



COVER PHOTO

Volunteer Ted Beedy has been running a wood duck project on the idyllic pond just outside his office in Nevada City for 20 years. He captured this image at the pond on April 7 last year with his Canon 7D Mark II camera, equipped with a 100-400 zoom lens. The ducks were on a log he placed there specifically for their perching pleasure.

2020 EVENTS

WOOD DUCK DINNER

What: 29th Annual California Wood Duck Program Banquet

When: April 11, doors open at 5 p.m., dinner is at 6:30 p.m.

Where: Fairfield Community Center, 1000 Kentucky St., Fairfield

Early-bird special: Purchase event tickets by March 28 for a chance at \$100 in General Raffle Tickets (3 winners).

Tickets and donations: Steve Mortensen, 707-592-5545; Robert Franco, 707-290-3601

WOOD DUCK 101

What: Learn about wood duck biology, check on active wood duck projects and get a chance to see a live hen get banded.

When: May 16

Where: Davis Ranches/Sebia Duck Club in Colusa County

Cost: Free

Register:
calwaterfowl.org/events

2019 CALIFORNIA WOOD DUCK PROGRAM REPORT

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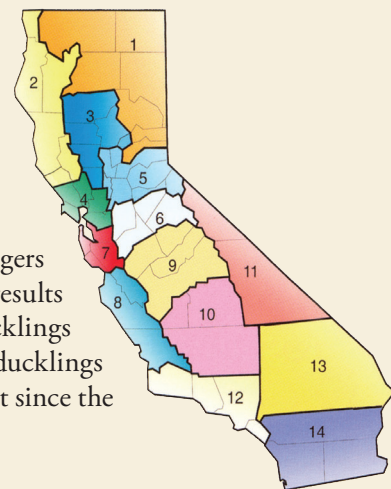
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2019

CALIFORNIA WOOD DUCK PROGRAM PRODUCTION

The **California Wood Duck Program** is the largest and most successful citizen science project of its kind, deploying dedicated volunteers to install, maintain and monitor literally thousands of nest boxes across the state. This incredible and humbling effort has helped mitigate the effects of habitat loss that almost drove wood ducks to extinction a century ago.

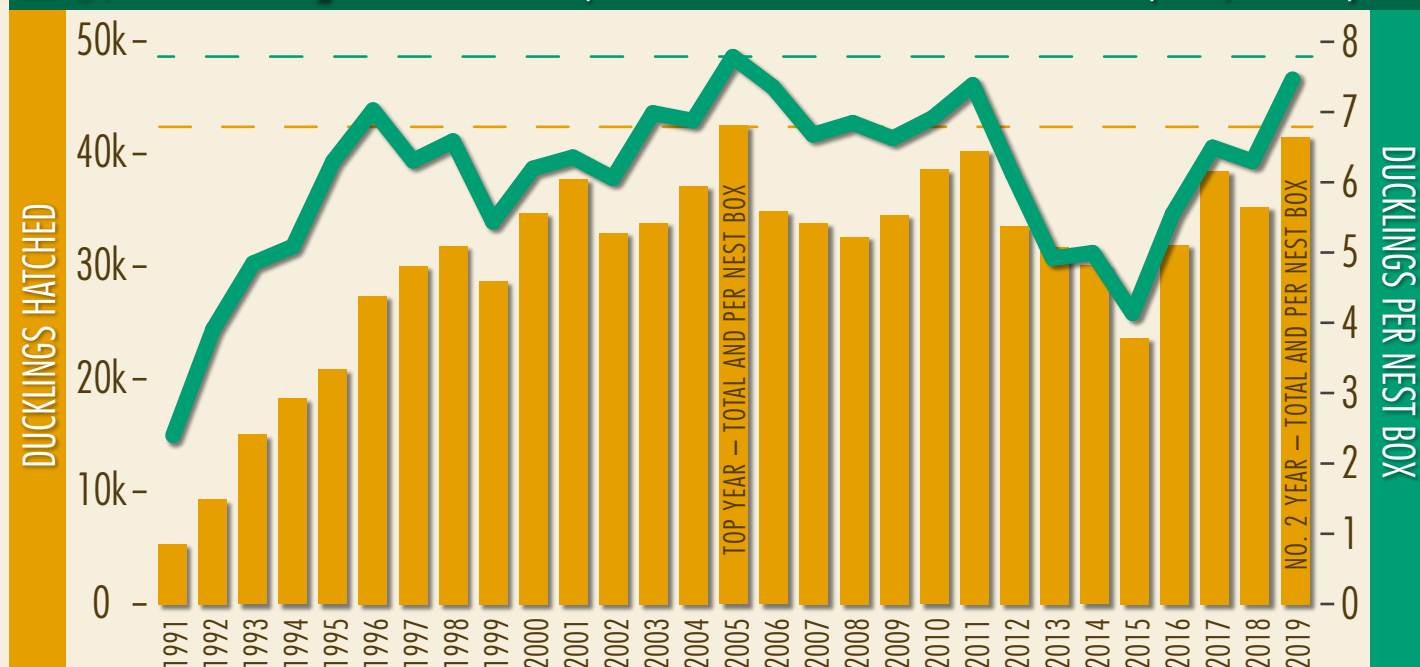
Wood Duck Program project managers reported the following volunteers and results for 2019. Both the total number of ducklings produced – 41,540 – and the average ducklings per box – 7.43 – were the second highest since the program began in 1991!



