

CONSERVATION CHAMPIONS

The Center for Conservation Biology
Annual Report 2020



CCB's

ONGOING MISSION



The mission of The Center for Conservation Biology, through all of its diverse programs, is to provide the global community with the information needed to drive thoughtful, science-based conservation, to educate and train the next generation of conservation scientists, and to make lasting contributions to the natural world through critical thinking, innovation, and ground-breaking research.

ON THE COVER:

A female aninga stands in the sun to dry its feathers after swimming for fish. The aninga has expanded its range north into Virginia in recent decades. Like many of our conservation champions CCB has worked hard to document the ever-shifting ranges of bird populations.

Photo by Bryan Watts



WILLIAM & MARY

CHARTERED 1693

Friends,

Charles Lavelle Broley worked as a branch bank manager in Winnipeg. When he retired in 1938 he began to spend winters in Tampa, Florida and summers in Delta, Ontario. At the age of 59, Broley launched a banding project in Florida and over the next twenty years he banded more than 1,200 eaglets. During the 1940s he was the first to document that Florida eagles migrated north to spend summers in the Chesapeake Bay. During the 1950s he documented a decline in eagle productivity that he suggested was the result of widespread use of DDT. Rachel Carson in *Silent Spring* used his work to support her case against persistent pesticides. So it was that an untrained, retired banker, not university or government biologists, sounded the alarm about the plight of bald eagles and helped to raise the global consciousness about the dangers of the chemical age.

Broley is but one among legions of quiet heroes through time who have shaped conservation. Despite coming from different walks of life they are connected by a shared passion and a tireless commitment. They are the selfless within an increasingly selfish society who believe that we can achieve great things when we work together. They are and always have been the backbone of the conservation movement.

I have dedicated this annual report to a few “conservation champions” whose efforts are connected to the ongoing work of The Center. Their work echoes through time and they inspire us to continue the journey.

There is always room to make a difference in conservation, no matter your background or situation. Join with us.

Sincerely,

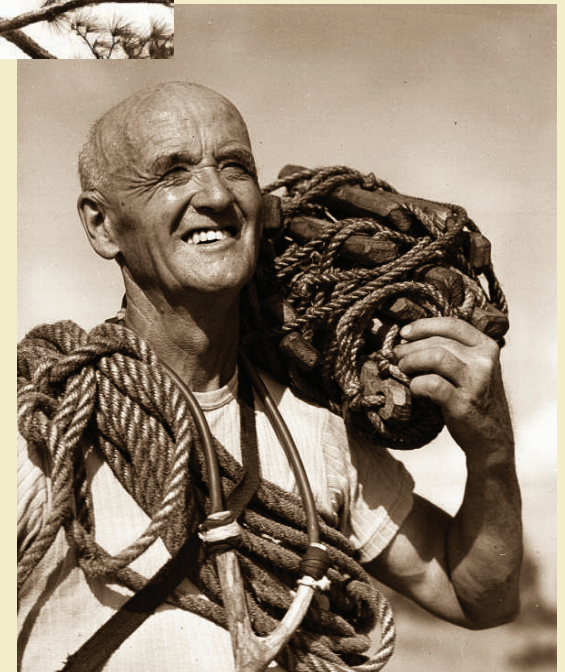
Bryan Watts

Bryan D. Watts
Mitchell A. Byrd Professor of Conservation Biology
Director, The Center for Conservation Biology

A MESSAGE FROM THE DIRECTOR



Charles Broley at the age of 72 climbs an eagle nest tree near Tampa, Florida to band nestlings. After retirement he would climb approximately 2000 trees to conduct ground-breaking eagle research. *Photo by Joseph Steinmetz*



Charles Broley with homemade climbing gear prepares to climb eagle nest tree in Florida. *Photo by Joseph Steinmetz*

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Bill Williams surveys for saltmarsh sparrows in a winter marsh on Fisherman Island. Bill has been committed to bird surveys for several decades and has collected data that has shaped what we know about many different bird groups within the region. *Photo by Bryan Watts*

CONSERVATION CHAMPIONS

Each day we wake up and confront the question – How should we spend our time? For an individual day our answer determines our schedule. Over time, the collective answers shape our lives and our sense of fulfillment. The direction we choose to follow gives us purpose. Purpose often begins as a weak, meandering trickle but if followed may build into a torrent. Conservation biology emerged from people who had a passion for the natural world and who made the personal decision to do what they could to maintain nature for the species that depend on it, for their own enjoyment and for the enrichment of future human generations.

