



*Audubon Western Everglades
2022 Annual Report*

Flamingos may be Florida natives after all

Few Floridians have ever seen a flamingo in the wild, but recent chance encounters with these pink wading birds may help solve a century-old controversy: Are flamingos native to the state?

It used to be a mega-rarity but over the years biologists and “birders” have seen them in flooded fields in West Palm, down near Snake Bight in the Everglades, near Flamingo in Monroe County and more recently in Eastern Collier County. “They’re out there.”

Sightings during bird surveys combined with an ecologist’s 2012 photograph of a large flock in the Everglades and another in Palm Beach County, prompted scientists to question if flamingos truly belong in Florida.

The conventional wisdom said no. Florida flocks were thought to be Bahamian vagrants from Andros Island. Or maybe from Cuba or the Yucatan where there are large flamingo populations. A recent study, however, calls this assumption into question. Published in the American Ornithological Society’s February 2018 edition of *The Condor*, the study details how researchers used satellite trackers and aerial surveys, plus old-fashioned detective work in archives including accounts of feathertraders in the 1800s who reported flocks in the thousands before overhunting

all but wiped flamingos from the state. The surprise conclusion of the study:

Flamingos were indigenous to Florida and here to stay.



Our Conservation Focus

I am pleased to report that our 2022 fiscal year was a programmatic and financial success. Our strategic focus to conserve, restore and protect Southwest Florida’s natural ecosystems, wetlands, coastal estuaries and barrier islands, which are critical habitats for resident and migrating birds and other threatened and endangered wildlife is making a difference.

Highlighted in this year’s annual report is the exceptional work AWE’s policy and advocacy directors did to protect 49,000 critical panther corridor and wildlife habitat acres, as well as continuing the fight for major watershed related conservation project funding. Also, working closely with our conservation partners, the Conservation Collier Land Acquisition Board was convinced to approve four Marco Island properties for A1 priority purchase — effectively snatching them from the jaws of development.

Additionally, our field biologist, after months of surveying work and working closely with the City of Marco Island’s biologist, published AWE’s *Marco Island Gopher Tortoise Land Study Report*, which is now the basis for implementing protection, rehabilitation and stewardship action plans for this “keystone” endangered species.

This important conservation work is made possible by the annual financial support from our members and donors.

Ted Rodman, *Executive Director*

FY-2021/2022 FINANCIAL SUMMARY (\$)

REVENUE	
• Contributions	158,391
• Programs & Services	50,920
• Grants	125,025
• Other Revenue	591
	Total 334,025
EXPENSE	
• Salaries:	
– Conservation Policy & Advocacy	79,976
– Administration	65,000
• Programs:	
– Direct Expense	37,446
– Program Operations	35,000
– Faculty/Instructors	8,982
– Science/Research	40,000
• Overhead	49,584
• Development	11,735
	Total 327,723
P&L SUMMARY	+7,246
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OPERATIONAL RESERVE FUND	75,000

