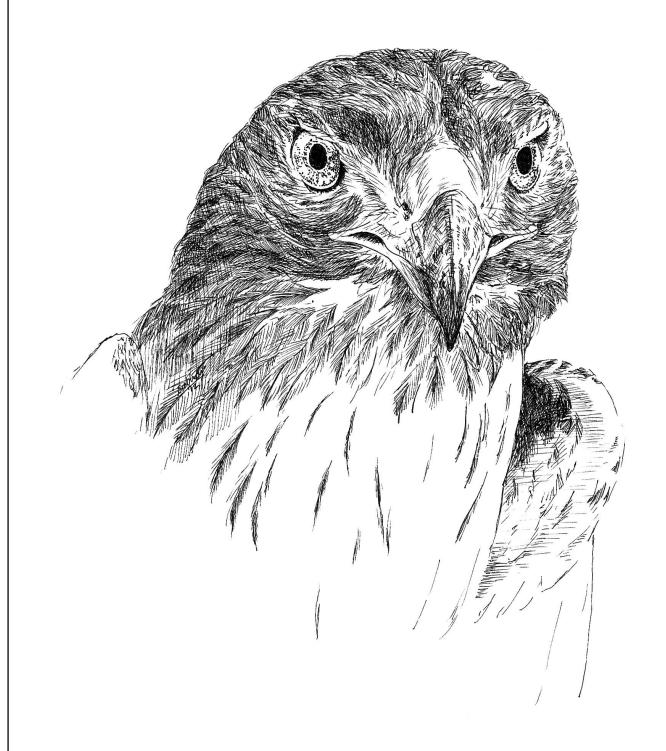
Golden Gate Raptor Observatory

Season Summary 2011



VOLUNTEERS • HAWKWATCH • BANDING TELEMETRY • OUTREACH • DONORS



Intern Brittney Wendell keeps alert at Hawk Blind for hawks that may fly into her nets.

GOLDEN GATE RAPTOR OBSERVATORY

The Golden Gate Raptor Observatory's mission is to inspire the preservation of birds of prey. Our business is to monitor and study the bird of prey migration along the central California coast, particularly at the Marin Headlands, part of the Golden Gate National Recreation Area. We are dedicated to the conservation of raptors both through careful data collection *and* through involving the public in every aspect of our research. The GGRO is a program of the Golden Gate National Parks Conservancy and the National Park Service, and is made up of 297 community volunteers and a small staff.

GGRO Season Summary 2011 written by Allen Fish, Buzz Hull, Brittney Wendell, & Katie Dunbar
Cover illustration by Siobhan Ruck; other illustrations by Katie Dunbar
Compiled by Jill Harley and published by the
Golden Gate Raptor Observatory, Golden Gate National Parks Conservancy
Building 1064 Fort Cronkhite, Sausalito, California 94965
(415) 331-0730 phone • (415) 331-7521 fax • ggro@parksconservancy.org
www.parksconservancy.org • www.ggro.org
Copyright 2011 by the Golden Gate Raptor Observatory. All rights reserved.

Cover Illustration: This adult Red-tailed Hawk was banded at Hawk Blind on December 3, 2011, then brought up to Hawk Hill for release so the hawkwatchers could get an up-close look at its plumage.

Allen Fish, GGRO Director • Buzz Hull, Research Director • Jill Harley, Project Coordinator 2011 Interns: Katie Dunbar • Megan Mayo • Robyn Smith • Brittney Wendell

INTRODUCTION

During 2009-2010, while we were incredibly busy at GGRO due to our 25th anniversary celebrations and road closures, a small group of GGRO banders did something fairly incredible. Here in late 2011, I want to slow down and acknowledge their accomplishment, which in many ways sets the GGRO on its newest path.

Jean Perata, Dick Horn, Dian Langlois, and Nancy Brink set up a series of objectives with which to evaluate their fellow banding leaders. They wrote the Siteleader Manual and devised a series of exams – a written test, a field evaluation, and a lab practical. They used as a guidepost the GGRO Bander Code of Ethics, which honors raptor health and safety, and the collection of accurate data. All of this came together under a belief that holding a wild raptor was both a rare opportunity and an enormous responsibility, and that our group could and would – through recertification – raise the bar on their own field skills.

Forty-eight banding leaders have taken the tests and been recertified through 2011 – a major accomplishment. And you might be wondering, why does this constitute a new path for GGRO? This isn't the first time we've evaluated the work of volunteers. But this time, the magnitude of the job was immense and required a great deal of extra time to prepare and execute. And ultimately I was most impressed by this: seeing volunteers ask volunteers to take their work seriously enough to put their egos aside, and to allow their skills to be evaluated and critiqued.