The Center for Conservation Biology is fortunate to have worked with many passionate and committed conservation champions over the years. Many of these people have left a legacy that we all benefit from today. The Center continues to build on these legacies and to work with many future conservation champions.





A brood of barn owls in coastal Virginia. Barn owls have declined dramatically throughout their eastern range. The charge of recovering grassland raptors like the common barn owl has been taken up by a new generation of conservation champions throughout the region. We applaud their efforts and cheer their successes with these magnificent indicators of grassland health. *Photo by Bryan Watts*

FREDERIC ROBERT SCOTT, III

Frederic “Fred” Scott was raised in Richmond, graduated from Hampden-Sydney College with a bachelor’s in biology and from the University of Michigan with a master’s in wildlife management. He was a technical writer for a science company and a real-estate developer. He was a founder of the Maymont Foundation where he set up the aviary for science exhibits.

CONSERVATION WORK

Fred had a passion for birds from an early age and spent his youth documenting bird species throughout the greater Richmond area. After college he would establish several Christmas Bird Counts throughout the region. Working with Jack Abbott, he would conduct bald eagle nest aerial surveys from 1963 through 1976 covering the James, York and Rappahannock Rivers. Fred was appointed by Governor Robb to serve on a task force to develop an eagle protection plan within Caledon State Park. He established the Kiptopeke Banding Station that would run for 50 years and band more than 350,000 fall migrants. He explored the avifauna within poorly visited habitats. He edited the Virginia Ornithological Society’s journal for more than thirty years and served the organization in many capacities. He was compiler of the mid-Atlantic report for American Birds for more than twenty years. Through all of these activities, Fred became the most knowledgeable scholar of bird distribution and status throughout the region. He was a true student of bird distribution and would become known as the dean of Virginia bird watchers.

ONGOING CCB WORK

Like Fred, CCB biologists are keen students of bird distribution. We continue his legacy by aggressively exploring bird trends and distribution through surveys and analyses. We continue to document and publish accounts of the changing avifauna within the region.



(Above) Fred Scott banding a brown creeper at the Kiptopeke Banding Station. Fred founded the station that would run for fifty years and process 350,000 birds. Data collected from the operation would build the foundation of what we know about fall passerine migration along the Delmarva. *Photo by Mitchell Byrd*

(Right) Female anhinga swallows a fish caught in a canal. The anhinga has expanded its range north into Virginia in recent decades. CCB has continued Fred’s commitment to document the ever shifting ranges of bird populations. *Photo by Bryan Watts*





Double-crested cormorant and brown pelican colony on Shanks Island within the Chesapeake Bay. Both of these species have colonized the region over the past forty years and are expanding rapidly. CCB biologists continue the legacy of Fred Scott by monitoring the ebb and flow of bird populations throughout the region. *Photo by Bryan Watts*

REESE FREDERICK LUKEI, JR.

Reese Lukei was raised in Norfolk, Virginia and graduated from Old Dominion University with a degree in accounting. He was a professional musician (French horn) for more than fifteen years, playing with a number of orchestras and serving the classical music community in various capacities. He was a partner in an accounting firm for twenty-five years and retired young to a life of service. Reese has been committed to outdoor activities, having hiked in all fifty states and seventy countries and serving many roles in local, regional and national outdoor organizations. He served as the National Coordinator for the American Discovery Trail for twelve years and has donated more than 30,000 hours to plan, construct and maintain outdoor infrastructure for national wildlife refuges and national parks across North America.

CONSERVATION WORK

Reese has had a lifelong interest in raptors and during the 1970s began trapping passage peregrine falcons with Tom Nichols in lower Tidewater. From 1985 through 2003 he ran the Wise Point trapping station for The Center, banding more than 10,000 raptors. The project documented the early recovery of peregrines and the migration patterns of several raptor species. Reese has monitored breeding ospreys and banded nestlings for decades in Tidewater and has monitored bald eagle recovery and productivity within urban areas for more than twenty years. Beyond the fieldwork, Reese has been a tireless ambassador for conservation. He has presented more than 700 talks to community groups and has continued a lifelong passion for bringing people and wildlife together.

ONGOING CCB WORK

CCB biologists are considered global experts on the osprey and have been committed to its recovery since the population low in 1970. We have monitored designated study areas since this time and have banded thousands of birds to address a wide range of ecological questions. In 2011 CCB established OspreyWatch, an online program that engages citizen scientists throughout the world to monitor and submit data on breeding osprey.