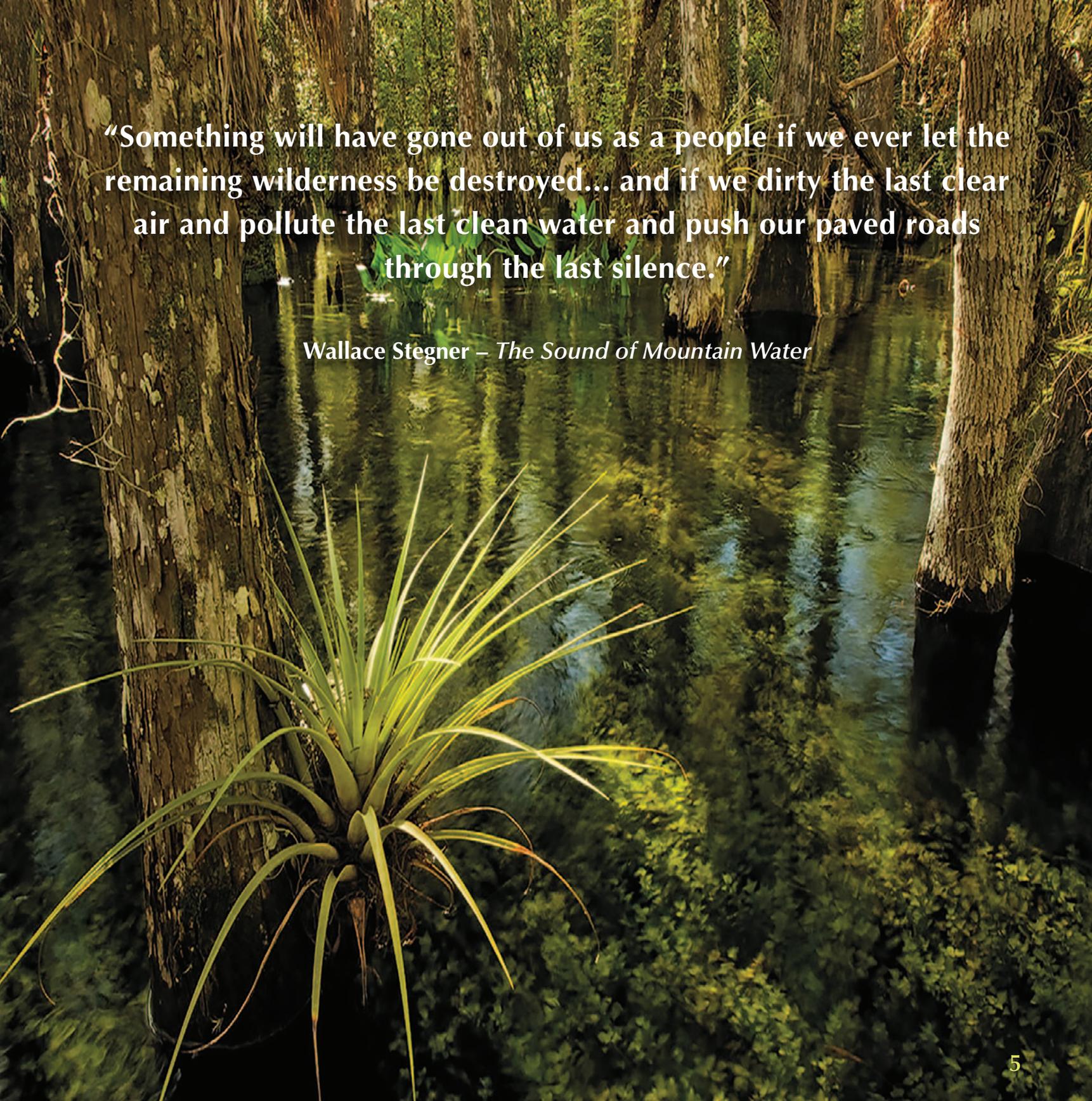
We think bioregionally and act locally

Audubon Western Everglades — its members, donors, volunteers, Board and staff — are witnessing unprecedented threats to the wildlife, water and habitats that sustain us all in Southwest Florida. Climate change-driven droughts, wildfires, storms, sea level rise and associated erosion, plus habitat loss-driven declines in many wildlife species, especially birds, insects and large mammals are local and world-wide phenomena. Recent news, however, has not been all bad — indeed, there are reasons for optimism on many fronts, due in no small part to the potential and real accomplishments of conservation work by scientists, governments and non-profit organizations. That also includes each of us and the work Audubon Western Everglades is doing often in our own yards and neighborhoods. Read on about some of the encouraging accomplishments over the past year and be inspired to redouble your collaboration and involvement with us. Our collective resolve and effort is all that will move our region to real conservation progress.

Western Everglades Restoration

AWE staff, sitting on two technical working groups for Picayune Strand Restoration Project, with expected completion in 2025, have coordinated with allies to get maximal water quality results out of agency plans to build farm pollution cleanup marshes controlling nutrient pollution affecting downstream Rookery Bay Reserve and Ten Thousand Islands Refuge. AWE has also pushed this year for vital hydrologic restoration and nutrient cleanup for the 600,000 acre Western Everglades Restoration Project (WERP) in the Big Cypress Preserve watershed. It is slated for Congressional authorization in 2024, but major technical and political hurdles remain. The Corkscrew Swamp watershed has been shown to suffer major drainage impacts from canals, farm irrigation and water supply wells. AWE and Audubon Florida staff have advanced watershed restoration solutions such as the Horse Pen Strand purchase and restoration to hold and clean more water regionally.