In November 2011, inspired by our banders, I asked volunteer GGRO hawkwatchers to participate in a class-room evaluation of their individual abilities. I used in-flight photos to quiz volunteers on raptor species, ages, and sexes. It's an imperfect system – just think of the information you gain from watching a bird's flight behavior that you don't see in a still photo – but we have a brave group of hawk counters who have already been tested, and they are ready for more.

So, now we are three years into this process, and I want to thank the Bander Recertification Committee for starting us down the path of evaluating individual volunteers, and for making the process fair, focused, and transparent. We are a better organization for your leadership. Also, thank you to the entire volunteer staff – to banders and hawkwatchers – for embracing this process, a unique and sometimes unsettling opportunity to be evaluated in your field skills.

As always, the GGRO is made possible by the great relationship between the Golden Gate National Parks Conservancy and the National Park Service, and we are grateful to have both organizations and so many great colleagues on our side.

ALLEN FISH

afish@parksconservancy.org

Shaw

V O L U N T E E R S

Sam Abercrombie Amanda Ailand Rob Allen Caryn Ansel Anne Ardillo Kendra Armer Michael Armer Jennifer Armer Carlo Arreglo Stefanie Arthur Diane Bahr Carol Baird Bill Barnaby Anna Barr Eddie Bartlev Don Bartling Larry Beard Marita Beckum Tim Behr Maxine Berg Ronald Berg Michael Berry **Ardith Betts** Jessica Blickley Marc Blumberg Robert Blumberg Jeff Boissier Robyn Boothby Brandi Bosch Carroll Botvinick Randy Breaux Nancy Brink Johnny Brown Ralf Burgert Shannon Burke Michael Butler Phil Capitolo Lynn Carew Caryl Carr Chennie Castañon Sally Cedarblade Linda Chambers Rich Cimino Jim Clausen Terry Coddington Martha Conant

Roger Conant Kay Conneely Tom Conneely Gerald Connell Lewis Cooper Candace Davenport Dennis Davison Pamela Dayton Rachel del Rio Tom Delebo Russ DeLong Frank DeMarco Janine DeMartini Shirley Doyal Richard Drechsler Katie Dunbar J.D. Durst George Eade Wade Eakle Betsv Eakman Rich Eliason Nathan Elliott Teresa Elv Robert Engel Laura Erickson Janeann Erickson Natalee Ernstrom Richard Ferris Alice Fialkin David Fichtner Amy Jo Fillin Robbie Fischer Allen Fish Dan Foldes Ross Forman Kathleen Gadway Claire Gallagher Jack Gedney Angelo Gilbert Louise Gilbert Megan Gnekow Lorri Gong Heather Gordy Art Graves

Alane Grav

David Gregoire

Ann Greiner Keith Gress John Griffin Jeanette Griffin Elin Gunnarsson Jerry Hadfield Joshua Haiman Aaron Haiman Mike Hall Joev Hall Michael Harkins Lisa Harn Alan Harper Judy Harris Susan Harris Michele Harrison Jen Haynes Melissa Hero David Herrema Barbara Hilbourn Jen Holmes Ryan Holmes John Holson Calvin Hom Sam Hontalas Dick Horn Diane Horn Mary Houghteling Heather Hoyles Buzz Hull Josh Hull Kenneth Huo Kevin Huo Julian Hyde Bill James Eric Jepsen Lynn Jesus David Jesus Debbie Kahn Judy Kaufman Kanani Kauka Mamiko Kawaguchi Beth Kean John Keane Mary Kennev

Walter Kitundu Stefanie Kohn Ann Kositsky Cheryl Kraywinkel Doris Kretschmer Zeka Kuspa Ariana La Porte Jason Laffer Corinne Lambden Shelby LaMotte Joan Lamphier Dian Langlois Ashley Laor Chuck Legere Patricia Lessard Allison Levin Pam Lewis Marie Lipman Salli Lundgren Jasmine Lvons Lynn MacDonald Jean Magistrale Mary Malec Stacy Martinelli Megan Mavo Wendy McConachie Jaime McConachie Fran McDermott Peter McGuire Tara McIntire Ewen McKechnie Raleigh McLemore Terry Mead Joe Medley Horacio Mena Carla Menjivar Kim Meyer Steve Miller Margaret Mindell Paul Mirocha Nancy Mori Tom Moutoux Mikiye Nakanishi Jennifer Nazzal Gavle Newman