A recently hatched osprey in a nest on the Chesapeake Bay. Osprey are effective ecological indicators for contaminants and fish populations. CCB continues along with Reese Lukei, Jr. to work with this population to monitor productivity and geographic shifts. *Photo by Bryan Watts*



Two osprey nestlings banded with USGS and purple alpha-numeric bands. CCB biologists have banded thousands of osprey within the Chesapeake Bay to understand longevity and movement patterns. These and many other efforts continue a long legacy including work with the species in lower Tidewater by Reese. *Photo by Bryan Watts*



Reese Lukei, Jr. with a young peregrine falcon caught on Wise Point within the Eastern Shore National Wildlife Refuge. Reese trapped raptors to monitor peregrine recovery for more than twenty years banding 10,000 birds. *Photo by Reese Lukei, Jr.*

JOHN WILLIAM WILLIAMS, JR.

John “Bill” Williams was born in Newport News and raised in Williamsburg, Virginia. He graduated from Emory and Henry College with a bachelor’s in biology and received a master’s in biology from William & Mary working on the breeding ecology of glossy ibis. Bill worked for the school system in James City County, Virginia for thirty-one years as an instructor of biology and later as the K-12 science and mathematics curriculum coordinator. He was a science curriculum consultant for other school systems as well. Bill served as the Education Director for The Center for Conservation Biology.

CONSERVATION WORK

Bill grew up with a passion for animals, particularly birds, from a very young age. He developed a steadfast commitment to bird surveys and has documented the status and distribution of many species. After graduate school he conducted the first assessment of birds along the Virginia Barrier Islands for The Nature Conservancy and led the beach-nesting bird survey along the islands for more than twenty years. Bill established the Kiptopeke Hawkwatch in 1977, a project that has documented the fall passage of more than 850,000 raptors to date. He has conducted decades-long surveys of specific properties that have documented the seasonality and trends of entire communities. He helped to found the Williamsburg Bird Club among other conservation organizations, and has served these and other organizations in many capacities. Bill is a student of and ambassador for birds and has brought scores of people to conservation.

ONGOING CCB WORK

CCB continues Bill’s legacy with long-legged waders including herons, egrets and ibises by conducting population surveys every five years. We are committed to using waders as biological indicators of ecosystem health and to achieving management goals.



White ibis family along Virginia's Eastern Shore. The white ibis population has grown dramatically over the past decade. CCB continues Bill's legacy by monitoring population changes in waders and many other species. *Photo by Bryan Watts*



Bill Williams holds a young peregrine on Cobb Island during banding. *Photo by Bryan Watts*

Great blue heron stands along the water. One of the most widespread and numerous long-legged waders within the mid-Atlantic, great blues are good ecological indicators. CCB continues to monitor the regional population and Bill's legacy with waders and many other species. *Photo by Bryan Watts*



CONSTANCE SIMONS DU PONT DARDEN

Constance “Connie” Darden was the daughter of Irénée du Pont, president of the DuPont Company in Wilmington, Delaware, graduated from the Baldwin School and studied viola and violin in Philadelphia. Connie married Colgate Darden, Jr. and settled on Flicker Point on the Lafayette River in Norfolk. Colgate was a politician for the people who held many posts including Mayor of Norfolk, Governor of Virginia, President of the University of Virginia, ambassador to France and Chancellor of William & Mary. The Dardens moved wherever their posts required but maintained their home on Flicker Point.

CONSERVATION WORK

During the 1930s while Colgate served as a U.S. Congressman and the family was living in northern Virginia, Connie began a lifelong interest in birds. In the early 1940s she began to record and produce films of birds using a new portable movie camera. In 1946, she recorded a pair of nesting yellow-crowned night herons on Flicker Point that would be the first throughout the mid-Atlantic region. Over the next fifteen years a breeding colony formed and she filmed courtship and nesting behavior from the ground and a third story window of their home. She showed her films to bird groups throughout the region, educating them about birds and nesting behavior. From 1960 through 1969, Connie would compile extensive daily notes on individual nests within the colony, detailing migration and breeding seasonality, nesting success and behavior. Connie was a kind person who loved people and loved to bring them to nature. When you were with her you were all that mattered, and you could sense her enthusiasm for the environment. She was one of the country’s great philanthropists, supporting conservation, the arts and community.



ONGOING CCB WORK

CCB has continued Connie’s legacy by monitoring and studying yellow-crowns in urban areas since 1985. Recent work has used her benchmark data to study the influence of climate change on the breeding ecology of this amazing species.

