta Valley (between Big Springs and Yreka, Siskiyou Co., CA) skinny/not emaciated in real cold weather—possibly hit by car;” reported by Nancy and Rick Meredith. Diagnosed with a sprained wing, this Redtail initially didn’t “have enough strength to make it out in the wild.” With dedicated care, Rick and Nancy described the “lazy boy” as finally beginning to fly well by mid-June, and was released 7/12/10. This couple has cared for wildlife for 28 years and noted that this Redtail “doesn’t look like an 18 year old bird, especially the feet!” They work full-time, in addition to their rehabilitation duties, and said “it is this kind of success that keeps us doing what we are doing.”

1031 Juvenile female Cooper’s Hawk banded on 9/21/08 by Julia Camp; found dead on trail under oak tree on a ranch at San Juan Bautista, San Benito Co., CA by Pat Eillert while hiking with his daughters. There is a discrepancy in the date found: The BBL states it as 3/23/10, while Pat corrected it to August 2009.

1032 Juvenile female Cooper’s Hawk banded on 9/16/09 by Nathan Elliot; found dead, still warm, on 1/16/10 in parking lot next to wall of office building at Carmel, Monterey Co., CA; reported by Kristin Cook.

1033 Juvenile Red-shouldered Hawk banded on 10/8/04 by Kim Meyer; trapped and released two miles southwest of Sebastopol, Sonoma Co., CA on 11/8/09 by Stan Moore.

1034 Juvenile female Cooper’s Hawk banded on 10/21/08 by Allen Fish; on 3/28/10 at 4:18 PM, Doug McCarter “heard a loud crash, found the dead hawk and broken glass on top of the recycling items” in the pantry of his home four miles north of Eureka, Humboldt Co., CA. The hawk went “clean through” a window.

1035 Juvenile male Red-tailed Hawk banded on 10/23/08 by Mandy Stanford; found 4/7/10 about a month after death from a “turbine blade strike” at a wind farm seven miles east of Livermore, Alameda Co., CA; reported by Levin Nason.

1036 Juvenile male Cooper’s Hawk banded...
banded on 9/10/07 by Diane Bahr; found by GGRO bander Dick Horn on 9/14/09 with a broken right wing and under attack by a Great Horned Owl near Building 1042 Fort Cronkhite, Sausalito, Marin Co., CA; the bird was taken to WildCare in San Rafael by GGRO staff. WildCare euthanized the kestrel within 24 hours; reported by Marion Weeks.

1047 After-second-year female Cooper’s Hawk banded on 11/30/09 by Brian Smucker; found dead 4/22/10 after apparently sailing into glass window atop a fence at residence in San Francisco, San Francisco Co., CA; reported by Rusty Hale.

1048 Second-year Red-tailed Hawk banded on 10/23/98 by Josh Hull; found dead of electrocution from a transformer 8/16/02 while still clutching a gopher at the Presidio, San Francisco, San Francisco Co., CA; recovered by Johanna of the Presidio staff and reported by Marion Weeks. This bird was given to the GGRO and is now part of our specimen collection used for teaching.

1049 Juvenile female Sharp-shinned Hawk banded on 9/22/09 by Marc Blumberg; caught due to injury 5/13/10 at Amargosa Valley, Nye Co., NV and “alive in captivity” with final outcome unknown; reported by Rebecca Donaldson.

1050 Juvenile male Cooper’s Hawk banded on 10/16/97 by Barbara Arbunch; found as a “window kill” at a home behind a Bell Market on 1/8/98 at Tiburon, Marin Co., CA; reported to the GGRO by Meryl Sundove, and to the BBL by Marion Weeks.

1051 Second-year Red-tailed Hawk banded on 8/30/96 by Alan Fleming; found grounded in early months of 1997 (exact date unknown) at a school yard in Daly City, San Mateo Co., CA when two Redtails were observed fighting in the air and both fell to the ground. School kids were kept away from the stunned hawks until the fire department personnel arrived. One Redtail flew up into a tree and the banded bird was caught and brought to Peninsula Humane Society and kept there for over a week before being released. Reported by Marion Weeks with information from Karen Scheuermann of GGRO and Jan Moughler of the PHS.

1052 Juvenile female Cooper’s Hawk banded on 10/24/97 by Buzz Hull; recovered dead 10/27/97 when Patricia Fry’s neighbors heard a noise as it apparently flew into a window at their home in Tiburon, Marin Co., CA. Patricia called the GGRO with the information. Buzz Hull found this report in a folder at the GGRO offices; reported to the BBL by Marion Weeks.

1053 Adult Red-tailed Hawk banded on 11/30/93 by Lynn Bantley; found dead by electrocution 2/20/02 at Hamilton Field, Novato, Marin Co., CA. Notes by Karen Scheuermann found; reported by Marion Weeks.

One of our 2005 juvenile Cooper’s Hawks (like the one above) was trapped and released at the Bonney Butte raptor banding site in Oregon. (Photo: Walter Kitundu)
Of 37 Red-tailed Hawks in this article, 21 were lacking in information as to their cause of death. Three were trapped by another bander. Of the remaining 13, 5 were hit by cars, 4 were electrocuted, and 2 were struck by wind turbines there for about 2-3 weeks... viscera were dried-up. Broken wing on (right) side. I took it to the bluffs and prayed for it and left it there for the elements to take care of it." Rainer suspected it was hit by a car.

1059 Juvenile male Red-tailed Hawk banded on 11/27/09 by Robyn Boothby; bone with band, no feathers or flesh, brought by dog to owner from their backyard on 7/13/10 at Walnut Creek, Contra Costa Co., CA; reported by Loraine McDonald.

1060 Juvenile Red-tailed Hawk banded on 10/6/04 by Buzz Hull; band, feathers, and bones found on 7/22/10 at the base of a telephone pole frequently used by a pair of resident Redtails in a valley at Boyes Hot Springs, Sonoma Co., CA; reported by Suzanne Perot.