HATCHED
SINCE 1991

887,464

Last year marked the California Wood Duck Program's second most productive year ever, hatching 41,540 ducklings, an average of 7.43 per nest box. Our all-time total is on track to top 900,000 this year!



DISTRICT 1 – NORTHEAST CALIFORNIA

District manager: Craig Ferrari, 530-268-1661

1000 Springs Ranch: 42 boxes, 208 ducklings.

Volunteers: Gary Welsh, Jacob Gerow-Welsh

Bar-E Ranch: 10 boxes, 66 ducklings. Volunteers: Maddie Nightingale, Mikey Nightingale, Caleb Wells, Vince Aiello

Beedy: 6 boxes, 46 ducklings. Volunteer: Ted Beedy

Bidwell: 26 boxes, 138 ducklings. Volunteers: Matt Meyer, Dennis Corvello

Budge: 6 boxes, 12 ducklings. Volunteer: W.W. Budge

Ferrari Farms: 15 boxes, 19 ducklings. Volunteer: Craig Ferrari

Golden Oaks: 10 boxes, 9 ducklings.

Volunteer: Craig Ferrari

Goose Valley: 20 boxes, 24 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Lake Margaret: 7 boxes, 70 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Napoli: 3 boxes, 5 ducklings.

Volunteers: Len Napoli, Gail Napoli

Nevada Co. F & W Commission: 17 boxes, 169 ducklings. Volunteer: Craig Ferrari

Sanders Ranch: 9 boxes, 80 ducklings. Volunteers: Rick A. Sanders, Henry Sanders, Sarah Sanders

DISTRICT 2 – NORTH COAST

District manager: Taylor Norris, 707-616-8672

Harpshire: 3 boxes, 0 ducklings. Volunteer: Kevin Harper

Humboldt State University: 13 boxes, 62 ducklings.

Volunteers: Jeffery Teel, Carly Stanton, Spencer Butler, Garrett Munian

Salt Flat: 4 boxes, 22 ducklings.

Volunteer: Robert Heitman

DISTRICT 3 – SACRAMENTO VALLEY

District managers: Steve Mortensen, 707-592-5545; Mike Johnson, 530-521-8066; Bryce Johnson, 530-624-9752; Jim Carr, 530-514-4352; Matt Meyer, 510-352-4844; John Garriga, 530-815-4998

5R Ranch: 5 boxes, 17 ducklings.

Volunteers: Greg Silva, Patti Silva

49er Duck Club: 10 boxes, 92 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Angel Ranch Duck Club: 36 boxes, 461 ducklings.

Volunteers: John Garriga, Doug Garriga, Jennifer Garriga, Mike Johnson, Jim Carr, Bryce Johnson, Rod Miller

Argo & Vickery Farms: 9 boxes, 127 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Behring Ranch: 175 boxes, 2,157 ducklings. Volunteers:

Isabelle Romo, Ernesto Jimenez, Gerardo Jimenez, Lazaro Romo, Maximus Romo, Janine Grupalo

Ben's WDP: 8 boxes, 67 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Brady Ranch: 35 boxes, 373 ducklings.

Volunteers: Bill Neufeld, Matthew Neufeld, Sam Craig, Richard Vannelli, Mike Johnson, Jim Carr

Broken Wing Duck Club: 11 boxes, 132 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Burgard: 36 boxes, 107 ducklings. Volunteer: Dirk Burgard

Butte City College: 62 boxes, 224 ducklings.

Volunteers: Rick Wittsell, Butte College Natural Resources Management Program students, Brian Huber

Butte Creek Farms: 61 boxes, 261 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Butte Creek Island Ranch: 17 boxes, 219 ducklings.

Volunteers: California Waterfowl staff

Bypass Farms: 20 boxes, 5 ducklings.

Volunteers: Ammy Reyes, Leslie Rodriguez

Cache Creek Conservancy: 8 boxes, 8 ducklings.

Volunteers: Phil Zoucha, Nicolette Sanchez, Jimmy Huynh

Casa de Patos/Bird Haven Ranch: 196 boxes, 2,251 ducklings. Volunteers: Paul & Sandi Bonderson, UC Davis

Cherokee Farms: 40 boxes, 343 ducklings.

Volunteers: Mike Johnson, Bryce Johnson, Jim Carr, John Garriga, Doug Garriga

Closed Zone Farms: 42 boxes, 200 ducklings.

Volunteers: Jesus Gomez, Mark Koller, Larry Gury

Colusa NWR: 49 boxes, 500 ducklings.

Volunteers: Mike Peters, Larry Garrett, Barbara Garrett

Concow Reservoir: 2 boxes, 0 ducklings.

Volunteers: Steve Wildblood, Virginia Wildblood

Cozzolino: 10 boxes, 92 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Crim-Sky Hi: 48 boxes, 263 ducklings.

Volunteers: Mike Phelan, Bill Crim

Crippled Mallard: 21 boxes, 180 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Fonseco: 5 boxes, 27 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Foothill Mallard Club: 29 boxes, 404 ducklings.

Volunteers: The Hammett Family, Honcut King, Bobby Grilli, Glen Weldon, Justin Wall, Faith Wall

Double Down Duck Club: 3 boxes, 27 ducklings.