Connie Darden working with film. She would create films of yellow-crowned night heron breeding behavior on Flicker Point. These films were in demand and she would use them to educate the public about birds and bird behavior. *Photo by Press Associates*



A yellow-crowned night heron nestling on the Lafayette River where Connie Darden worked with them. She was particularly fascinated with their breeding behavior. CCB shares this fascination and has continued to work with these birds since 1985. *Photo by Bryan Watts*



LANCE WILLIAM MORROW JILL MORROW

Lance Morrow was born in the Washington, D.C. area and graduated from the University of Texas with a degree in biology and sociobiology. Jill Morrow was born near Denver, Colorado and graduated from Colorado State University with a focus in microbiology and medical technology, University of Colorado at Denver with a doctorate in biochemistry and conducted post doctoral work with tuberculosis. She later worked for the Red Cross and a company developing vaccines. Lance and Jill later worked as consultants evaluating construction plans and cost estimates for major companies.

CONSERVATION WORK

Lance developed a passion for raptors by the age of six and Jill enjoyed wildlife in her rural upbringing and began banding raptors around Denver. Both have worked on a wide range of bird research and conservation projects across North America over decades. These projects include banding thousands of gray-crowned rosy-finches and recapturing individuals across years, establishing a successful mountain bluebird box program and working with loggerhead shrikes. Over the past thirteen years they have worked intensively to develop a grassland raptor project focused on American kestrels and barn owls within the Shenandoah Valley. They manage pairs in 100+ nest boxes and monitor reproductive rates and survival by trapping birds during both breeding and winter seasons. Beyond the fieldwork, Lance and Jill have worked to educate the farming community about grassland raptors.

ONGOING CCB WORK

CCB biologists have worked with grassland birds for decades, focusing on their ecology and management. Much of the current effort to manage grassland raptors is being mounted by champions like Lance and Jill. We admire and applaud these efforts.

A nestling barn owl just after banding. This species has declined dramatically throughout their eastern range. CCB biologists continue to be concerned about the decline of grassland birds and have worked for decades to better understand management options and to promote efforts by champions like Lance and Jill that appear to be working. *Photo by Bryan Watts*

Lance (r) and Jill (l) Morrow with male kestrel in their study site within the Shenandoah Valley. Their long-term conservation work and careful study is changing our understanding of grassland raptors in the region.
Photo by Lance Morrow



CHARLES WILLIAM HACKER

Charles “Charlie” Hacker was born in Sioux City, Iowa and graduated from Iowa State University with a degree in engineering. He moved to Hampton, Virginia and worked his entire professional life for Newport News Shipbuilding. He worked as an engineer and became the assistant head of the hull design department. He would retire in 1977 and devote decades to volunteer service.

CONSERVATION WORK

Charlie had an early interest in birds and by the early 1960s had his own banding license, becoming one of the founding banders of the Kiptopeke Banding Station that would operate annually for fifty years. In the late 1970s he would add hawk trapping to the station. Charlie worked with Mitchell Byrd to conduct the first survey of red-cockaded woodpeckers in Virginia. From the late 1970s through the early 1990s, he worked with Mitchell nearly six days per week during the breeding season to monitor and band osprey, peregrine falcons, herons and waterbirds. He also participated in the first systematic survey of piping plovers. Charlie was a founding member of the Hampton Roads Bird Club and served in many capacities within conservation organizations.

ONGOING CCB WORK

CCB has been committed to the restoration of the Virginia red-cockaded woodpecker population for decades and will continue to aggressively manage the population to achieve recovery. We have worked for twenty years to rebuild the Piney Grove population and for several years to establish a second population in the state.

Charlie Hacker with osprey captured from nest for banding. Charlie worked osprey and other species with Mitchell Byrd for decades. *Photo by Mitchell Byrd*





A red-cockaded woodpecker nestling in the hand just after banding. CCB biologists have worked to recover this endangered species for decades and are making consistent progress. *Photo by Bryan Watts*



CLAUDIA PHELPS WILDS

Claudia Wilds was raised in Massachusetts, South Carolina and Maryland. She graduated from Radcliff College with a bachelor's in English, Harvard University with a master's in education and completed post graduate work in linguistic and educational statistics. Claudia was employed by the State Department to conduct foreign language training and testing for foreign service personnel. She later worked for the Center for Applied Linguistics and was a consultant in language testing for the Peace Corps and other government agencies.