AWE and many allies have strongly advocated for over \$4 billion in greater Everglades public funding during this past year. Part of that funding should carry the C-43 Reservoir — with its attendant improvements to water quality and availability for the Caloosahatchee River and its Estuary — to completion by 2025, a longstanding priority for AWE. Similarly AWE and our allies have successfully promoted other important initiatives with potential for ameliorating water issues north of Lake Okeechobee, in the Caloosahatchee watershed and Estuary, and affected coastal areas. Examples include retention of \$100 million for aquifer storage wells north of the Lake; funding sufficient for finalizing the Kissimmee River restoration; funding for completion of the Herbert Hoover Dike rehabilitation by 2025; and the coming on line of the water storage and treatment project at Lake Hicpochee with funding secured for its expansion. Additionally, funding was secured for seagrass replanting in the Caloosahatchee aimed at improved fish habitat and nutrient sequestration as well as



“Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed... and if we dirty the last clear air and pollute the last clean water and push our paved roads through the last silence.”

Wallace Stegner – *The Sound of Mountain Water*

for the Comprehensive Everglades Restoration plan. Exciting initial tests of techniques for harvesting algae so that it does not decompose and damage waterways have also been conducted.

Conservation Collier and Land Acquisition

With the 2020 approval by referendum vote of 77%, Conservation Collier is now working to spend about \$27 million annually to buy conservation lands locally. AWE staff have been at almost all meetings and successfully advocated the approval for purchase of over 1000 acres of properties this past year. Most of those are habitats for highly imperiled species such as the Florida Panther, Wood Stork, Gopher Turtles, and Red-cockaded Woodpeckers. Most recently, AWE and allies were successful in accelerating the slow annual purchase process to a quarterly process. The first quarterly buys are in process now! Lee County's Conservation 2020 Program surpassed over 30,000 acres of public conservation lands purchased.

Climate Change and Sea Level Rise Southwest Florida

The success of all 15 local governments in Southwest Florida joining the SW Florida Regional Resiliency Coalition has been recently dampened by Lee and Collier Counties pausing their participation. Climate resilience, adaptation and mitigation remain politically difficult topics in Southwest Florida. AWE will be attempting to encourage their re-engagement. In the meantime AWE and allies have successfully argued for watershed restoration as a fundamental resilience measure which benefits both wildlife and water. Successful examples include the 4,000 acre Southern CREW completed restoration and the nascent Horse Pen Strand acquisition. Additionally, a regional resilience strategy emphasizing nature-based solutions is emerging that targets minimizing sea level rise impacts on existing infrastructure and wildlife species.



Our beaches, coastal estuaries and barrier islands are threatened by the increasing frequency and strength of coastal storms due to climate warming.



Our beloved Manatees are starving to death as their seagrass food source disappears due to climate warming algae blooms.

Coastal mangrove forest habitats, so important to erosion control, are being lost to development pressure.

Wetlands and Water Protection

AWE and allies have proactively advocated better storm-water policies and watershed management in Florida in general and here in our region. Collier's Watershed Management Plan and Lee's Flood Mitigation Plan are useful conceptual plans that have not yet been implemented, and AWE is working to realize their potential, while also targeting wetland protection rules that continue to allow unsustainable losses. AWE continues to work on improving state and federal rules governing building permits, while objecting strongly to egregious project permits destroying wetlands.