Volunteers: Guy Delorefice, Lani Delorefice, Bob Nichols and Family, Carl Walker and Grandsons

DC: 12 boxes, 131 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Foster City Rod & Gun Club: Volunteers: Darold Givens, Bruce Billings, Eric Swanson, Don Woods, Matt Plut

- **Delevan NWR:** 23 boxes, 159 ducklings.

- **Gordon's Pond:** 25 boxes, 208 ducklings.

- **Laughing Mallard:** 46 boxes, 241 ducklings.

- **Sacramento NWR:** 19 boxes, 99 ducklings.

Fresh Water Creek: 11 boxes, 141 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Gardner Farms: 15 boxes, 189 ducklings. Volunteers:

Dan Erben; Avery Erben; Kelsey Erben; Kaila Erben; William Gardner, Jr.; Steve Mortensen

Gray Lodge Wildlife Area: 355 boxes, 2,913 ducklings.

Volunteers and staff: Carol Allen, Rod Behbood, Cathy Bergkamp, Larry Bergkamp, Alex Dunn, Matthew Kendall, Lori Dieter, Donna Dugan, Cal Dugan, Dan Furr, Dorothy Glass, Ray Kirk, Bob Larsen, Duane Linander, Jennifer Linander, Jack Macfarlane, John Royce, Kaitlyn Shorrock, Kristin Shorrock, Meghann Shorrock, Alex Short, Edith Shubert, Marie Smith, Hal Stoner, Slaney Stringer, Brianna Wyatt

Hollywood Duck Club: 56 boxes, 293 ducklings.

Volunteers: Dave Barale, Pete Barale, Joe Barale, Erik Hora, Ron Hora

Joe Paulo Ranch: 55 boxes, 333 ducklings. Volunteers:

Mike Johnson, Bryce Johnson, Joe Paulo, Jim Carr, John Garriga, Doug Garriga

Larry Merlo Youth: 33 boxes, 397 ducklings. Volunteers:

Mike Johnson, Jim Carr, Michael Felkins, Rocque Merlo, John Garriga, Doug Garriga, Bryce Johnson

Little Dry Creek Farms: 92 boxes, 61 ducklings.

Volunteer: Judy Oswald

Lone Star Duck Club: 8 boxes, 98 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Mallard Ranch: 50 boxes, 338 ducklings. Volunteer:

Dominic Gillibert

Mayberry: 25 boxes, 91 ducklings. Volunteer: Dan Mayberry

Mom's Farm: 16 boxes, 121 ducklings.

Volunteers: Dennis Burkell, Kathie Burkell

Murdock Gun Club I: 67 boxes, 693 ducklings.

Volunteers: Brian Huber, Caroline Brady, Jason Coslovich, Ryley Haugh, California Waterfowl staff

Murdock Gun Club II: 103 boxes, 1,716 ducklings.

Volunteers: Brian O'Connor, Kathleen O'Connor

MVS Fowl Estates: 10 boxes, 21 ducklings. Volunteers:

Matt dePolo, Giovanni dePolo, Anthony dePolo, Vincent Andreuccetti, Luciano Andreuccetti

Nannini Bros.: 6 boxes, 23 ducklings. Volunteers: Michael

Nannini, Jeffrey Nannini, Brian Nannini

North Colusa: 3 boxes, 68 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Ohm Road Club: 10 boxes, 109 ducklings. Volunteers: Matt

Meyer, Dennis Corvello

Opa's Dead End Duck Club: 7 boxes, 16 ducklings.

Volunteer: William Owen

Oroville Wildlife Area: 207 boxes, 1,206 ducklings.

Volunteers: Kim A., Amanda G., Byron S., Roy M., AJ D.,

Bryan Y., Taylor G., Rose J., Aundrea A., Claire

Packer Rd: 19 boxes, 284 ducklings. Volunteers: Gene Beauchamp, Matt Meyer, Dennis Corvello

Paradise Farms: 8 boxes, 51 ducklings. Volunteers: Tiffany Podesta, Anthony Lopez

Pintail II: 10 boxes, 119 ducklings. Volunteers: Matt Meyer, Dennis Corvello

Pioneer Duck Club: 34 boxes, 508 ducklings. Volunteers: Johnny Drury, Matt Drury, Morgan Richardson, Tami Clark

Prime Time Duck Club: 63 boxes, 540 ducklings.

Volunteers: Don Springer, Bruce Billings

Rancho Esquon: 70 boxes, 112 ducklings. Volunteers:

Mike Johnson, Bryce Johnson, John Garriga, Jim Carr, Doug Garriga, Brian Huber, Loretta Gardner

Riverside Cottage: 2 boxes, 34 ducklings.

Volunteers: Kris Shorrock, Merrily Stover, Larry Jendro

RJ Finney Rod & Gun Club: 50 boxes, 552 ducklings.

Volunteers: Dominic Gillibert, Rene Gillibert, Dave Ciapponi

UC Davis:

- **Roosevelt Ranch:** 100 boxes, 654 ducklings.

Volunteers: Roosevelt Ranch Partners, UC Davis

- **Russell Ranch:** 16 boxes, 89 ducklings.