CONSERVATION WORK

Claudia's passion for birds would build over the years and in the early 1970s she decided to devote herself fulltime to birds and bird conservation. Over time she would become a sought-after lecturer, trip leader and author. She was very active in several ornithological and birding organizations, serving in a wide range of leadership roles and committees. Fittingly, she was the "Voice of the Naturalist" (1973-1990), recording weekly broadcasts of rarities for the regional community. Claudia developed a close attachment to Chincoteague and in 1974 began systematic, weekly surveys of shorebirds within Chincoteague National Wildlife Refuge that would continue through 1987. The dataset that resulted from these surveys would document the timing and magnitude of shorebird migration through the mid-Atlantic and would provide the foundation for conservation decisions. Beyond the surveys, Claudia would meet thousands of visitors at the refuge and teach them about the marvels of shorebirds in her gentle and unassuming way.

ONGOING CCB WORK

CCB has continued Claudia's legacy by working with migratory shorebirds on the Eastern Shore of Virginia for three decades and has expanded this work throughout the Western Hemisphere, from breeding grounds in the Arctic to wintering sites in Chile. We have tracked birds throughout their annual cycle and focused on reducing barriers to recovery.

Claudia Wilds was one of the great ambassadors for shorebird watchers and for Chincoteague National Wildlife Refuge. Her dedicated surveys over many years informed shorebird conservation.
Photo by Ted Oberman



A whimbrel on winter grounds in Aruba. CCB flagged this bird in Virginia during spring migration. CCB biologists and partners have worked with migratory shorebirds on the seaside of the Delmarva Peninsula for thirty years. This work follows the tradition and efforts of Claudia Wilds who pioneered survey efforts within Chincoteague National Wildlife Refuge. Photo by Michiel Oversteegen

RUTH ANN BECK

Ruth Beck was raised near Richmond, Virginia, graduated from Radford College with a bachelor's in biology and from the University of Virginia with a master's in education. After a short stint as an educator for Longwood College, Ruth joined the faculty of the Department of Biology at William & Mary where she managed laboratory classes for undergraduates and worked with graduate students. Ruth was often the first faculty member that incoming students encountered and introduced more than 32,000 of them to the natural sciences, becoming a mentor to hundreds. She retired as an Emeritus Professor of Biology.

CONSERVATION WORK

Ruth had a passion for birds from an early age and soon after moving to Williamsburg was a co-founder of the Williamsburg Bird Club. She participated in bird counts for decades and established long-standing surveys of Craney Island and Grandview Beach. Ruth was a tireless advocate for bird populations and very active in professional societies, hosting meetings for the Waterbird Society, the Wilson Ornithological Society and the Virginia Society of Ornithology. She worked with yellow-breasted chats on the campus of William & Mary and conducted aerial surveys of great blue heron colonies for more than a decade with her husband, Sherwin. She researched the declining red-cockaded woodpecker population during the 1980s. Likely, Ruth's greatest passion was waterbirds. She surveyed beach-nesting birds along the Virginia Barrier Islands for more than twenty years and worked for decades with government agencies to protect vulnerable populations of least tern, common tern and black skimmer. Beyond the research and management, Ruth's greatest contribution was involving students and the public in conservation. Ruth had an infectious personality that drew thousands of people to birds and involved them in conservation activities.

ONGOING CCB WORK

CCB continues Ruth's legacy in monitoring nesting seabirds and advocating for their populations. Along with partners, we conduct assessments of seabird populations in Virginia every five years and advise agencies on management on an ongoing basis.



Ruth Beck (l) explains the layout of the nesting seabirds on the Hampton Roads Bridge Tunnel to wildlife services director Martin Lowney (r). Ruth worked on waterbird monitoring and conservation for decades and was a critical advocate for birds to both agencies and the public. She involved students in all of her work. *Photograph courtesy of Sherwin Beck*



A black skimmer roosts on some wrack during high tide. Skimmers were one of the species studied and managed by Ruth on the Hampton Roads Bridge Tunnel. CCB continues Ruth's legacy by monitoring population changes in skimmers and many other species. *Photo by Bart Paxton*



A colony of royal terns on a shell rake along the Eastern Shore of Virginia. Royals and other beach-nesting seabirds were a particular focus of Ruth's over decades. CCB biologists continue this interest by monitoring seabird populations and studying their distribution within the region. *Photo by Bryan Watts*

SHAWN MICHAEL PADGETT

Shawn Padgett was raised in Norfolk, Virginia. Shawn has had a wide range of interests throughout his professional life and has worked in a variety of positions. Shawn managed a restaurant in Norfolk and owned his own restaurant in Chesapeake for several years. He worked for the city of Norfolk and as a supervisor for a paving company. He has owned a doughnut company, a video surveillance and security company and a turf management company.