Private Lands Habitat Conservation

Against the daunting prospect of 10 million more people moving to Florida in the coming decades, AWE and our allies have been proactively negotiating with landowners and developers to eliminate and reduce impacts to wetlands and listed species habitats. We have pursued land use policies we helped write in Collier County called Rural Land Stewardship and Transferable Development Rights that direct incompatible development away from wetlands, flowways and listed species habitats for Florida Panthers and Wood Storks. This past year we negotiated over 12,000 acres of permanent preservation with 2600 acres of restoration in the CREW Florida Forever Project, along with required wildlife underpasses for three roads, and two more expected. While the landowners of 152,000 acres in Eastern Collier County decided to withdraw their application for a powerful conservation permit called a Habitat Conservation Plan because of exceedingly long delays by the U.S. Fish and Wildlife Service in processing it, AWE and allies succeeded in obtaining commitments from the majority of landowners to implement the conservation provisions of that 50 year plan, including \$150 million for wildlife road underpasses, land acquisition, and research, on top of the ultimate goal of 134,000 acres of privately owned habitats preserved. ■

Marco Island Conservation Programs Continue to Grow

Led by our full-time field biologist AWE has seen terrific accomplishments in its efforts to protect the iconic and charismatic wildlife of Marco Island and Collier County coastal habitats. AWE program staff and over 75 trained volunteers collect nesting and population data year round on the state's second largest population of threatened Florida Burrowing Owls and almost 1500 endangered Gopher Tortoises. Our field staff have restarted the owl banding research effort and are presently seeking grants for ongoing biological owl and tortoise research. Although too early to tell, AWE's use of "starter-burrows" to relocate burrowing owls may hold the key to sustaining this urban colony and other populations in Florida. Recently, several diverse groups of volunteers, led by AWE staff collaborating with the Native Plant Society, tortoise expert Nancy Richie, FWC, and the City of Marco Island, installed 1000' of silt fencing to protect gopher tortoises from entering busy roadways and restored vacant lots with native foraging plants for tortoises.

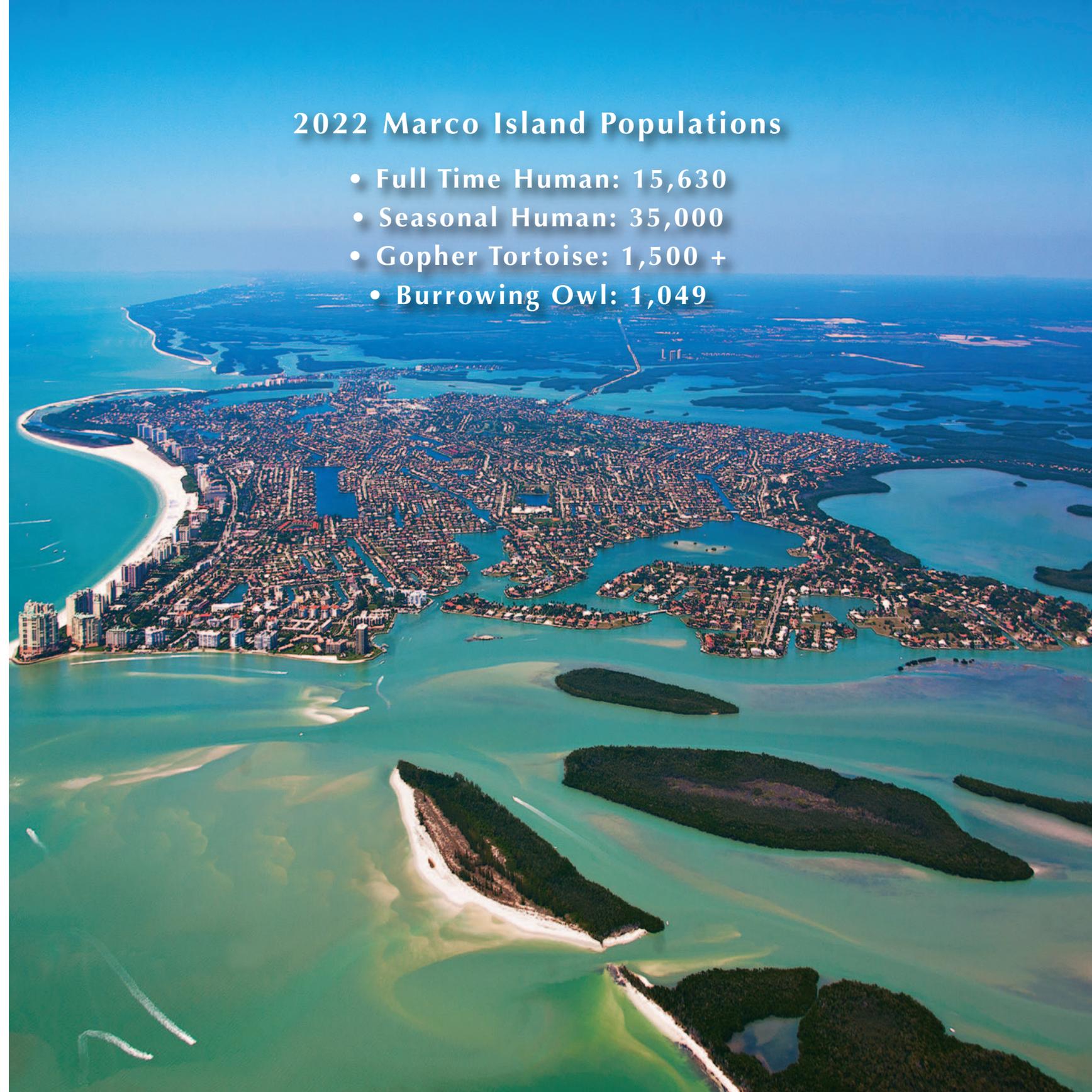
Additionally, AWE staff and volunteers are working in cooperation with Audubon Florida, JW Marriott and Rookery Bay to monitor, protect and educate the public at several critical habitat areas for large flocks and colonies of both breeding and wintering shorebirds and seabirds on Marco at Clam Pass, Caxambas Pass and Tigertail Beach. AWE's wildlife data, collected by staff and volunteers for years, was perhaps the most essential factor, cited by County staff, convincing the Conservation Collier Program and Board of Commissioners to approve or recommend purchase of several important Marco parcels that host hundreds of Gopher Tortoises, Burrowing Owls, breeding Bald Eagles, and 3000 year old human archaeological remains and artifacts. ■