1061 Juvenile female Cooper’s Hawk banded on 9/30/06 by Diane Horn; found dead on 11/13/06 at Rana Creek Ranch, Carmel Valley, Monterey Co., CA; reported by Justin Cully. No further information available.

1062 Juvenile male Red-tailed Hawk banded on 11/20/08 by Mandy Stanford; found dead 1/7/09 lying on its back next to the road near Brisbane Lagoon, Brisbane, San Mateo Co., CA; reported by Roel Funke. He suspects it was hit by a car.

1063 Juvenile female Red-tailed Hawk banded on 9/3/09 by Marion Weeks; found at Fell and Baker Streets, San Francisco, San Francisco Co., CA and picked up by San Francisco’s Animal Control and taken to the Peninsula Humane Society on 5/21/10. Believed to have been hit by a motor vehicle but no injury found on admission; however, when swelling developed two days later, the wing was x-rayed and found to be broken and untreatable. The bird was euthanized 5/24/10; reported by Rachel Blatt of PHS.

1064 Juvenile female Cooper’s Hawk banded on 10/13/06 by Megan Cook; found shot 12/19/06 five miles west of Sausalito, Marin Co., CA and now dead; reported by Rochelle Gerratt. No further information available.

1065 Juvenile female Cooper’s Hawk banded on 10/22/07 by Diane Bahr; found dead on 10/30/07 under a tree on fire department property near Sonoma, Sonoma Co., CA. Reported by Dave Church, who said he could find no cause of death, although the BBL reported the bird as shot.

1066 Juvenile male Red-tailed Hawk banded on 9/10/09 by Russ DeLong; found a quarter mile east of Fort Rock, Lake Co., OR on 8/31/10 “struggling on the ground with injuries... among them a broken wing—several days old and it smelled real bad.” Lowell Franks was advised to have it put down.

1067 Juvenile female Red-shouldered Hawk banded on 8/17/07 by Mike Armer; band “read by telescope while bird was free” three miles east of Novato at Deer Island, Marin Co., CA on 10/14/10; reported by Stan Moore and Gene Ghisolfo.

1068 Juvenile Red-tailed Hawk banded on 11/19/84 by Carol Riback; band was discovered 26 years later in a box under a “broke down truck” in a barn on 10/19/10 at a ranch 3.3 miles from Gray Lodge Wildlife Area near Gridley, Butte Co., CA; reported by Chris Tocatlian. He states that there were some feathers, a few bones and the crimped band—not on a bone. Despite our hopes, we are unable to determine how long this Redtail survived post-banding.

1069 Second year female Cooper’s Hawk banded on 10/19/02 by David Fix; returned eight years later to be trapped and released again at the Marin Headlands, Sausalito, Marin Co., CA on 10/16/10 by Nancy Mori during banding operations of the GGRO.

1070 Juvenile Red-tailed Hawk banded on 12/13/96 by Dan Gottsegen; found dead 8/10/06, 10 miles north of Vancouver, Clark Co., Washington; reported by Renee Henderson. No further information available.

1071 Juvenile female Sharp-shinned Hawk banded 10/6/09 by Buzz Hull; returned a year later to be trapped and released again at the Marin Headlands, Sausalito, Marin Co., CA on 12/15/10 by Jonathan Stein during banding operations of the GGRO.

1072 Juvenile female Cooper’s Hawk banded on 9/17/08 by Muki Belliappa; found dead 12/24/10 on roof of California Pacific Medical Center building, “pretty well decomposed—had been there some time” at San Francisco, San Francisco Co., CA. Reported by Joseph Dimauro who speculated that the hawk may have flown into the four-foot high glass paneling that surrounds a deck on a higher part of the roof, above the spot where the remains were found.

1073 Juvenile female Cooper’s Hawk banded on 9/16/09 by John Keane; was hit by a truck on 11/28/10 driven by Mike German. On his way home Mike felt the impact and saw the explosion of feathers, pulled over to the side of Fairview Road about 5 miles northeast of Hollister, San Benito Co., CA. He found the dead hawk, recorded the band number and reported it to the BBL.

1074 Juvenile male Merlin banded on 10/24/09 by Steve Rock; found dead 12/28/10 on a porch near the glass door of their home at San Diego, San Diego Co., CA. Reported by Tony Crisafi, who added, “it wasn’t there in the morning when I let the dogs out... birds of prey do hang out in the trees and then go after the mock-in-birds and other birds in the area.”

Now in her 20th year as a bander, Marion Weeks has devoted hundreds of hours to repairing nets and to organizing our band recovery stats.
On weekdays when active roadwork made the road impassable, hawkwatch volunteers maintained counts from an alternate hilltop, South Slacker Hill, just over a half-mile to the northeast. On October 20, Conzelman was completed and reopened, and all GGRO teams and the public were allowed daily access to Hawk Hill once again.

Because of this uneven data collection from multiple locations, the 2010 hawk count data will be forever asterisked. Will it be un-useable? No. But the data taken from the two hilltops cannot be combined for comparison with other years. At best, we can take only the 2010 counts collected from Hawk Hill, and compare them to hawk counts from the same hours (weekends and October 20-December 5) from Hawk Hill in previous or future years.

Finally, rearranging our hawk count teams to count hawks from two locations was no simple task. Great thanks to Shannon Farrell, Daphne Hatch, Sue Fritzke, Cathie Barner, Bill Merkle, Chris Ramos, Dave Dusterhoff, Brian Dobling, and especially our volunteer hawkwatch dayleaders for helping with our logistical song-and-dance. The resulting season was one measured in qualitative rather than quantitative events, and so I asked our 157 volunteer hawk counters to recall some of the best moments of the 2010 season. Here are a few of their reflections.