Angela Newsham

Jane Khudyakov

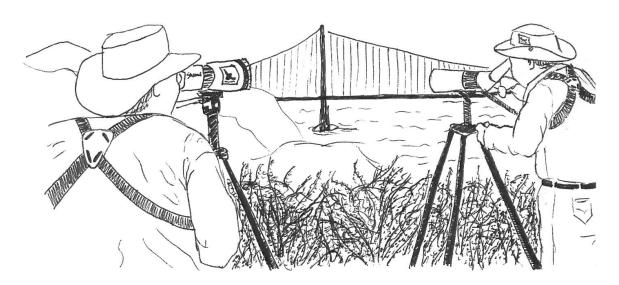
V O L U N T E E R S

Chris Nikitas Craig Nikitas John Odell Brian O'Laughlin Sammy Oliva Michelle Oltman Claire O'Neil Steve O'Neill Marissa Ortega-Welch Pat Overshiner Elizabeth Palmer Gary Palmer Robert Palmer Ron Parker Janine Pavne Jean Perata Ralph Pericoli Matthew Perry John Perry Roy Pisetsky **Bob Power** Brian Prochazka Bill Prochnow

James Raives Don Reinberg Theresa Rettinghouse Eileen Richey Marina Rivieccio Shawn Roberts Steven Rock Toby Rohmer Laury Rosenthal Elizabeth Rouan Siobhan Ruck Andrea Salgues Peter Sapienza Juta Savage Linda Schneider Bill Schroeder Terrie Schweitzer David Sexton Robert Sexton James Shea Karen Smith Robyn Smith Brian Smucker

David Snipper Tate Snyder Curtis Snyder Mara Solomon Sandrine Soulet Patricia Spencer Brian Spirou Skye Standish Polly Strahan Beth Sturgeon Hal Sugishita Jennifer Sullivan Julie Sykes Michelle Tattersall Craig Tewell Patrick Theimer Janet Thiessen Holly Thomas Laura Thomas Leslie Tribe John Ungar Linda Vallee Douglas Vaughan

Nick Villa Erika Walther Noreen Weeden Marion Weeks **Emily Weil** Carol Weinstein Dave Wells Brittney Wendell Barbara Westree Peter White Jeffry Wilkinson Sarah Willbrand Harvey Wilson David Wimpfheimer Bright Winn Kathy Wolf Elizabeth Wommack Roderick Woo David Wood Jim Yampolsky Laura Young



Hawkwatchers Steve Miller and David Sexton tally raptors over the Golden Gate.

H A W K W A T C H

RAPTOR-SIGHTINGS IN THE MARIN HEADLANDS DURING AUTUMN*

	2011 Ses Sightings	ason Hawks/Hour	Past 10-Year Avera Sightings	nge (2000-2009*) Hawks/Hour
Hours	439	114 ((14.5), 11.041	503	114 ((18), 11041
Turkey Vulture	6,447	14.69	9,176	18.27
Osprey	57	0.13	105	0.21
White-tailed Kite	74	0.17	92	0.18
Bald Eagle	9	0.02	5	0.01
Northern Harrier	335	0.76	751	1.49
Sharp-shinned Hawk	2,622	5.98	4,183	8.33
Cooper's Hawk	1,805	4.11	2,427	4.83
Northern Goshawk	0	0.00	1	0.00
Red-shouldered Hawk	248	0.57	464	0.92
Broad-winged Hawk	202	0.46	123	0.25
Swainson's Hawk	13	0.03	6	0.01
Red-tailed Hawk	7,529	17.16	9,410	18.73
Ferruginous Hawk	18	0.04	22	0.04
Rough-legged Hawk	0	0.00	7	0.01
Golden Eagle	9	0.02	20	0.04
American Kestrel	358	0.82	540	1.08
Merlin	166	0.38	172	0.34
Peregrine Falcon	264	0.60	199	0.40
Prairie Falcon	2	0.00	7	0.01
Unidentified	1,011	2.30	1,292	2.57
Total	21,169	48.24	29,001	57.72

^{*2010} not included in 10-year average since counts were made from two locations. See Season Summary 2010 for more details.

Spanning August 15th to December 4th, our 2011 count season showed no raptor species in record high nor in record low numbers. What was superlative in 2011 was the fog. From mid-August through September, fog kept us off Hawk Hill for 22 days – half the potential count days. Fortunately, October winds blew the fog out, and November was one of the most rain-free in California's history. The net result was that we counted for 439 hours during the 2011 season, the lowest number of total hawkwatching hours in GGRO's history.

Four raptor species dropped in 2011 compared to previous ten-year averages: Golden Eagle and Northern Harrier (both 50%); and Red-shouldered Hawk and Osprey (both 62%). The Osprey dip might be most easily explained, as 90 percent of our Osprey migrate during August-September. In other words, lots of Osprey flew by while we were counting fog drips. Two species stood out for their high numbers: Peregrine Falcon (50% higher than average) and Broad-winged Hawk (84%). In fact, the Broadwings out-paced the Red-shoulder numbers well into October. Not bad for a species that isn't known to nest in the western US!