AWE's incredible group of Marco Island volunteers help monitor sites and protect species year round.

2022 Marco Island Populations

- Full Time Human: 15,630
- Seasonal Human: 35,000
- Gopher Tortoise: 1,500 +
- Burrowing Owl: 1,049





Class of 2022

MARCO

- 76 Volunteers monitored
- 351 Total Sites
- 259 Active Sites
- 238 Pairs of Owls
 - 190 Nests
- 524 chicks fledged

ISLES OF CAPRI

- 10 Total Sites
- 9 Active Sites
- 7 Pairs of Owls
- 14 chicks fledged

FIDDLERS CREEK

- 3 Total Sites
- 3 Active Sites
 - 3 Nests
- 5 Pairs of Owls
- 11 Fledged Chicks

Starter Burrows

- 92 on Marco
- 6 at Fiddlers Creek
- 2 on Isles of Capri
 - 37 Excavated
- 28 Fledged chicks



Banding is a key research activity



Local resident participates in AWE's "starter burrow" program



AWE's field biologist bands fledging burrowing owl with our science advisor



Team of Marco Island resident Gopher Tortoise program volunteers



Team of AWE volunteers erect tortoise barrier fence to block road crossings



Marco Island Gopher Tortoise Research & Stewardship Program

2022 Activity

- 268 site surveys
- 2895 potentially occupied burrows
- 454 abandoned burrows
- 1,448 estimated population within surveyed area

A Keystone Species

A wildlife landlord providing shelter for more than 350 other species including endangered wildlife and burrowing owls.

Burrowing Owl Research and Stewardship Continues

We are finishing up the 2022 year nesting season. The majority of our sites have fledged young and nested hundreds successfully before the first tropical storm. Our "starter burrow" program is having more success than ever. One hundred starter burrow sites were active with owls this season and produced 28 chicks. Raoul Boughton, longtime AWE Ph.D science advisor, helped us restart our banding program and we were able to band a number of young and adults this season. Banding is key to helping us determine how this urban population of burrowing owls deals with territorial and density issues and remains healthy. Since we have begun banding juveniles again this year, we are switching to a better resighting bands with larger identifying numbers so we can continue research on where owls are going after they have fledged.