**August 29, 2010**

**KEITH VAN BUEREN**

On the first Sunday 2, Horacio Mena got us up to Hawk Hill, but the wind was blustery and the fog stayed just about at our elevation. There were not many raptors to watch or count. There was a spectacular juvenile, dark morph Red-tailed Hawk that flew by and generated a lot of excitement. There was also a pair of ravens who watched us with some interest the whole time we were there. We left around noon when it was clear that the fog was like Carl Sandburg’s cat—except he wasn’t going to move.

Two Sundays later, we were there in much the same situation, except that Horacio was feeling that the fog might lift a bit in the afternoon. He explained that some of the best hawk watching occurred under exactly these conditions, with the fog lifting in the early afternoon. Hawk sightings remained very sparse, however, as the fog lingered obstinately. There seemed to be a number of juvenile Redtails practicing and playing and generally occupying the cypress trees and the air space over the bunkers to the west of us. There was also a pair of ravens watching us the whole time we were there—perhaps the same pair from two Sundays ago? They would perch on the railing, then go to the ground, then fly around.

I watched the ravens closely, as did my daughter, who also goes by the name Raven. One was large, and the other slightly smaller and the more retiring of the two. The most amazing thing to watch, however, was the tenderness and obvious bond between these two corvids as they would sidle up wing to wing and preen each other. Occasionally the larger raven would regurgitate something and the smaller one would pick it out of his or her beak. Horacio took some pictures of those two, and we stayed there until 3:30 PM. The fog stayed with us.

**September 9, 2010**

**MEGAN GNEKOW**

It was late in the day on Slacker Hill and rather quiet. I was in the south quadrant, scanning the skies above Kirby Cove with my borrowed binoculars when I saw a big brown raptor heading northwest near Hawk Blind. I called it to my compatriots, who immediately said “Juvi tail.” And I said “Uh: I don’t think so. Its head is BIG.” But by then it was out of sight.
and, being an apprentice hawkwatcher, I figured they knew better. But we passed it to the west quadrant anyway and not 10 seconds later, Tim yelled: “JUVENILE BALD EAGLE!” We all dropped our jaws and lifted our binocs to see if we could catch another glimpse, but it was long gone.

September 17, 2010
KIM MEYER
While waiting for fog to lift from the hilltops, we walked Rodeo Valley. Dew-beads like temperate hoar-frost revealed webs and grounded, jewelled dragonflies. On the Bobcat Trail, we saw three species of herps, 11 species of passerines, three species of arachnids, two species of molluscs, one Green Darner, and one Northern Harrier.

September 27, 2010
KEITH GRESS
The event that stands out in my memory from that day is my first-hour encounter, face-to-face, with a Red-breasted Nuthatch. I was standing with Herb Brandt facing north when a low-flying nuthatch crested the hilltop and nearly hit me head-on! Had it not been for the headwind, this bird very likely would have hit me in the chest. It was no more than an arm’s length away as it hung there for a second in the wind looking straight down its bill—to where his two eyes made contact with my two eyes. It veered at the last second.

My other memory from this day is the huge number of dragonflies lifting off from North Slacker Hill during the morning hours. The air was warming in the 10 AM to NOON hours and the wind was apparently just right. Pointing my binoculars to the flat area atop the hill revealed thousands of dragonflies hovering and flying about, like potato chips waiting to be crunched upon by a passing Merlin or Kestrel. I don’t think that falcon feast happened, but the number of dragonflies was memorable.

September 29, 2010
TIM BEHR
My Tuesday 1 team knew it was going to be HOT that day. We schlepped our gear (including two much-needed two-gallon thermoses full of ice water) to the top of South Slacker Hill. We started counting at 10 AM; the temperature was already 86 degrees with light breezes out of the northeast. By 2:30 PM, the thermometer rose to a blistering 99 degrees. But there were good birds to be seen. We had four spectacular Ferruginous Hawk sightings by 11 AM. We had great looks at both adult and juvenile Broad-winged Hawks. We even got good looks at Black Swifts. We were jazzed but the heat was becoming ever more oppressive. On South Slacker, there was no place to run and hide from the heat. By 2:30 PM, I made the decision to abandon the hill at 3 PM, despite the presence of countable raptors. At about 2:45 PM, I looked over my shoulder to see our stalwart intern, Genevieve Rozhon, who was recording at the time. She was completely nonplussed. There she sat, with clipboard in hand and her bare feet immersed in a pile of ice. To paraphrase Noel Coward, only mad dogs and hawk watchers go out in the midday sun.
October 8, 2010
JEAN MAGISTRALE
I was a humble apprentice this year, my first as a hawk counter. It was our team’s fourth day on Slacker Hill. Windy, frigid, arid, bleak. Sigh. I was sitting—freezing and discouraged—in the north quadrant with Tim Behr. He was peering through the scope, and in his annoyingly cheerful way, merrily calling birds in the murky, distant haze over the FM Towers. For heaven’s sake, I thought glumly, minuscule specks in the sky! Can’t even see them unaided!

But, just then, something loomed up out of the brush closer in, rising just above us. Dark, large. A damn Turkey Vulture, I thought. But, wait a minute, there are white patches in the center of the underwings! However, the wheels turn slowly for a lowly apprentice. So my frozen brain slowly cranked, its size, white head, and white tail became apparent. Nick, standing next to me, said, “That’s not a Raven!” Oh, split-second when I had my own, private, teenaged Golden Eagle.

“Bald Eagle! Adult!” I announced, as the speck got larger and its wings making a rowing motion. Angelo Gilbert, standing next to me, said, “That’s not a Raven!” Oh. “EAGLE!” sang out Tim happily, “Bald Eagle! Adult!” I announced, as the speck got larger and its size, white head, and white tail became apparent. Nick Whelan asked if I was joking. Evidently I had said it too calmly and was supposed to scream about it. The adult Bald Eagle came closer and everyone got a great look before it headed south along the coast to San Francisco.