Volunteers: UC Davis

RSCT Inc Duck Club: 4 boxes, 2 ducklings. Volunteers: Tom Orgain, Russ Morth

Sanborn Slough: 21 boxes, 200 ducklings. Volunteers: California Waterfowl staff

Sebia Duck Club: 39 boxes, 359 ducklings. Volunteers:

Mark Kirsten, Vince DeCoito, Matt Artz, Ryan Artz, Dan Artz, Anna Artz, Dave Garibaldi, Jim Wruck, Mark Seaters, Katherine Seaters, Caroline Brady, Brian Huber

Stone Creek: 9 boxes, 105 ducklings. Volunteers: Matt Meyer, Dennis Corvello

Sutter Buttes Boys Club: 31 boxes, 81 ducklings. Volunteers: Vic Parachini, Walt Sikes, Eric Hohener, Don Sande

Thuis Ranch: 6 boxes, 39 ducklings. Volunteers: Steve Mortensen, Neal Van Alfen, Pam Kazmeirczak, Dave Howes, Wyatt Ensley, Garrett Ensley, Jack Ensley

Tin Can Louie: 12 boxes, 116 ducklings. Volunteers: Jeff Huff, Chris Perry, Bill Maudru

Upper Butte Basin Wildlife Area:

- **Howard Slough:** 67 boxes, 709 ducklings. Volunteers: Laura Cockrell, Shannon Rich, Jay Bogiatto, Shelly Kim, Derek Schiewek, Caylin Stanley, Jepson Manuel, Matt Manuel, John Davis, William Shippen, Roberta Overton, Jared R. Decker, Claire Bryant, Taylor Groves, Izaak Farley, Shannon Sinkovich, Alan Vigent, Kelsey Carreras, Jessica Gonzales, Phillip Jaques

- **Little Dry Creek:** 51 boxes, 600 ducklings. Volunteers: Laura Cockrell, Shannon Rich, Claire Bryant, Taylor Groves, Izaak Farley, Shannon Sinkovich

Vista Ranch: 23 boxes, 229 ducklings.

Volunteers: Roger Borrell, Mike Schuster, Steve Mortensen

West Delevan Duck Club: 7 boxes, 98 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

Wild Goose: 123 boxes, 586 ducklings.

Volunteers: J.P. Stover, Luke Pfister

Willow Creek Wood Ducks: 113 boxes, 2,213 ducklings.

Volunteers: Harlan Albers, Curtus Amaro, John Amaro, Randy Hansen, Troy Hansen

DISTRICT 4 – NORTH BAY

District manager: Robert Franco, 707-290-3601

Arnold Ranch Duck Club: 58 boxes, 503 ducklings.
Volunteer: Mike Lenzi

Denverton: 5 boxes, 0 ducklings. Volunteers: California Waterfowl staff

EBMUD: 24 boxes, 74 ducklings. Volunteers: Douglas Vaughan, Robert Bartholomew, Sandy Ferreira, Doris Kretschmer

Green Valley Creek: 10 boxes, 69 ducklings. Volunteers: Anthony Iaccarino, Theresa Iaccarino, John Iaccarino

Greenhead Duck Club: 26 boxes, 84 ducklings. Volunteers: Kevin Brush, Trinity Brush, Malina Brush, Amber Brush

Grizzly Ranch: 12 boxes, 0 ducklings.
Volunteers: Robert Franco, California Waterfowl staff

Jacksnipe: 10 boxes, 131 ducklings. Volunteers: Albert Seeno III, Paul Silva, Eric Sheffield, Jim Paroli

Just For Ducks: 14 boxes, 24 ducklings. Volunteers: Brian Murphy, Barney Howard, Rick Kelch, Gary Murel, Wally King, Hugh Harvey, Bob Babb

Laguna Creek: 4 boxes, 0 ducklings.
Volunteers: Steve Broadley, Benjamin Broadley

Machado: 14 boxes, 174 ducklings. Volunteers: Don Alvarado, Ken Machado, Gary Machado, Millie Machado, Teddy Machado, Callen Ditty, Sam Alvarado, Robert Franco

McDaniel: 12 boxes, 76 ducklings. Volunteers: Gary McDaniel, Joeni McDaniel, Gianna Rose McDaniel, Jared McDaniel

Opus One: 4 boxes, 28 ducklings. Volunteers: Bill Neufeld, Robert Franco, Aimee Baker, Greg Hamilton

Peaceful Glen: 7 boxes, 59 ducklings. Volunteers: Steve Mortensen, Bob Brown, Jeanie Brown, Dave Howes, Wyatt Ensley, Garrett Ensley, Jack Ensley

Pope Creek: 7 boxes, 0 ducklings.
Volunteers: R. Todd Eggert, John Ehrenfeld

Psmith: 8 boxes, 24 ducklings.
Volunteers: Robert Franco, Robert T. Franco

Stuart Creek Sonoma: 3 boxes, 0 ducklings.
Volunteers: Tony Nelson, Eric Fessenden, Bo Kearns

Telfer: 5 boxes, 26 ducklings.
Volunteers: Robert Franco, John Telfer, Robert T. Franco

Willow Pond: 8 boxes, 107 ducklings. Volunteers: Steve Mortensen, Joann Tomlinson, Dave Howes, Wyatt Ensley, Garrett Ensley, Jack Ensley