- ALLEN FISH

D A Y L E A D E R S

TIM BEHR • LEWIS COOPER • DENNIS DAVISON • ALLEN FISH • JOSHUA HAIMAN

JULIAN HYDE • DAVID JESUS • MARY KENNEY • FRAN MCDERMOTT

HORACIO MENA • KIM MEYER • BOB POWER • JAMES RAIVES • LAURY ROSENTHAL

B A N D I N G

RAPTORS BANDED IN THE MARIN HEADLANDS DURING AUTUMN

	2011 (Aug 15, 2011-Jan 5, 2012)	Annual Average 1992-2010*	Totals 1983-2011
Northern Harrier	2	11	259
Sharp-shinned Hawk	494	477	10,078
Cooper's Hawk	444	565	12,450
Northern Goshawk	0	0	5
Red-shouldered Hawk	15	14	320
Broad-winged Hawk	0	1	22
Swainson's Hawk	0	0	9
Red-tailed Hawk	187	322	8,298
Ferruginous Hawk	0	0	2
Rough-legged Hawk	0	0	5
Golden Eagle	0	0	2
American Kestrel	56	55	1,214
Merlin	60	27	582
Peregrine Falcon	3	4	80
Prairie Falcon	2	2	38
Eurasian Kestrel	0	0	1
Total	1,263	1,479	33,365

^{* 1992} through 2010 are used for this comparison due to similarity of methods and effort between those years and 2011.

The 2011 banding season started with a record-setting number of foggy cold days and very few birds banded. Through the end of September we had serious concerns that we might be working on a record low year.

October brought both good weather to the Headlands and better numbers of birds to our nets, enabling us to finish the season with a nearly respectable 1,263 birds banded. After a 2010 season in which we saw and banded very few Redtails in the second peak, we had a better second peak in 2011. Our final Redtail banding total of 187 was much improved over the modest 115 banded in 2010. Nine of the Redtails were in adult plumage, a great improvement over the two adults we banded in 2010. We banded 60 Merlins in 2011, just two below our record for the species, set in 2009. This was the first season in which we banded more Merlins than Kestrels.

Two long-time dayleaders stepped back from those responsibilities and it took three new dayleaders to replace them. 17 apprentice banders stayed the course for the 2011 season and made good progress as they experienced a few more birds than in 2010.

- Buzz Hull

D A Y L E A D E R S

ANNE ARDILLO • MIKE ARMER • EDDIE BARTLEY • MARC BLUMBERG • RANDY BREAUX

NANCY BRINK • RUSS DELONG • CLAIRE GALLAGHER • BUZZ HULL • JOSH HULL

DAVID JESUS • MAMIKO KAWAGUCHI • JOHN KEANE • CRAIG NIKITAS • BETH WOMMACK

T E L E M E T R Y

JUVENILE RED-TAILED HAWKS RADIOTRACKED IN 2011

Name	Active Tracking	Post-season Tracking	Net Direction	Last Known Location	Net Distance from Headlands
Coco	Nov 3 – 9	Early Jan 2012	South	Crystal Springs Reservoir	21 miles
Diana	Nov 14 – 21	Early Jan 2012	North	Laguna de Santa Rosa	45 miles

"Coco," our 29th radiotracked juvenile Red-tailed Hawk, was trapped, banded, and tagged on November 3, 2011. He was released near the base of Hawk Hill, where we watched him soar out over Kirby Cove in the drizzling fog. He then spent the rest of the day moving through southern Marin County and settled for the night at Ring Mountain in Tiburon, where he was relocated by Phil Capitolo and Lorri Gong the next morning. By mid-morning Coco started flying, and he headed around the north side of Mt. Tamalpais. He then proceeded down the coast through Bolinas and into San Francisco, where he landed less than a mile from Twin Peaks – where Larry Beard and Robyn Smith had been monitoring his signal all day. On November 5, Coco left Twin Peaks and headed south, flying east of San Bruno Mountain and settled in at San Andreas Lake. From November 6-9, Coco remained on the west side of the lake, making only short, local flights – it seemed he had found his winter home. Even though we left Coco on November 9, several trackers returned repeatedly to the area and through December 31, Coco remained in the vicinity of San Andreas Lake. In early January, Lorri Gong found Coco's roost was about 3 miles south at Crystal Springs Reservoir. Coco was our first ever "Lake Bird."

"Diana the Huntress," our 30th juvenile Red-tailed Hawk, was trapped, banded, and tagged on November 9, 2011. She was released from Hawk Hill and immediately started flying north. The team raced to keep up with her as she passed quickly through Marin County. Phil and Mike Hall headed to Mt. Burdell where they picked up a strong signal coming from the northwest. They lost it quickly, around 4PM, and decided Diana had settled down for the evening. On the morning of November 10, Phil and Ron successfully met up with Diana, first with a visual in Two Rock near Petaluma, and again later in the day as she flew northwest following the riparian corridor of Laguna de Santa Rosa near Sebastopol. From November 1–15, only local movement was recorded from Diana. On November 16, Phil and Megan Mayo walked a half mile into the Laguna de Santa Rosa Preserve, off of Sanford Road, and were greeted by Diana as she flew directly above them and perched on a telephone pole. She took off once more and finally perched in an old oak tree nearby. Trackers frequently returned to the area and found she remained in the preserve through early January 2012.