CONSERVATION WORK

Shawn developed an interest in raptors at a young age and by his teens was building boxes for screech owls and placing them on properties throughout Norfolk. He became a falconer and by his early twenties wanted to be involved with the recovery of peregrine falcons, leading to his involvement with The Center's peregrine falcon management project. Shawn was a tireless worker and advocate for the peregrine population, designing and establishing nest towers, nest boxes and trays. More than sixty-five percent of the known peregrine population in Virginia now nests on structures established by Shawn during the 1990s. He initiated a project that tracked more than forty peregrines with satellite transmitters and developed a video system to identify breeding adults by reading their bands. He helped to survey peregrines throughout their historic mountain range in the southern Appalachians.

ONGOING CCB WORK

CCB continues to manage the recovering peregrine population with several organizational partners, including the Virginia Department of Wildlife Resources. We have investigated many ecological questions within this emerging population including diet, dispersal, migration and lifetime reproductive success. We continue to help develop management guidelines and advise on the management of individual sites and pairs.

Shawn Padgett with a young peregrine falcon along the Rappahannock River in Virginia. The bird was taken from a bridge eyrie to be driven to the mountains for hacking. Shawn has played a critical role in recovery of the species in Virginia. *Photo by Bryan Watts*





An adult female peregrine falcon in flight. Shawn has helped to restore this spectacular species to Virginia. CCB continues to monitor, manage and study the population. Photo by Bryan Watts

JACKSON MILES ABBOTT

Jackson “Jack” Abbott was born in Germantown, Pennsylvania, was raised in Massachusetts and southern California and studied zoology at Swarthmore College. Jack joined the army in 1941 with stations in the Panama Canal Zone, British West Indies, Europe and Fort Belvoir. During the war he designed and engineered camouflage for the army. After the war he became an intelligence officer and manual writer. He left active military duty in 1950 and worked as an intelligence specialist for the Army Map Service as a civilian in Korea. He retired from the Army Reserve as a lieutenant colonel.

CONSERVATION WORK

Jack Abbott was the son of renowned wildlife artist Jacob Bates Abbott. His father instilled in him a love of nature and he was an avid bird watcher since the age of six. As a private, he established the Fort Belvoir Christmas Bird Count that continues to this day. During the war he wrote an article about bird watching at the front. Back in Alexandria he wrote a weekly column for the Washington Star titled “This Week’s Migrant.” He followed his father to become an accomplished bird artist, and was the only artist to ever place first and second in the National Duck Stamp Contest in the same year (1957). Jack championed environmental causes throughout the region and served in various capacities for conservation organizations. In 1955, he served on the Chesapeake Bay Bald Eagle Survey Committee for the Audubon Society and in 1957 spearheaded the bald eagle survey. In 1962 he used military aircraft to conduct one of the first aerial surveys of breeding bald eagles in the Bay, an approach that would be adopted throughout North America. He performed the survey (1957-1976) during the height of the DDT era and documented a population struggling to survive.



ONGOING CCB WORK

CCB has continued Jack Abbott’s legacy with bald eagles within the Chesapeake Bay, conducting aerial surveys until the present day. CCB biologists are considered global experts on the bald eagle and have conducted more than 100 research projects investigating virtually all aspects of its ecology. We maintain ongoing research on eagle threats including contaminant exposure, hazard mitigation and human disturbance.

Jack Abbott receives an award for conservation work on Fort Belvoir.
Photo by George Jones





An adult bald eagle fitted with a satellite transmitter by CCB in the upper Chesapeake Bay. CCB has studied the movement ecology of this species for many years to better understand how human development influences the population. This work continues a long legacy of research on bald eagles within the Chesapeake Bay that was championed by Jack Abbott. *Photo by Bart Roberts*

WALTER POST SMITH DORIS DESPER SMITH

Walter Smith was born in Newport News, Virginia and graduated from the Newport News Shipyard Apprentice School. Walter loved ships and worked as a draftsman and supervisor for Newport News Ship Building. Doris Smith was born in Hampton, Virginia and was involved in education her entire life. She was the first female member of the Hampton City School Board and served during the time of integration.

CONSERVATION WORK

Walter and Doris were founding members of the Hampton Roads Bird Club and conducted regular surveys within the region. They were bird banders in Hampton and were founding banders for the Kiptopeke Banding Station. Walter was the primary champion of the station from the 1970s through the 1990s often spending several weeks during the fall on the Eastern Shore. Doris was a firecracker with boundless energy and an enthusiasm for education and birds. She brought many people to bird watching and banding. Walter and Doris were a team at Kiptopeke and ambassadors for the study of bird migration.