DISTRICT 5 – SACRAMENTO/SIERRA

District manager: Greg Damitz, 916-705-4544; Mike Merlo, 916-248-6595; Tim Anderson, 707-474-8448

Beale Air Force Base: 50 boxes, 129 ducklings.
Volunteers: Chadwick McCready, Trevor Moore, Jeff Radar, Nick Nugent, Mathew Saiz, Maia Lipschutz, Jacob Miller, Luca Lagares, Mark Suek, Blake Lawver, Jane Tavares, Clay Crow, Brandon Swalla, Justin Hutchinson, Mary Walker

Bear River: 25 boxes, 185 ducklings. Volunteers: Brett Lawson, Bo Lawson, Hunter Lawson, Brad Thompson, Toby Woodworth, Steve Mortensen

Boy Scouts Troop 83: Volunteers: Russ van Loben Sels, Yuuto van Loben Sels

- **Elk Slough:** 69 boxes, 975 ducklings.
- **Babel Slough:** 22 boxes, 458 ducklings.

Brown's Valley: 3 boxes, 14 ducklings. Volunteers: Mike Schuster, Ruth Mickelsen

Chesapeake: 29 boxes, 145 ducklings.
Volunteer: Chris Holsey

Conaway Ranch: 71 boxes, 169 ducklings.
Volunteers: Mike Hall, Conaway Ranch partners, UC Davis

Cosumnes River Preserve: 203 boxes, 849 ducklings.

Volunteers: Nancy Sage, Jim Dunn, Sean Wirth, Greg Willis, Tim Miller, Richard Larson, Steve Imialek, Mike Savino, Cathie LaZier, Ann Burris, Amber Veselka, Rick Hicks, Charlie Henderson, Duane Gansberg

Crawford Rocklin: 6 boxes, 17 ducklings.
Volunteers: Clark Squires, Bill Crawford

D & T Tackle: 3 boxes, 0 ducklings.
Volunteers: Dennis Byrne, Terra Byrne

Footrot Flats: 49 boxes, 322 ducklings. Volunteers: Steve Broadley, Benjamin Broadley, Roy Broadley, Brian Huber, John Garriga, Jimmy Carr, Doug Garriga, Mike Johnson

Greenberg: 7 boxes, 48 ducklings. Volunteers: Stu Greenberg, Deb Greenberg

Jeri Langham: 16 boxes, 207 ducklings. Volunteers: Jeri Langham, Cliff Hawley, Jim Thomas, Tom Horner, Oleta Melnicoe, Jim Pompy, Sonia Santa Anna, Carla Barbaro, Gay Jones

LJ Farms: 52 boxes, 364 ducklings.
Volunteers: Nick Iacopi, John Iacopi, Sheila Iacopi

Mike Merlo Pleasant Grove Creek: 13 boxes, 0 ducklings. Volunteer: Mike Merlo

Mike Merlo Yuba City: 33 boxes, 174 ducklings.
Volunteer: Mike Merlo

Moe: 8 boxes, 41 ducklings. Volunteer: Rich Moe

North Delta Conservancy: 172 boxes, 1,352 ducklings.
Volunteers: John Erickson, Tom Uslan, Jim Kerruish

North Pleasant Grove: 19 boxes, 65 ducklings.
Volunteers: Clark Squires, Bob Rasmussen, Colby Heaton, Cooper Heaton

Placer County Taylor Ranch Nature Reserve: 10 boxes, 132 ducklings. Volunteers: Ginger Knutson, Morgan Knutson, Gabriella Knutson, Natalie Knutson, Taylor Kemis

Pompy: 8 boxes, 84 ducklings. Volunteer: Jim Pompy

South Butte Hunting Club: 22 boxes, 317 ducklings.
Volunteer: Chris Holsey

South Lake Tahoe: 2 boxes, 6 ducklings. Volunteers: Dave Huber, Ginger Huber, Daniel Huber, Brian Huber, Wyatt Huber, Karlie Huber

South Pleasant Grove: 19 boxes, 141 ducklings.
Volunteers: Greg Damitz, Sr.; Gregory W. Damitz, Jr.

Township South: 26 boxes, 76 ducklings.
Volunteers: Steve Broadley, Benjamin Broadley, Roy Broadley, Brian Huber, John Garriga, Jimmy Carr, Doug Garriga, Mike Johnson

Whitney Oaks: 5 boxes, 68 ducklings. Volunteer: Ed Price

William's Pond: 6 boxes, 59 ducklings.
Volunteers: Tad Gantenbein, Erik Gantenbein, Zack Reuter

Yuba City: 29 boxes, 352 ducklings. Volunteers: Chris Holsey

DISTRICT 6 – DELTA

District managers: CWDP Chair Jim Paroli, 209-993-0808; Eric Sheffield: 925-699-9452

Black Hole Habitat: 62 boxes, 641 ducklings.
Volunteer: Trevor Carlson

Brack Track: 12 boxes, 123 ducklings.
Volunteers: Jim Paroli, Eric Sheffield, Pete Costamagna

Brush Duck Club: 21 boxes, 154 ducklings. Volunteers: Matt Meyer, Dennis Corvello

Eudy: 9 boxes, 0 ducklings.