- Brittney Wendell & Katie Dunbar

T L \mathbf{E} L \mathbf{E} \mathbf{M} \mathbf{E} T R Y \mathbf{E} A D \mathbf{E} R S

Larry Beard • Maxine Berg • Phil Capitolo
Ann Greiner • Bill James • Lynn Jesus • Cheryl Kraywinkel
James Raives • Libby Rouan • Barb Westree

O U T R E A C H

There was a moment on Hawk Hill in October 2011 that I will never forget. I was watching the skies above Rodeo Lagoon when my partner pointed out a dark, muscular falcon flapping hard right toward us, maybe a few hundred yards out. I saw that it would pass right by GGRO Intern Megan Mayo, who was teaching a group of kindergartners from Marin Horizons School on the middle platform. From two hundred feet away, I yelled "Megan! Peregrine!" Megan wheeled, and her class of thirty kids jumped to their feet, just as the Peregrine cleared the hilltop thirty feet away.

And then, seemingly from nowhere, a second Peregrine, an adult, crashed the scene. It grazed the first Peregrine, a juvenile, with a short stoop. In a sudden direction change to avoid getting hit, the younger Peregrine flew right over the school kids' heads and gently crashed into a pine at the west end of Hawk Hill. It seemed to linger among the trees for safety while the persistent adult, possibly the territorial Golden Gate female, circled the forest, yelling *kek-kek-kek*. Within a minute the young falcon emerged from the pines and flapped hard for the Golden Gate and San Francisco. The adult charged after it, flapping and kekking like crazy. In about twenty seconds, both disappeared, mere falcon-dots in the southern sky. Five minutes later, we all remembered to breathe.

Three months later, I can run this two-minute scene like a film loop in my head. I wonder if those kids can. Did they tell their parents about it that night? Did they know that viewing such a falcon interaction happens once in a decade? Maybe a lifetime? I thought to write about this here on the "Outreach" page because I'm not sure that any article in any magazine, any blog-posting, any radio or TV news segment, or prepared raptor class could have a fraction of the impact of that moment.

How do you make Outreach like that happen? It's all about time outside. For our families and our classes. For ourselves. An article in the SF Bay Bird Observatory newsletter about 20 years ago said it perfectly, "The more time you spend outside in wild places, the better chance you will be there when it happens." What is "it?" Doesn't matter. That's the great thing about being outside: something always happens. And that's what changes people.

Many people were changed by their time atop Hawk Hill this autumn – hearing identification seminars by our Hawk Talk docents, or seeing a banded raptor released by our banding docents. My great thanks to the 17 docents listed below who talked to an estimated 5,000 people on Hawk Hill last fall.

As always, we had great audiences with a variety of institutions and groups, both on and off Hawk Hill in 2011: Aim High, American Birding Association, Americarps, Bay Area Discovery Museum, East Bay Regional Park Junior Rangers, Elder Hostel, Environmental Forum of Marin, Friends of Five Creeks, Habitat Restoration Team, Head-Royce School Bay Ecology Class, Lindsay Museum Docents, Menlo Park Rotary, North American Banding Council, North Fork Association, Portola Valley Middle School, Propsect-Sierra School, Redwood Retirement Home, REI Corte Madera, San Francisco State University, Santa Clara Valley Audubon Society, Sonoma State University Wildlife Class, Trails Forever, Trust for Public Land, UC Davis Raptor Class, UC Davis

Wildlife Society, Wildlife Society Western Section, and the William Kent Society.

- ALLEN FISH

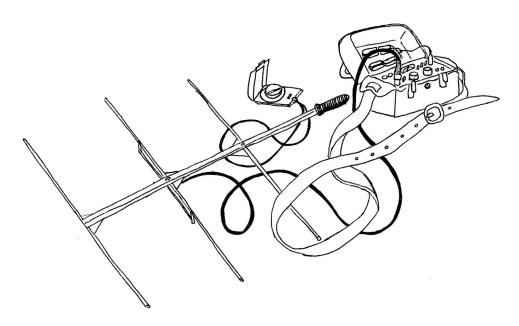
D O C E N T S

Eddie Bartley • Randy Breaux • Dennis Davison • Tom Delebo • Katie Dunbar • Anastasia Ennis Ann Kositsky • Charles Massen • Megan Mayo • Craig Nikitas • Pat Overshiner • Siobhan Ruck Robyn Smith • Denise Villa • Nick Villa • Brittney Wendell • Nick Whelan