I was thrilled! Not only was it the first adult Bald Eagle I’d seen at such close range, it was the first adult of the year, and I spotted it! What an exhilarating feeling! Unmatched by anything during my internship, save the Giants winning the World Series.

November 13, 2010
ANASTASIA ENNIS
It was a beautiful sunny day, the first of its kind for 2010’s Saturday 1 team! We’d been out on Hawk Hill for half the day already, and had seen some great birds, but the visitors on the Hill were starting to outnumber the raptors in the sky. In the west quadrant, I picked up my binoculars and started scanning the distant horizon by Hill 88.

“Is that a raven?” I remarked out loud, seeing some distant dark speck making a rowing motion with its wings. Angelo Gilbert, standing next to me, said, “That’s not a Raven!” Oh. “Bald Eagle! Adult!” I announced, as the speck got larger and its size, white head, and white tail became apparent. Nick Whelan asked if I was joking. Evidently I had said it too calmly and was supposed to scream about it. The adult Bald Eagle came closer and everyone got a great look before it headed south along the coast to San Francisco.

November 24, 2010
TOM CONNEELY
On the last day we were on Hawk Hill, at least one Bald Eagle was spotted. I was in the east quadrant with Jonathan Stein when I first saw the big bird out toward Alcatraz. He called out that there was a Peregrine out there and I noticed he was looking in the same direction I was. I thought “Wow, I didn’t know Peregrines were that big.” So I asked, “Out toward Alcatraz and circling?” He said “Yes,” so I kept watching the thing as it stopped circling and headed toward downtown Oakland.

When Jonathan said “It just perched on the Golden Gate Bridge,” I knew he and I were looking at different birds. By then my big bird blended in...
with the buildings in Oakland and I lost it. Not long after, someone called a juvenile Bald Eagle coming from the same direction. I bet that was my eagle, dammit.

November 27, 2010

RON BERG

Our team gathered at the base of Hawk Hill and slowly walked up to the top, just before our time to start counting. There was a strong breeze coming in from the west, over the pines and towards Angel Island. To our amazement, we were greeted by a Merlin stilling over the Hill. Later, the wind remained strong, but shifted more to the northwest. We waited for a long time for hawks to move, but not many came. The last day of hawkwatch for the year and the season was going out with a whimper. Even with a planned potluck picnic and plenty of good conversation, time dragged on and few black dots in the distant sky blossomed into raptors.

Then, around 11:30 AM, two Peregrine Falcons appeared from out of the east and began stilling and pirouetting in front of the Golden Gate Bridge and the city. They swooped up and dove down into Kirby Cove, frolicking in the breeze for at least 30 minutes. Then they were gone. When I was a boy, I hoped in my lifetime to someday spot a Peregrine (we called them Duck Hawks), but never in my wildest imagining did I ever think I’d see such a sight as this. Never do I expect to see such wild joyous behavior again, but you never know at Hawk Hill. Thank you.

JOHN ODELL

My best experience during the 2010 hawkwatch was the increased “hang time” with raptors—especially with accipiters—that we got on South Slacker Hill, in contrast to our experiences on Hawk Hill. This enabled us to observe details in flight behavior, body shape, and markings that were often only a suggestion or a blur in previous years. And it gave our Friday 1 dayleader, Kim Meyer, many teachable moments—and he is a great teacher. Because of those excellent opportunities, I consider my ability to distinguish between Cooper’s and Sharp-shinned Hawks greatly enhanced this season. I just hope I can remember it all next August!

FRAN McDERMOTT

The best thing about the 2010 hawkwatch on South Slacker Hill was how my team rose to the challenge! To communicate, we used a combination of radios and our outside voices, neither of which we were accustomed to using. Still, I was elated to be back on Hawk Hill once the road reopened.

MATTHEW PERRY

For me, the greatest pleasure of hawkwatching every year comes from the experience of seeing exquisitely adapted life forms juxtaposed with the magnificence of the landscape. Just watching a juv Redtail make its precise adjustments to the wind while kiting over the expanse of the Marin Headlands (and the Bay Area in general) brings a smile to my face and a sense of awe to my mind. Changing my focus back and forth between the vista and the bird, I realize how lucky we are to be in this place with these people, watching these animals do these amazing things.

DAVE HERREMA

As is sometimes the case for me, it is the non-raptors that make the day (blasphemy!). When four Lewis’s Woodpeckers came over Slacker Hill at close range, I stood there with my mouth open. Did I just see what I thought I saw?

Great thanks to all the hawk counters and interns who sent in their unique perspectives and reflections on the 2010 season.
As GGRO’s 2010 interns, we were charged with the task of choosing and perusing a raptor hot-spot in California, and then writing an informative and entertaining summary of the trip. One problem: considering the number of fantastic birding spots in this state, it was difficult to limit ourselves to only one field trip. So… we didn’t. But if we had to choose, our visit to the Yolo Bypass Wildlife Area near Davis was the most epic of our field trips by far.

The Yolo Bypass Wildlife Area consists of a network of swales, riparian habitat, grasslands, and rice fields managed by California Department of Fish and Game. Prior to visiting the bypass, we knew that it would be chock-full of wintering raptors at this time of year. In addition, all of us had a hankering to see waterfowl wintering in the Central Valley. So, why not kill two birds with one stone (metaphorically, of course)? Boy, did we hit the avian jackpot! Here follows the narrative of our trip northeast to see talon-toed friends in the Central Valley.

It was a foggy and overcast day in December when we left the Headlands in search of sunnier skies and visible birds of any sort. As we drove north-east on Highway 101 to Highway 37, we spotted a few Turkey Vultures circling lazily overhead, several perched Red-tailed Hawks looking snug as a bug in a rug with all their feathers puffed up, and a few American Kestrels bobbing their tails while hunting from power lines. We also passed numerous species of shorebirds and ducks around Port Sonoma Marina on Highway 37. Once we hit Interstate 80 East (I-80), we started to see an increasing number of raptors, to our extreme delight.