ONGOING CCB WORK

CCB biologists have worked with passerine and raptor migration on the Delmarva Peninsula for decades. We have continued the legacy of the Kiptopeke banders by studying migration ecology, the distribution of migrants to facilitate protection of the most critical lands and pattern of habitat and fruit use to develop best practices for habitat management.



Banding a yellow-rumped warbler. This species is the most numerous passerine migrant captured on the lower Delmarva. CCB has worked with fall migrants for decades focusing on how to provide for the needs of migrants that stopover within this migration bottleneck. Our work continues the efforts of Walter and Doris and the scores of others who have worked and enjoyed experiencing migration. *Photo by Michael Land*



Walter and Doris Smith on an outing in later years. They were a team at the Kiptopeke Banding Station for decades that would keep the operation running from the 1970s through the 1990s. *Photo by Dick Davis*



Fruit of the devil's-walking-stick on the lower Delmarva Peninsula. This and several other fruiting plants are critical food for many staging passerine species during fall migration. CCB has conducted dozens of studies of fall migrants to better understand their needs and how to improve habitat management. These efforts continue the work of Walter and Doris and many others who operated the Kiptopeke Banding Station. *Photo by Bart Paxton*



PAUL SEAMAN BAKER

Paul Baker was born and raised in Quincy, Massachusetts, graduated from Thayer Academy, from M.I.T. in aeronautical engineering (1929), and from the Army Air Corps Advanced Flying School (1930). During his professional career, Paul was an experimental test pilot, chief of aerodynamics, engineering manager and chief technical engineer. He was a test pilot during the early years of fearless giants that expanded the boundaries of manned flight. Among others, he worked on the design of the OS2U “Kingfisher,” F4U “Corsair” and the F7U “Cutlass”.

CONSERVATION WORK

At an early age, Paul’s love of flight and flying led to a natural fascination with birds. He had a particular attachment to peregrine falcons that were similar in design to the fast, low-drag aircraft he would later champion. Paul had a maverick personality, and after retirement he would apply that personality to conservation. Writing letters, attending meetings and making telephone calls to government agencies in support of environmental issues became a way of life. In the 1980s and 1990s, Paul would work with CCB to trap and monitor raptors during fall migration on Fisherman Island. Paul made a lead gift to establish the Mitchell A. Byrd Faculty Endowment and donated his extensive bird library to CCB.

ONGOING CCB WORK

CCB continues Paul’s legacy of being a staunch advocate for the protection of wetlands and other critical habitats throughout the mid-Atlantic region. We continue to advise on the wise use of funds to acquire habitat and to conduct research focused on habitat policy and management.

Paul Baker banding a Cooper's hawk in the trapping blind on Fisherman Island. Paul loved raptors and was a tireless advocate for conservation. *Photo by Reese Lukei, Jr.*



A red-tailed hawk captured during fall migration on the Delmarva Peninsula. Tens of thousands of raptors migrate through this area each fall. CCB continues the interest held by Paul Baker in better understanding the migratory movements and conservation of these species. Photo by John DiGiorgio



CONSERVATION INFLUENCERS

Education and outreach are force multipliers. One of the common traits of conservation champions is an infectious enthusiasm for the natural world. Unable to contain their passion, they share it with their communities and encourage others to become global citizens. These seemingly simple but natural acts formed the beginning of the conservation movement and continue to fuel it today.

The Center for Conservation Biology is fortunate to work with many committed conservation champions who effectively share their passion with students and the broader community. They play a vital role in widening the circle.

A group of bird watchers from the Virginia Society of Ornithology watch a CCB biologist band a nestling red-cockaded woodpecker on Piney Grove Preserve. CCB hosts a group of bird watchers every year to see this endangered species. Bird watchers are great ambassadors for bird conservation. *Photo by Bryan Watts*



Reese Lukei introduces a young naturalist to a nestling bald eagle in Virginia Beach. Reese has worked tirelessly for decades to bring people to wildlife. *Photo by Bryan Watts*