Volunteers: John Eudy, Robbin Eudy

Kautz Ironstone Winery: 70 boxes, 627 ducklings.
Volunteers: Joe Valente, Claudia Valente

Mandeville Island: 320 boxes, 1,742 ducklings.
Volunteers: Jim Paroli, Eric Sheffield, Tony Marnell

McDonald Island: 50 boxes, 367 ducklings. Volunteers: Jim Paroli, Eric Sheffield

Medford Island: 10 boxes, 0 ducklings.
Volunteers: Rigo Sevilla, Peter Ottesen, Seven Partners

Nelson: 60 boxes, 376 ducklings.

Volunteers: Matt Meyer, Dennis Corvello

San Joaquin River NWR: 47 boxes, 165 ducklings.
Volunteers: Doug Ridgeway, Lee Whitmer

Swan Lake: 4 boxes, 32 ducklings.
Volunteers: Bill Keller, Quinlynn Keller, William Keller

Talavera: 4 boxes, 39 ducklings.
Volunteers: Jim Paroli, Eric Sheffield, Tom Zuckerman

Trion Ranch: 17 boxes, 113 ducklings. Volunteers: Matt Meyer, Dennis Corvello

Tyler Island Habitat: 11 boxes, 128 ducklings.
Volunteers: Eric Sheffield, Jim Paroli, Stuart Greenberg

DISTRICT 7 – SOUTH BAY

District manager: Sandy Ferreira, 925-420-6256

152 Land and Cattle: 3 boxes, 21 ducklings. Volunteers: Eric Sheffield, Peter Ciraulo

Arroyo Del Valle: 3 boxes, 6 ducklings.
Volunteer: Ralph Moir

Quarry Lakes: 10 boxes, 0 ducklings. Volunteers: Dave Riensche, Sarah Riensche, Daniel Riensche, Nathan Riensche, Rebekah Riensche



2020 BELLROSE AWARD RECIPIENT MIKE JOHNSON

The California Wood Duck Program honors Mike Johnson as the recipient of the 2020 Bellrose Award.

Johnson got involved with wood ducks in 1982, establishing private wood duck projects on ranches along the Cosumnes River in Sacramento County. In 1983, he worked with Ducks Unlimited biologists to develop habitat for wood ducks and waterfowl on the Cosumnes River Preserve.

He has been involved in the California Wood Duck Program for 11 years and is currently one of the District 3 managers for projects in the Butte, Glenn, Colusa, Tehama and Yolo counties. He currently helps manage five projects totaling 234 boxes, hatching 1,646 ducklings in 2019 alone!

Johnson has also become a bander for the wood duck program and banded over 90 hens on the nest in 2019. And he graciously volunteers his time helping with the Wood Duck Program dinner, Wood Duck 101 event and Yolo Duck Days. 🦆

Dr. Frank C. Bellrose was one of the pioneers of wood duck nesting research. His career-long commitment to understanding wood duck biology began in the late 1930s and resulted in the development of predator-resistant nest boxes. His lifelong dedication to waterfowl, especially the wood duck, is why the California Wood Duck Program honors one outstanding volunteer in his name each year.

DISTRICT 8 – CENTRAL COAST

District manager: Gary Owens, 805-772-5229

No projects reporting

DISTRICT 9 – NORTHERN SAN JOAQUIN VALLEY

District manager: Erik Knorr, 831-809-1571

Dallas Duck Club: 152 boxes, 222 ducklings. Volunteers: Al Sturla, Anthony Lopez, Rene Lopez, Jess Nelson, Chris Chung, Tiffany Podesta

Hensley Lake: 18 boxes, 19 ducklings. Volunteer: Bill Ralph

Hollister Duck Club: 26 boxes, 18 ducklings.

Volunteer: John Cerruti

Loggers: 11 boxes, 6 ducklings. Volunteer: Craig Robinson

Merced River: 85 boxes, 606 ducklings.

Volunteer: Steve Simmons

DISTRICT 10 – SOUTHERN SAN JOAQUIN

District manager: Ken Barton, 818-367-4158

California Living Museum: 9 boxes, 54 ducklings.

Volunteer: Andrew Kenyon

Tulare Basin Wetlands Assoc.: 22 boxes, 109 ducklings.

Volunteers: Andrew Kenyon, Ken Barton

DISTRICT MANAGERS

District managers are a vital component of the California Wood Duck Program. They often wear numerous hats by helping train new volunteers, gathering nest box building materials, raising money and coordinating field days and banquets. The California Wood Duck Program could not be as successful as it is without the hard work of our district managers.

If you are interested in participating in the California Wood Duck Program, please contact a district manager for your region. If you are interested in becoming a district manager, contact California Wood Duck Program Coordinator Brian Huber at bhuber@calwaterfowl.org.