After taking Exit 75 (Chiles Rd.) from I-80, we drove east on Chiles and soon arrived at the Yolo Bypass Wildlife Area Visitor Center. There we checked out the taxidermied local wildlife and chatted up the docent on staff in order to find out what birds were hanging out in the wetland. Thanks to her, we found out that it was not a duck-hunting day (winter is duck hunting season), so we could afford to tool about the wetland in a leisurely fashion, without having to worry about impeding hunters. She also informed us that Tundra Swans had recently arrived at the wetland, so we high-tailed it out to the swales (a short distance farther down Chiles Road) without further delay.

One great feature of the Yolo Bypass Wildlife Area is that you can cover a lot of distance either by foot or by car. There are several interconnected dirt roads and walking trails on berms that take you right into the heart of the wildlife area—and the bird action, for that matter. We entered the wildlife area at Parking Lot A and proceeded to drive east on the well-marked “autoroute.” Almost immediately, we spotted a juvenile Redtail sitting...
on the Yolo Bypass causeway. Taking this cream and chocolate colored baby as a good omen, we continued to drive along.

Multiple White-tailed Kites were out and about. Some were kiting above tilled fields, while others were perched at the tippy-tops of trees that lined the autoroute. We saw one catch a rodent of some sort, perch on a snag to pick at it, and then look around suspiciously as if someone was going to take away its lunch. Northern Harriers were everywhere, coursing low over the fields with their legs hanging down. We counted over a dozen in total, including adult males, adult females, and juveniles.

The wildlife area was teeming with birdlife. The swales’ emergent reeds and cattails provide great habitat for blackbirds (including Tricolored Blackbirds). Unfortunately, we did not see any Tricolored Blackbirds on this trip, and we looked too! However, we did see many adult and juvenile Red-tailed Hawks, representing the rainbow of *Buteo jamaicensis* color morphs, perched cozily in trees or on top of telephone poles.

As we approached the fallow rice fields, we started to see hundreds of American Coots, Western Gulls, and ducks. Suddenly, we noticed some very large white birds flying in formation with some Greater White-fronted Geese. We jumped out of the car, scope and binoculars in hand, to get a better look at these birds. They turned out to be the Tundra Swans, over 200 in total! We left the car at a turnout, walked out along the gravel berm to get a better look, and spotted Snow Geese, American Wigeons, Northern Pintails, Northern Shovelers, and Redheads.

After fully investigating the birds by the fallow rice fields, we headed back to the autoroute and proceeded southeast toward Parking Lot C. This part of the road is lined by hydrophilic trees and passes through a series of seasonal wetlands. Dozens upon dozens of White-crowned and Song Sparrows ornamented the branches of these trees. As we drove along, we flushed a Cooper’s Hawk (who tried to evade us by hopping from tree to tree along the road), a Red-shouldered Hawk, and a juvenile Redtail. That last bird actually emerged from a roadside ditch next to our car and flew right over the windshield! Talk about a fantastic look!

We finally reached Lot C, adjacent to a permanent wetland which was, in short, a duck-a-palooza. The number of ducks there definitely surpassed several hundred. Of course, we had to stop again to admire the various dabbling and diving species that were foraging there. Then, without warning, we saw an enormous wave of water spray into the air. The ducks began to take off, making a ruckus in the process. As we looked around, trying to see what had elicited this extreme reaction, a large, dark, pointy-winged predator appeared like a phantom over the wetland and proceeded to stoop repeatedly on the ducks. “PEFA!” we all shouted, and up went the binoculars. It turned out to be a lovely juvenile Peregrine who appeared to have more ambition than skill, since no ducks were snatched while we were watching.

When we finished grinning like fools over seeing the Peregrine, we hopped back into the car and headed out of the wildlife area. On the drive back to the Headlands, we realized that we had observed over 40 bird species in total during the day. This included at least 35 individual accipiters, falcons, and buteos. With an avian paradise like that only two hours away, who could resist visiting again and again? But don’t take my word for it. Go visit the Yolo Bypass Wildlife Area today!