INSTITUTIONAL PARTNERS 2020

Acadia University	Discover the James	Maine Dept of Inland Fisheries and Wildlife	Northern Virginia Conservation Trust
Advanced Conservation Strategies	Dominion Energy	Manomet, Inc	Ohio Dept of Natural Resources
Aluminum Company of America	EA Engineering	Martha's Vineyard Raptor Research	Oklahoma State University
American Bird Conservancy	EDM International	Maryland Dept of Natural Resources	Panama Audubon
American Eagle Foundation	Environment Canada	Maryland Ornithological Society	Parks Canada
American Wind Wildlife Institute	Exelon Corporation	MathScience Innovation Center	Partners in Flight
Arborscapes, LLC	Florida Audubon	Michigan Audubon	Pennsylvania Game and Fish Commission
Arizona Bird Conservation Initiative	Florida Fish and Wildlife Conservation Commission	Michigan Dept of Natural Resources	Progress Energy
Atlantic Coast Joint Venture	Friends of Dragon Run	Michigan Natural Features Inventory	Richmond Audubon
Audubon North Carolina	Friends of Rappahannock River	Microwave Telemetry, Inc	Richmond Times-Dispatch
Audubon South Carolina	George Mason University	Midstream Technology, LLC	Richter Museum of Natural History
Avian Research and Conservation Institute	Georgia Dept of Natural Resources	Midwest Coordinated Bird Monitoring Partnership	Smithsonian Institution
Bird Studies Canada	Georgia Ornithological Society	Mississippi Museum of Natural Science	Smithsonian Tropical Research Institute
Birds Caribbean	Georgian Bay Osprey Society	Mississippi State University	Solertium Corporation
Boreal Songbird Initiative	Gomez and Sullivan Engineers	Mount Allison University	South Carolina Dept of Natural Resources
Brooks Bird Club	Good Shepherd Fund	Movebank	Southern Company
Canadian Wildlife Service	Hampton Roads Bird Club	MPJ Wildlife Consulting, LLC	Southern Illinois University
Center for Coastal Resources Management	Hanover Aviation	National Aeronautics and Space Administration	State University of New York
Chesapeake Bay Bridge Tunnel Authority	Idaho Bird Observatory	National Audubon Society	Tennessee Ornithological Society
Chesapeake Bay Foundation	Illinois Natural History Survey	National Fish and Wildlife Foundation	Tetra Tech, Inc
Chesapeake Conservancy	Institute for Integrative Bird Behavior Studies	National Park Service	Texas Parks and Wildlife
Coastal Virginia Wildlife Observatory	James River Association	New Hampshire Audubon	The Carolina Bird Club
Colorado State University	Jim Reed Enterprises, Inc	New Jersey Audubon	The Nature Conservancy
Conserve Wildlife New Jersey	Kentucky Dept of Fish and Wildlife Resources	New Jersey Conservation Foundation	The Peregrine Fund
Cornell Laboratory of Ornithology	Kleinschmidt Associates	New Jersey Division of Fish and Wildlife	The Wildlife Center of Virginia
Cube Hydro Carolinas	Laramie Audubon	Norfolk Southern Corporation	Toronto Ornithological Club
Dalhousie University	Louisiana Fish and Wildlife	North Carolina Wildlife Resources Commission	United States Army Corps of Engineers
Delaware Division of Fish and Wildlife	Low Country Institute	Northern Neck Audubon Society	United States Coast Guard
Delaware Natural History Museum			United States Dept of Agriculture

United States Dept of Defense	Whitaker Center
United States Fish and Wildlife Service	William & Mary
United States Forest Service	Williamsburg Bird Club
United States Geological Survey	Wisconsin Bird Conservation Initiative
Universidad de La Pampa, Argentina	Woods Hole Group, Inc
University of Connecticut	Xponent 21, Inc
University of Delaware	
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University of Maine	
University of Maryland	
University of Moncton	
University of Queensland	
University of Rhode Island	
University of Virginia	
Virginia Academy of Science	
Virginia Aquarium	
Virginia Coastal Zone Management Program	
Virginia Dept of Conservation and Recreation	
Virginia Dept of Environmental Quality	
Virginia Dept of Mines, Minerals, and Energy	
Virginia Dept of Transportation	
Virginia Dept of Wildlife Resources	
Virginia Institute of Marine Science	
Virginia Marine Resources Commission	
Virginia Master Naturalists	
Virginia National Estuarine Research Reserve	
Virginia Outdoors Foundation	
Virginia Society of Ornithology	
West Virginia Dept of Natural Resources	
West Virginia University	

ON THE BACK COVER:

An adult double-crested cormorant. Cormorants have recovered from DDT and have expanded their range rapidly within the mid-Atlantic in recent decades. CCB continues the interest of many of our conservation champions in studying this emerging population and its interaction with humans. *Photo by Bryan Watts*

CCB

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