Cheryl Abel
Rachel Albright
Robert Allen
George & Stephanie Almeida
Anonymous
Caryn & Joe Ansel
Marilyn Armbruster
Kendra Armer
Michael Armer
Loretta Armstrong

William Bianco
Linda Biscoe
Jessica Blickley
Carl & Jean Blom
Robert & Marion Blumberg
Bill & Jennifer Bollinger
John & Olive Borgsteadt
Dix & Didi Boring
Heather Borman
Anthony Brake

Shirley Carson
John Caulfield
Sally Cedarblade
Shelley & John Chesley
Al Christie
Terry & Zeo Coddington
Joanna Cohen
Sally Cole
Ron Colwell
Huguette Combs



The tools of a telemetrist: Yagi antenna with receiver and compass (not pictured: GPS unit, cell phone, pager, datasheets, clipboard, ready-for-anything attitude).

Paul Babwin & Karen Bell
Diane Bahr
Chloe Banks
Bill Barnaby
Juliana Barr
Anna Barr
Mr. & Mrs. Reg Barrett
Mai-Liis & Donald Bartling
Linda Becker
Marita Beckum
Dr. Catherine Bell
Sandra Berggren
Anne Bernstein
Ardith Betts

Max Brier
Nancy Brink
Johnny Brown
Phyllis Browning
Jean Burke
Shannon Burke
Davida Bushner
Michael Butler
Dr. & Mrs. Richard Camp
Julia Camp
Hugh & Pearl Campion
Sharon Carrillo &
Merlie Sandagon
Caryl Carr & David Presotto

Katherine Compagno
Roger & Martha Conant
Mr. & Mrs. Gerald Connell
Lewis Cooper
Marilyn Cooper
Kanit Cottrell
Reese & Kathleen Cutler
Ludek Dadok
Mr. & Mrs. Jon d'Alessio
Anne Darragh & David Ford
Dennis Davison &
Jean Perata
Mary Delapa
Dr. Tom Delebo

Janine DeMartini Karen DeMello Licia DeMeo Charles & Leslie Dicke

David Driggs Steve Dykes Wade Eakle Peter Ehrlich Holly Eliot Robert Elliott Robert Engel

Richard Engle & Paula Horowitz Marian Erdelyi Janeann Erickson Natalee Ernstrom Norval Fairman Alice Fialkin

Jeanne Fidler Virginia Fifield Amy Jo Fillin Robbie Fischer George & Patsy Fish Mary Anne Flett Gayle Fuetsch Kathleen Gadway Leo & Jane Gaspardone

Kris Geiger Valinda Gillis Kevin Gilmartin & Barbara Bessey Derek Girman Grant Gladman

Mr. & Mrs. Goldstein Marisol Gonzalez

Cindy Goral & Jerry Scharf

Jim & Ruth Gravanis

Alane Gray Dorothy Gregor Earl Gress Keith Gress

Mr. & Mrs. John Griffin

Mary Haack Jerry Hadfield Michael Hall Michael Harkins Judy Harris John Harris Diane Patricia Hart

Hugh Harvey Jennifer Haynes

Kathleen Hazelton-Leech Annelisa Hedgecock

Frederick Heitkamp, Jr.

Pete Heller Colin Henne Melissa Hero Ann Heurlin Diane Hichwa Jan Hintermeister Sam Hontalas

Richard & Diane Horn Richard & Terry Horrigan

Michael House Karen Humphrey Angela Ippolito John Irwin Misty Ismail Kathy Jarrett

Dr. Marcine Johnson George Johnson

Mr. & Mrs. Peter Joost Barbara Jording

Pamela Jorgensen Cyril Juanitas

Derry & Charlene Kabcenell

Debbie Kahn Benjamin Kaplan Judy Kaufman Mamiko Kawagu

Mamiko Kawaguchi Susan Kelly

Nancy Kittle Leslie Koenig Robin Kojima &

Teresa Renaker Ann Kositsky

Allison Kozak Cheryl Kraywinkel



Bander Ari La Porte extracts a juvenile Sharp-shinned Hawk from an upright net.