Gen Rozhon is spending 2011 studying the raptors of Idaho.
DONORS 2010

Cheryl Abel • Rachel Albright • Rob Allen • George & Stephanie Almeida • Leslie Andrews • Marilyn Armbruster • Kendra Armer • Laura Armor • Stefanie Arthur • Marylou Avanzino • Diane Bahr • William Barnaby • Juliana Barr • Reginald Barrett • David Barry & Roxi Farwell • Donald Bartling • Guy Baty • Anne Becker • Linda Becker • Muki Beliapilla • Sandra Berggren • Anne Bernstein • F.J. Bethke • Ardith Betts • William Bianco • Thomas Birdsall & Rebecca Green Birdsall • Adam Birek • Carl & Jean Blom • Marc Blumberg • Robert & Marion Blumberg • John • & Olive Borgstead • Anthony Brake • Johnny Brown • Phyllis Browning • Shannon Burke • Hugh & Pearl Campion • Lynn Carew • John Caufield • Shelley & John Chesley • Ronald Cliff • Terry & Zeo Coddington • Joanna Cohen • Sally Cole • George Coles • Ron Colwell • Hugueute Combs • Roger & Martha Conant • Kanit Cottrell • Elizabeth Cutler • Jennifer Cutler • Reece & Kathleen Cutler • Charles Cutting • Ludek Dadoo • Anne Darragh & David Ford • Dennis Davison & Jean Perata • Michael & Pamela Dayton • Tom Delebo • Russ DeLong • Frank DeMarco • Janine DeMartini • Charles & Leslie Dicke • Sue Dirksen • David Dotur • David Driggs • J.D. Durst • Stephen Dykes • George Eade • Wade Eakle • Margaret Edwards • Peter Ehrlich • Robert Elliott • Robert Engel • Richard Engle & Paula Horowitz • Marian Erdelyi • Janeann Erickson • Natalee Ernstrom • Ron Felzer • Mark Fenn • Richard Ferris • Jeanne Fidler • Virginia Fifield • Robbie Fischer • George & Patsy Fish • Robert Fivis • Gayle Fuetsch • Theresa Gabel & Timothy Zumwalt • Kevin Gilmartin • David Ginsburg • Derek Girman • Grant Gladman • Cindy Goral & Jerry Scharf • Patricia Gotchall • Alane Gray • David & Iris Gregory • Dorothy Gough • Earl Gress • Ken Griff • Derek Grimen • Mary Haack • Jerry Hadfield • Michael Hall • John Harris • Judy Harris • George Hartzell • Hugh Harvey • Steve Hayashi & Judy Winn-Bell • Jennifer Hayes • Melissa Hero • David Herrema • Jan Hintermeister • Calvin Hom • Dick & Diane Horn • Sam Hontalas • Tom • & Julie Ann Hopkins • Richard & Terry Horrigan • Michael House • Ellen Hughes • Pearce Hurley • John Irwin • Misty Ismail • Victoria Jackson • Kathy Jarrett • George Johnson • Marjorie Johnson • Barbara Jording • Cyril Juantitas • Derry Kabcenell • Sterling Kninnell • Nancy Kittle • Leslie Koenig • Donald Koors & Nancy Williams • Ann Kositsky • Cheryl Krawinkel • Zeka Kuspa • Cobb Lafayette-Keller • Lori Lambertson • Shelley LaMotte • Barbara Lancaster • Owen & Eva-Lynne Leibman • Mardi Leland • Winifred Lennihan • Patricia Lessard • Peter Leveque • Pam Lewis • Marie & Barry Lipman • Kirsten Liske • David Loeb • Mary Lorey • Paul & Diane Jones Lowrey • Chris Macintosh • Dana Macmynowski • David & Lynne Madison • Jean Magistrale • Mark Mallory • Nancy Martin • Charles Massen • Frances McDermott • Mary McCadden • Susan McGreevy • Eween Mckechnie • John McQuown • Terry Mead & Lois Reynolds-Mead • Mona & Horacio Mena • Amy Meyer • Kim Meyer • Ivan Meyerson • Ginnie Mickelson • Steve Miller • Sarah Mills • Margaret Mindell • Edith Mitchell • Henry Mitchell • Nancy Mori • Denise Morford • Alida Morzenti • Daniel Murphy • Jean Myers • Miki Nakanishi • Kirsten Nielson • Gregg Niceley • Ed Nute • Kathy Odell • Steven O’Donnell • Brian O’Laughlin • Rebecca Olsen & Ken Wilson • Patricia Overshiner • Gary Palmer • Ronald Parker • Jean Perata • Roy Pisetsy • Allan Plumb • Carol Poole • David & Cay Pratt • David Presotto & Caryl Carr • Roberta Preu • Bill Prochnow • William & Karin Rabin • John Rathkey • Gail Richardson • Eileen Richey • Allan Ridley & Helen McKenna-Ridley • Marci Riseman & Evan Sagerman • Marsha Robins & Bill Porte • Duane & Barbara Robinson • Steven Rock • Marjorie Roth • Elizabeth Rouan • Ruth Royter • Connie Rubiano • Steve Rudolph • Ann Ruffer • Maggie Rufo • Philip Ruhle • Judith Runstrom • Leonurd & Elizabeth Rush • Walter Sakai • Serena Salomon • Ivan Samuels • Peter & Barbara Sapienza • Juta Savage • Michael Savino • Rolf & Charlotte Scherman • Birgit Schilling • Norma Pauline Schmid • Marilyn Schmitz • Donald Schmitt • Linda Schneider • David Sexton • James Shea • Carrie Sherriff • Heidi Munzinger Short • Martin Sidor • Laura & Kirk Silver • Robin Smith • Ryan Smith • Tate & Curtis Snyder • Karen Solomon • Sheila Sousa • Colin Specht • Patricia Spencer • Kim Steele • Joan Stewart • Hal Sugishita • Tracy Swartz • Kurt Svenson • Stephen Taylor • Bruce Thompson • Cynthia Thomssen • John Ungar • Linda Vallee • Richard Vanderlugt • Nick & Denise Villa • Jerry Vitenson • Karyn Vogel • Erika Walther • Wendy Warrington • Mary & Roman Watt • Noreen Weedon • Eddie Bartley • Marion Weeks • Stephen Blossom • David Wells • Richard Welsh • Nick Whelan • David Wichner • Jeff Wilkinson • Harvey Wilson • Bright Win • Kathleen Winslow • Elizabeth Wommack • Carolyn & Frederick Wood

CORPORATIONS & FOUNDATIONS • Adobe Systems Inc. • Bank of America Foundation • Bank of the West Employee Giving Program • Hawk Migration Association of North America • Head-Royce School • James C. Cummings Trust • Kowa Optics, Inc. • Nature Trip • Ohlone Audubon Society • Pacific Gas & Electric Co. • Schwab Charitable Fund • Tom & Claire O’Neil Foundation • Wild Bird Center