DISTRICT 11 – INYO/MONO

District manager: Dylan Whitmore, 760-709-0033

Sibley Ranch Land and Livestock: 4 boxes, 52 ducklings. Volunteers: Sibley Family

DISTRICT 12 – SOUTH COAST

District manager: Position open, contact CWDP Chair Jim Paroli, 209-993-0808

No projects reporting

DISTRICT 13 – MOJAVE

District manager: Position open, contact CWDP Chair Jim Paroli, 209-993-0808

Camp Cady: 2 boxes, 0 ducklings. Volunteers: Andrew Kenyon, Bruce Kenyon

DISTRICT 14 – IMPERIAL VALLEY

District manager: Position open, contact CWDP Chair Jim Paroli, 209-993-0808

So. Cal Wood Ducks:

- **Prado Regional Park:** 28 boxes, 73 ducklings. Volunteers: Bonnie Johnson, Natalia Doshi, Jessica Medrano, Miranda Peters, Jack Hall, Ronda Hall, Robert Williams, Gary Lucas, Brul LaRue, Jessica Perez, John McKeon, Rod Chambers, Norma Rodriguez
- **Yorba Regional Park:** 36 boxes, 307 ducklings. Volunteers: Mike Geraci, Marcella Waggoner, Nat Mann, John Higley, Chip Oppenlander, Bob Wooton, Rick Spittler, Preston Hatch, Tom Marino, Andrew Lee, Charles Arabian

FOLLOW THE LEADER

WE KNOW NEST BOX PROGRAMS HELPED BRING WOOD DUCKS BACK FROM THE BRINK OF EXTINCTION. BUT THERE'S A LOT WE DON'T KNOW ...AND WHAT WE DON'T KNOW MIGHT MATTER.

by **TEZ STAIR** and **JOHN EADIE**

Spring is here in California, and enterprising wood duck hens are already out prospecting for nest locations.

Wood ducks are cavity-nesting birds, historically making nests in large, old, holey trees along streams and rivers. However, following the loss of 90% to 95% of California's riparian habitat during the 19th and early 20th centuries, wood ducks faced a dire shortage of places to nest.

Enter the nest box. These manmade nesting cavities and the wildlife enthusiasts who first deployed them helped pull West Coast wood ducks back from the brink of extinction.

Though wood ducks have been thriving here for the last 80 years, the same cannot be said for their natural habitats, so ongoing nest box programs remain necessary to maintain wood duck populations.

Anyone who has monitored nest boxes knows not all boxes are the same – some are used almost every year, sometimes multiple times per year, while others are seemingly never visited at all. This poses an obvious question: What makes one nest more attractive than another?

Although researchers have been studying wood duck breeding ecology since the 1940s, we still don't have a clear answer.

With this in mind, biologists at UC Davis and UC Santa Cruz sought to tackle this question systematically, and so began a large-scale survey to examine a multitude of nest box characteristics and how they relate to use by hens.

We first thought nest box height would be important. It would make sense if hens preferred to use boxes high up in trees, rather than those closer to the ground, because most nest predators are ground-dwelling. Conversely, since woodie ducklings must jump from their nests as one-day-olds, perhaps boxes closer to the ground would be better to avoid falling injuries.

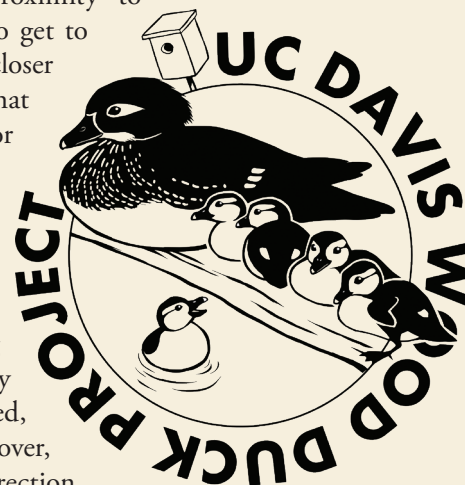
As it turns out, height wasn't important. Wood ducks seem just as happy to use a box 20 feet up a tree as one 4 feet off the ground.



This nest box has an RFID reader at the entrance that scans "chips" embedded in wood ducks. PHOTO BY RUBY REBENDS DORF

What about a box's proximity to water? Ducklings need to get to water quickly, but being closer to water could mean that a box is more visible or accessible to predators. However, survey results suggested distance from the water doesn't matter.

This ended up being the case for nearly every variable we measured, including canopy cover, underbrush, and facing direction.





UC Davis Wood Duck Project research technicians Holly Coates (left) and Theresa Wisneskie (right) release wood ducks. PHOTO BY TEZ STAIR

There was only one variable that predicted whether a box would be used in the future: Whether the box had been used in the past.

In a way, this makes sense: If another hen had found security and success there, what better indicator of quality would be needed? This suggested to us that woodies were incorporating social information into their reproductive decisions.

This may seem unhelpful for a manager looking to put up new nest boxes or maximize the productivity of existing boxes. Still, we know wood ducks will use boxes that have never been used before, so starting new projects and putting up new boxes remains worthwhile.

The next question is, can we use the knowledge that wood ducks cue in on social information to help us manage existing nest boxes?

For example, we have often wondered how much information we clean out of nest boxes after each season when we remove old feather down and eggshells. The natural state of a nest box at the end of a season could indicate a successful hatch, an abandoned brood, or provide evidence of predation risk. Does removing that evidence do ducks a disservice?

To test this idea, we set up pairs of new boxes – one of each pair received egg membranes and down transferred from other nests to simulate a previously “used” box, while the nearby paired box got only standard fresh shavings. The result? Absolutely no difference in usage. The preference for previously-used sites must be a social phenomenon – birds learning directly from each other and perhaps copying

each other’s choices. It is, in effect, a popularity contest.