Julia Kringel Lori Lambertson Shelby LaMotte Barbara Lancaster Owen & Eva-lynne Leibman Mardi Leland Winifred Lennihan Peter Leveque Allison Levin Pam Lewis Penny Lewis Marie & Barry Lipman Kirsten Liske David Loeb Lvnn MacDonald Chris Macintosh David & Lynne Madison Elizabeth Madriz Ron Mallory Nancy Martin



Charles Massen
Maureen McCormick
Mary McFadden
Dr. Susan McGreevy
Herb McGrew
Mr. & Mrs. John McQuown
Ms. Amy Meyer
Mr. & Mrs. Ivan Meyerson
Ginnie Mickelson
Margaret Mindell

Henry Mitchell, III

Edith Mitchell
Nancy Mori
Denise Mortorff
Alida Morzenti
Thomas Moutoux
Mark Mushkat
Jean Myers
Mikiye Nakanishi
Soo-Hi & Alan Nayer
Mr. & Mrs. Gregg Niceley
Craig Nikitas
Jill North

Mr. & Mrs. Ed Nute Edward Oberweiser & Elaine Charkowski

John Odell
Kathy Odell
Steven O'Donnell
Brian O'Laughlin
Claire O'Neil
Patricia Overshiner
Gary Palmer
Jenny Papka

Diane Parish & Paul Gelburd Ronald Parker Katherine Pattison Allan Peoples Ralph Pericoli Roy Pisetsky Allan Plumb Carol Poole Bob Power Norma Powrie

Mr. & Mrs. David Pratt William & Karin Rabin Mr. & Mrs. John Rathkey Martin Rayl

Donald Reinberg
Gail Richardson
Eileen Richey
H. Allan Ridley & Helen

McKenna-Ridley
Marci Riseman &
Evan Sagerman

Duane & Barbara Robinson

Diane Rooney
Elizabeth Rouan
Ruth Royter
Steve Rudolph
Ann Ruffer
Maggie Rufo
Philip Ruhle

Leonard & Elizabeth Rush

Ahmad Sadr Walter H. Sakai Serena Salomon Ivan Samuels Susan Sandler

Peter & Barbara Sapienza

Juta Savage

Charles & Susan Savage

Michael Savino

Rolf & Charlotte Scherman

Birgit Schilling

Norma Pauline Schmid Marilyn Schmitz Donald Schmoldt

Donald Schmoldt Linda Schneider

Samuel & Ilana Schuchat

Terry Scussel David Sexton James Shea

Debra Love Shearwater

Jay Sheets Jennifer Shepard Carrie Sherriff

Heidi Munzinger Shott

Rob Shovlowski Martin Sidor Marjorie Smith Robin Smith David Snipper Sharon Solomon Dr. Sheila Sousa Patricia Sparacino Patricia Spencer Margaret Stanley Joan Stewart

Ann Stone
Polly Strahan
Hal Sugishita
Jennifer Sullivan &
Paul Mirocha
Meryl Sundove
Jan Sutcher
Mark Sutherland
Tracy Swartz
Kirk Swenson
Julie Sykes
Michelle Tattersall

Elise & Craig Tewell Susan Thomas Storm Thomas

Mr. & Mrs. Bruce Thompson Ms. Cynthia Thomssen Mr. & Mrs. James Todd

Peter Triem John Ungar Linda Vallee

Richard Allen Vanderlugt

Jullie Nan Vasquez Nick & Denise Villa

Karyn Vogel
Erika Walther
Wendy Warrington
Penelope Watson
Mary & Roman Watt
Noreen Weeden &
Eddie Bartley
Marion Weeks &
Stephen Blossom

Emily Weil S. Paul Welles, Jr. David Wells

Nick Whelan

Mr. & Mrs. Richard Welsh

Peter White Thomas White Mr. & Mrs. M.K. Whyte Jeff Wilkinson

Jeff Wilkinson Howard Williams Edwin Williams & Joan Halverson Deborah Wilson Kathleen Winslow Kathy Wolf David Wood Jim Yampolsky Bob Zeiss

CORPORATIONS & FOUNDATIONS

Bank of America Matching Gifts Program GMAC Commercial Mortgage Hawk Migration Association of North America Pacific Gas & Electric Co.

REI Symantec SYPartners

DAP CAMPAIGN

Carvn & Joe Ansel Michael Armer Kendra Armer William Barnaby Marita Beckum Ardith Betts Gleneda Borton Johnny Brown Michael Butler Terry & Zeo Coddington Mr. & Mrs. Gerald Connell Lewis Cooper Dennis Davison & Jean Perata Dr. Tom Delebo Janine DeMartini Norval Fairman George & Patsy Fish

Robert Fivis

Alane Gray

Keith Gress

Mr. & Mrs. John Griffin Michael Harkins

Jennifer Haynes Melissa Hero

Calvin Hom Sam Hontalas

Dr. J. Pearce Hurley Dr. Marcine Johnson

Pam Lewis

Marie & Barry Lipman Lynn MacDonald

Mr. & Mrs. John McQuown

Margaret Mindell Nancy Mori

Thomas Moutoux

Claire O'Neil

Patricia Overshiner Ronald Parker

Donald Reinberg

Ann Ruffer

Peter & Barbara Sapienza

David Sexton
James Shea
Jay Sheets
David Snipper
Jennifer Sullivan
Elise & Craig Tewell