DAP CAMPAIGN • Jeff Acuff • Caryn & Joe Ansel • Kendra Armer • Paul & Joan Armer • Bill Barnaby • Don Bartling • Steven Bauer • Muki Beliapilla • Ardith Betts • Robert Blom • Glenda Borton • Herbert & Giselle Brandt • Daivida Bushner • Michael Butler • Lynn Carew • Donna Ciccolini • Terry Coddington • Huqette Combs • Gerald Connell • Dennis Davison & Jean Perata • Frank DeMarco • Janine DeMartini • Joe & Laura DiDonato • George Eade • Janeann Erickson • Roxi Farwell & David Barry • Mark Fenn • George & Patsy Fish • Mary Anne Flett & Max Brier • Bob Garcia • Alane Gray • David & Iris Gregoire • Melissa Hero • Calvin Hom • Dick & Diane Horn • Sam Hontalas • Pearce Hurley • Marcene Johnson • Mamiko Kagawuchi • Mary Kenney & Joe Pasqua • Walter Kitdu • Leslie Koenig • Allison Kozak • Zeka Kuspa • Shelby LaMotte • Joan Lamphier • Patricia Lessard • Marie Lipman • Lynn MacDonald • Dana Macmynowski • Fran McDermott • Margaret Mindell • Nancy Mori • Kathy Odell • Douglas Overman • Pat Overshiner • Ronald Parker • Ralph Pericoli • Bill Prochnow & Hulda Nelson • Robbie Preu • Ann Ruffer • Barbara & Peter Sapienza • Juta Savage • David Sexton • James Shea • Jay Sheets • Patricia Spencer • Thom Tran • John Ungar • Linda Vallee • Nick & Denise Villa • Marion Weeks • Emily Well • David Wells • Nancy Willard • Katie Winslow • Kathy Wolf

IN MEMORY Of Betty Lobsinger • Pat & Gayle Berry • Pam & Tony Hebner • Judy Sue • Of Ruth McHugh • Mary Frances Schottstaedt; Of Sally Mills • Robert Fivis • Dennis Davison & Jean Perata; Of Maitland Stanley • Peggy Stanley
2010 GGRO VOLUNTEERS

Sam Abercrombie • Jeff Acuff • Lindsay Addison • Amanda Ailard • Christian Alexanderson • Rob Allen • Caryn Ansel • Anne Ardillo • Kendra Armer • Michael Armer • Stefanie Arthur • Diane Bahr • Bill Barnaby • Anna Barr • Eddie Bartley • Don Bartling • Larry Beard • Marita Beckum • Tim Behr • Nicolas Bell • Mukund Bellappa • Ande Bennett • Maxine Berg • Ronald Berg • Ardith Betts • Lisa Blankenship • Leah Blaschke • Jessica Blickeley • Marc Blumberg • Robert Blumberg • Natalya Blumenfeld • Jeff Boissier • Robyn Boothby • Brandi Bosch • Carroll Botvinick • Tony Braze • Randy Breaux • Nancy Brink • Johnny Brown • Stephanie Brugera • Ralf Burgert • Shannon Burke • Carol Butler • Michael Butler • Phil Capitolo • Lynn Carew • Caryl Carr • Chennie Castañon • Sally Cedarblade • Linda Chambers • Charles Clausen • Patrick Cleeves • Terry Coddington • Wendy Cole • Martha Conant • Roger Conant • Kay Coneeley • Tom Conneely • Gerald Connell • Lewis Cooper • Su Corbaley • David Coughlin • Jennifer Cutler • Candace Davenport • Dennis Davison • Pamela Dayton • Tom Delebo • Carmen DeLeon • Russ DeLong • Janine DeMartini • Richard Drechsler • Judith Dunham • J.D. Durst • George Eade • Wade Eakle • Rick Elefant • Nathan Elliott • Teresa Ely • Robert Engel • Anastasia Ennis • Janeann Erickson • Laura Erickson • Natalee Ernstrom • Arturo Espindola • Debi Fanucchi • Roxanne Farwell • Nancy Felling • Tom Felling • Mark Fenn • Richard Ferris • Norma Ferriz • Alice Fialkow • David Fichtner • Robbie Fischer • Allen Fish • David Fix • Ross Forman • Richard Freeberg • Claire Gallagher • Suzanne Garcia • Jack Godney • Megan Gnekow • Alane Gray • David Gregoire • Ann Greiner • Keith Gress • John Griffin • Eli Gross • Elin Gunnarsson • Jerry Hadfield • Aaron Haiman • Joshua Haiman • Mike Hall • Michael Harkins • Jill Harley • Lisa Harn • Alan Harper • Judy Harris • Susan Harris • Michele Harrison • Amos Hausman-Rogers • Jen Haynes • Melissa Hero • David Herrema • Barbara Hilbourn • Jen Holmes • John Holson • David Montgomery • Sam Montales • Diane Orn • Dick Orn • Mary Houghteling • Penn Hughes • Buzz Hull • Josh Hull • Julian Hyde • Diana Jacob • Bill James • Eric Jepsen • David Jesus • Lynn Jesus • Neal Johannsen • Jennifer Kaczor • Debbie Kahn • Judy Kaufman • Kanani Kaupu • Mamiko Kawaguchi • John Keane • Mary Kenney • Sterling Kinnell • Walter Kitundu • Leslie Koenig • Ann Kostsky • Allison Kozak • Cheryl Kraywinkel • Doris Kretscher • Zeka Kupsa • Jason Laffer • Corinne Lambden • Shelby LaMotte • Joan Lamphier • Diann Langlois • Tami Lau • Patricia Lessard • Allison Levin • Pam Lewis • Marie Lipman • John Longstreth • Corrina Lu • Salli Lundgren • Jasmine Lyons • Lynn MacDonald • Jean Magistrale • Mary Malec • Stacy Martellini • Jaime McConachie • Wendy McConachie • Fran McDermott • Carol Mchale • Terryl Mead • Joe Medley • Horacio Mena • Carla Menjivar • Alan Meyer • Kim Meyer • John Miles • Jess Miller • Steve Miller • Margaret Mindel • Paul Mirocho • Nancy Mori • Tom Moutoux • Mikiye Nakashima • Jennifer Nazazz • Gayle Newman • Angela Newsham • Chris Nikitas • Craig Nikitas • John Odell • Kathi Odell • Kaori Okada • Bill O’Laughlin • Rebecca Olsen • Michelle Ottman • Claire O’Neill • Steve O’Neill • Pat Overshiner • Lisa Owens-Viani • Elizabeth Palmer • Mary Palmer • Robert Palmer • Ron Parker • Janine Payne • John Perata • Ralph Pericoli • John Perry • Matthew Perry • Roy Pisetsky • Bob Power • Robbie Preu • Bill Prochnow • James Raives • Don Reinberg • Theresa Rettinghouse • Eileen Richey • Shawn Roberts • Steven Rock • Toby Rohmer • Laury Rosenthal • Genevieve Rozhon • Siobhan Ruck • Barbara Sapienza • Peter Sapienza • Chika Sato • Juta Savage • Terrie Schwitzer • Misha Semenov • David Sexton • Robert Sexton • James Shea • Jay Sheets • Cynthia Smith • Karen Smith • Robert Smith • Brian Smucker • David Sniper • Curtis Snyder • Tate Snyder • Maria Solomon • Patricia Spencer • Brian Sproul • Skye Standish • Mandy Stanford • Kim Steele • Jonathan Stein • Polly Strehau • Beth Sturgeon • Libby Subers • Hal Sugishita • Jennifer Sullivan • Jan Sutcher • Julie Sykes • Craig Tewell • Patrick Theimer • Janet Thiessen • Laura Thomas • Rachel Townsend • Leslie Tribe • John Ungar • Linda Vallee • Keith Van Bueren • Raven Van Bueren • Eric Vance • Douglas Vaughan • Nick Villa • Erika Walther • Noreen Weeden • Marion Weeks • Emily Weil • Dave Wells • Barbara Westree • Peter White • Jeffry Wilkinson • Laurie Williams • Harvey Wilson • Ken Wilson • David Wimpfheimer • Susan Winer • Bright Winn • Kathy Wolf • Elizabeth Wommack • David Wood • Jim Yampolsky • Laura Young