How do these fads come about? We still do not know, but it is well understood that wood duck hens and other cavity-nesting waterfowl often prospect for nest sites in social groups. Our recent research using new remote tracking technology is starting to reveal how important and intriguing these social connections might be.

For the past seven years, we have been monitoring several populations of Central Valley wood ducks with the same technology vets use when they “chip” a cat or a dog for identification purposes. Each duck is given a unique PIT tag (passive integrated transponder) that is recorded by a radio frequency identification (RFID) device whenever

that duck visits one of our more than 200 nest boxes with RFID readers. This way we can know which boxes get the most traffic, and which hens are visiting the same sites as each other.

What we have learned so far is fascinating: Most nest boxes that aren’t used are still visited by hens, and often they are visited by many hens. An empty box does not mean woodie hens have not explored that site.

However, we also found that certain boxes are unquestionably preferred, and not just by one hen but often by several. We have recorded as many as 47 tagged females visiting the same nest box in a single year, while an otherwise identical nest box only 100 yards away was visited by one or two hens at most. It seems that if the “cool” hens don’t like a spot, the rest of the wood duck social club will likely avoid it as well, much like a high school clique.

Our new technology is also revealing just how informed wood duck hens are of the boxes in their neighborhood. Females visit many more boxes than we had expected. For example, some hens visited more than 30 nest boxes in a single season (the record so far is 50), and most females visit at least five boxes.

By tracking uniquely tagged individual females across all our nest sites, we have discovered that females do indeed form social cliques. Using social network analysis tools developed by human demographers on platforms like Facebook and other social networking sites, we’ve identified groups of hens that visit boxes together throughout the early breeding season.

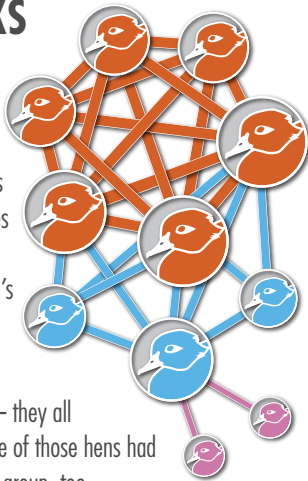
SOCIAL NETWORKS

This diagram represents how a group of wood duck hens explored nest boxes at Russell Ranch in Davis in 2015.

Each line signifies that connected hens visited the same nest box within minutes of each other. The **size of each icon** corresponds with the number of the hen's nest box-visiting connections.

UPSHOT: There is a core group of **six hens** that were bigtime buds — they all visited nest boxes with each other. Three of those hens had nest box-exploring pals outside the core group, too. **Three other hens** were pretty social, but not part of the core group. And **two hens** weren't very social explorers at all.

UC Davis and UCSC researchers believe these social networks may drive behaviors ranging from **which nest boxes get used** and which don't (their research shows it is a popularity contest), to **dump nesting**, in which multiple hens can deposit so many eggs in a box that no hen can successfully incubate them all.



DATA: UCD, UCSC / GRAPHIC: HOLLY A. HEYSER

This social cueing may help us better understand the phenomenon of “dump nesting,” in which wood duck hens lay eggs in the nests of other hens. This often increases the number of eggs beyond what a hen can incubate. We've found hens can usually incubate clutches of 12 to 18 eggs, but dump nesting can create clutches of 20 or even 30 eggs, which can reduce hatch success.

It appears this behavior, too, may be influenced by the strong social ties among females in a group, to the extent that if one hen lays eggs in a box she likes, others will follow her example and do the same.

The question now is how can these new insights improve our wood duck habitat management practices? Given that woodie hens seem to rely heavily on the influence of others, the trick is to discover what sets off that follow-the-leader chain reaction.

The simple management solution is obvious: Increase nesting habitat so that the reproductive social dynamics of these enigmatic birds can play out on a larger and perhaps more natural scale. For now, though, by spreading boxes out to avoid creating high density clusters that could exacerbate the nest-following behaviors of these highly social birds, we might increase the success of each nesting attempt.

On the flip side, for new nest box programs, the opposite might be recommended. Place a number of boxes around a waterway, monitor which boxes begin to be used, and place new boxes nearby those to promote social interactions and



Mitch Hinton, a doctoral candidate in the Animal Behavior Graduate Group, is part of UC Davis's core wood duck research group. PHOTO BY TEZ STAIR

population growth. Once a population is well established, redistributing boxes into a more sparse arrangement may then help avoid excessive social cueing and minimize dump nesting.

It is remarkable that despite decades of interest and research on these charismatic birds, we still have so much to learn about even some of their most basic behaviors. Who might have guessed that such a rich social dynamic existed? Wood duck relationships may be more reflective of our own social networks than we could ever have imagined. 🐾



Tez Stair. PHOTO BY YOUNG HA SUH

ABOUT THE AUTHORS:

Tez Stair is a doctoral candidate in the Animal Behavior Graduate Group at UC Davis. **Dr. John Eadie** is the Dennis G. Raveling Waterfowl Chair in the Department of Wildlife, Fish and Conservation Biology. The authors have partnered with California Waterfowl on a long-term wood duck project since 2014.

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The following individuals and companies donated \$100 or more in 2019 to support the California Wood Duck Program. California Waterfowl and the Wood Duck Program committee and volunteers would like to recognize these individuals for their generosity and financial commitment to wood duck conservation.

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