John Ungar Linda Vallee Marion Weeks & Stephen Blossom

David Wells
Peter White
Nancy Willard
Bright Winn
Kathleen Winslow
Kathy Wolf

IN HONOR

- of Jaclyn De Santis Pete Triem

NUMBER OF RAPTORS BANDED 1983-2011, MARIN HEADLANDS*

	1983-2004	2005	2006	2007	2008	2009	2010	2011	Total
Northern Harrier	208	0	20	15	S	∞		2	259
Sharp-shinned Hawk	5,992	929	191	583	646	558	362	494	10,078
Cooper's Hawk	7,964	989	829	1,048	504	451	524	444	12,450
Northern Goshawk	4	0	0	-	0	0	0	0	S
Red-shouldered Hawk	213	6	27	24	17	13	2	15	320
Broad-winged Hawk	14	3	3	0	0	2	0	0	22
Swainson's Hawk	3	0	3	2	0	0	-	0	6
Red-tailed Hawk	6,536	121	381	452	280	226	115	187	8,298
Ferruginous Hawk	2	0	0	0	0	0	0	0	7
Rough-legged Hawk	3	0	1	1	0	0	0	0	S
Golden Eagle	2	0	0	0	0	0	0	0	2
American Kestrel	753	63	06	59	38	73	82	99	1,214
Merlin	217	56	57	51	27	62	52	09	582
Peregrine Falcon	50	4	3	S	10	3	2	3	80
Prairie Falcon	24	3	1	1	3	3	1	2	38
Eurasian Kestrel	0	0	0	1	0	0	0	0	1
Total	21,985	1,621	2,182	2,243	1,530	1,399	1,142	1,263	33,365

^{*} Data compiled by Buzz Hull. 2011 data are through January 6, 2012.

NUMBER OF RAPTOR SIGHTINGS 2001-2011, MARIN HEADLANDS*

	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2011
Hours	445	524	200	530	455	492	524	208	497	439
Turkey Vulture	8,307	11,059	10,804	10,133	7,877	9,211	9,228	7,529	8,060	6,447
Osprey	71	106	134	124	110	108	06	88	81	57
White-tailed Kite	98	79	63	201	99	130	71	74	93	74
Bald Eagle	4	4	4	3	9	2	2	9	10	6
Northern Harrier	700	1,318	352	957	460	1,090	1,002	454	614	335
Sharp-shinned Hawk	3,368	5,847	5,171	3,257	4,407	5,244	4,636	4,091	3,332	2,622
Cooper's Hawk	1,818	2,765	2,022	2,454	2,427	3,367	3,717	1,956	1,738	1,805
Northern Goshawk	2	0	_	0	-	0	4	2	-	0
Red-shouldered Hawk	485	229	289	548	149	612	512	559	529	248
Broad-winged Hawk	68	180	123	42	146	183	70	131	180	202
Swainson's Hawk	5	6	8	S	4	7	12	_	_	13
Red-tailed Hawk	8,359	12,175	6,994	13,094	7,277	11,410	11,869	6,860	8,297	7,529
Ferruginous Hawk	18	34	14	31	33	25	13	15	11	18
Rough-legged Hawk	5	12	1	0	4	21	10	4	2	0
Golden Eagle	22	21	14	21	13	24	38	18	11	6
American Kestrel	577	999	069	547	627	611	378	377	458	358
Merlin	153	212	175	173	198	230	140	184	149	166
Peregrine Falcon	134	106	229	229	219	237	181	224	259	264
Prairie Falcon	5	12	3	6	5	~	4	7	6	2
Unidentified	1,159	1,357	1,232	1,474	1,441	1,436	1,382	904	991	1,011
Total	25,367	36,639	28,324**	33,302	25,470	33,956	33,359	23,485**	24,826	21,169
Raptor Activity (raptors per hour)	57.0	70.0	56.6	62.8	56.0	0.69	63.7	46.2	50.0	48.2
(raptors per hour)										

^{*} All hawkwatck data underwent intense review in 2011, and the numbers listed in this chart reflect corrected data. 2010 data are not included for comparison with other years because two count sites were used due to road closures during the 2010 season. See our 2010 Season Summary for a more detailed explanation.
** Includes 1 Mississippi Kite.

Golden Gate Raptor Observatory

Building 1064 Fort Cronkhite Sausalito, California 94965

(415) 331-0730 • ggro@parksconservancy.org • www.ggro.org



GGRO Season Summary 2011

VOLUNTEERS
HAWKWATCH
BANDING
TELEMETRY
OUTREACH
DONORS



The Golden Gate Raptor Observatory is a program of the Golden Gate National Parks Conservancy in cooperation with the National Park Service.