www.ggro.org

Golden Gate National Parks Conservancy
Building 1064, Fort Cronkhite, Sausalito, CA 94965
(415) 561-4700, or visit www.ggro.org

ggro@parksconservancy.org

P R R  E d i t o r :  J ill  H a r l ey •  G G RO  D i r e c t o r :  A llen  F is h •  G G RO  R es e a rch  D irect o r :  B uz z  H ull •  G G RO
Office Manager: Jill Harley • 2010 Research Interns: Lindsay Addison, Anastasia Ennis, Genevieve Rozhon, Jonathan Stein • PRR Design Director: Bill Prochnow • Copy Editor: Michael Hsu • GGNRA Advisor: Bill Merkle • Parks Conservancy Director of Community Programs: Sharon Farrell • Founder: Judd Havell

A special thanks for map assistance to: Jill Harley (Bandingle), Bill Prochnow (Bandingle, Peregrinations & Telemetry).

The Pacific Raptor Report (PRR) is the annual newsletter of the Golden Gate Raptor Observatory, but we also welcome any raptor-related articles based in the Pacific States and Provinces. The PRR is published by the GGRO, a program of the Golden Gate National Parks Conservancy in cooperation with the National Park Service.

The GGRO Season Summary is published in the winter. Subscriptions to both are $30 per year with checks made out to “GGRO.”

The Golden Gate National Parks Conservancy is the nonprofit membership organization created to preserve the Golden Gate National Parks, enhance the experiences of park visitors, and build a community dedicated to conserving the parks for the future. To become a member, phone (415) 4R-PARKS, or visit www.parksconservancy.org.

The National Park Service was created in 1916 to preserve America’s natural, cultural, and scenic treasures, which today number 394, and to provide for their enjoyment by future generations. For information about the Golden Gate National Parks, phone (415) 561-4700, or visit www.nps.gov/goga.
In the mid-2000s, GGRO staff worked with lead researcher Joshua Hull and a group of Red-shouldered Hawk biologists on a genetic analysis of this species across its range. Among the results, published in 2008 in the journal *Molecular Phylogenetics and Evolution*, was evidence that Eastern *Buteo lineatus lineatus* and California Redshoulder *B. l. elegans* populations are genetically distinct lineages, and have experienced very different demographic histories.

Should the Eastern and California Redshoulders be called different species? It’s not clear at this point, but this genetic analysis clearly supports the decision that these two populations are worthy of subspecies status. The map above depicts the complete range of this forest-dwelling buteo (black lines), broken into five subspecies’ breeding ranges. There is no evidence that Redshoulders have been able to disperse across the gap of forests between Texas and California except for occasional sightings and one record of nesting in southwestern Arizona.

The 1,000-mile space between these two subspecies ranges means that it is very unlikely that an *elegans* and a *lineatus* will mate, much less form a hybrid zone. Thus we may never know whether viable interbreeding is possible, or impossible, for these populations. Of course sometimes two species are delineated purely on differences in morphology, plumages, behavior, vocalizations, habitat type, etc.

One case to make for a unique California Redshoulder species may be in the distinct juvenile plumages between *lineatus* and *elegans*. Evan Barbour’s paintings show juvenile Red-shouldered Hawk plumages from each. Overall, the juvenile *elegans* has a more “adult” look than its eastern relative. *Elegans* has: (1) fewer and brighter light bands in the tail and secondaries; (2) a bright white wing crescent, not tawny as in *lineatus*; (3) a complex breast and belly pattern made up of dark rusty-brown vertical streaks, horizontal barring, and distinct arrowheads on a light background. This latter pattern contrasts with pure brown streaking on the underside of the juvenile *lineatus*.

**Artist and illustrator Evan Barbour was a GGRO Intern in 2000, then moved south to complete a UC Santa Cruz program in scientific illustration. Evan worked at the Cornell Lab of Ornithology illustrating many newsletters and a book, The Birds of Sapsucker Woods. Also to his credit: Birds of New Caledonia, and an amazing range of zoological paintings. See [www.evanbarbour.com](http://www.evanbarbour.com).**
JUVENTILE RED-SHOULDERED HAWKS
Watercolors by Evan Barbour (www.evenbarbour.com)