Importantly, Marco's Beach and Coastal Resource Committee (BACR) bought two Burrowing Owl signs a few years ago, "Low Flying Owls" and placed them in heavily trafficked areas. We are working on getting a few more signs around the island that would help with car strikes—two more would be great. We also want to educate lot owners and property owners on the importance of not using rodenticide on their properties since they do affect and kill the Burrowing Owls, as well as reach out to pest control companies and educating them on using a more environmentally friendly ways to get rid of rodents. ■

Protecting Marco Island's Gopher Tortoise Creep

AWE's field biologist has completed 268 site surveys and documented 2895 potentially occupied burrows, which included 454 abandoned burrows and suggests that there are 1,448 Gopher Tortoises within this surveyed area. We are just about done with the Marco mainland survey that included community and private developed properties. We are now starting the Key Marco area survey.

Our Gopher Tortoise conservation management plan, authored by city biologist Nancy Richie, has been completed and will be presented to Marco Island City and the public soon. We have started a volunteer Gopher Tortoise Watch to help us keep an eye out for mortality and harm to tortoises and protect critical urban habitat—a recent violation involved burrows filled with concrete blocks. We have documented that 28 Gopher Tortoises have been hit and killed on Marco Island since November. We are moving on a number of fronts to protect Marco's Gopher Tortoise urban habitats and recently led a project installing a silt-fence along S. Barfield behind the Publix on four lots that the owners gave us permission to test using a physical barrier to block tortoises from dangerous roads. This was a team effort with FWC, Marco Island Councilor Rich Blonna, Humble Bumble Backyard, Eazy Street Handmade, Refined Powder Coating and Media Blast, Sosa's Lawn Service, and nearby citizens. AWE is leading an effort to protect this area from future development with Conservation Collier. ■



Audubon Corkscrew Sanctuary Field Trip



Florida Adventures Coastal Habitats Field Trip



Corkscrew Sanctuary resident



AWE field biologist prepares her class to sneak up on the owl's nest in their playground

Marco Island Academy Conservation Leadership Program

Our Marco Island Academy Conservation Leadership Program (CLP) is now enrolling for the 2022 fall semester and is enthusiastically being supported by MIA teachers, student alumni from last years program, and its twelve new recruits. This program enables students to explore environmental science and human ecology issues through field adventures and classroom sessions using film and guest speaker presentations to spark informal group discussions.

The course curriculum focuses on key environmental issues facing Collier County and Southwest Florida's local ecosystem including the challenges of urban sprawl, impact of invasive species, loss of wildlife habitat, protecting keystone and indicator wildlife species, and the threat of climate warming on Southwest Florida's bioregion.

"It is truly fascinating to learn about how every component of an ecosystem is interconnected."

Program Graduate – Haylen Irvan



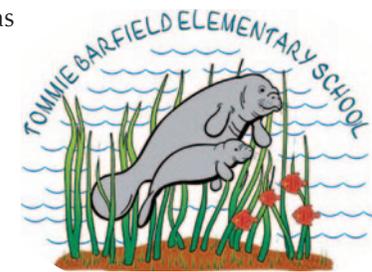
Importantly, this experiential education model prepares students to advocate for local conservation actions that will protect natural habitat and wildlife, understand how community conservation policy evolves, experience how teams of students can make a difference, explore future environmental educational and career pathways and earn "community service" credits required for future scholarship awards.

The program's goal is to plant the seed for a life-long commitment to environmental activism and community engagement. ■



Tommy Barfield Elementary School Owl Club Program

This past year we were contacted by one of our volunteers, Stephanie Parker, who is also a teacher at the Tommy Barfield Elementary School. The school was starting a program where students get to choose a club to be a part of monthly during school hours and Stephanie proposed doing a Burrowing Owl Club! AWE's field biologist worked with Stephanie and another volunteer Jean Hall to coordinate monthly activities for students to learn about the owls. Sessions included presentations, videos, a survival game, dissecting pellets, decorating perches, naming banded owls, making masks, creating educational signs, and observing owls



in the field. The students were always excited for each visit. TBE has a pair of Burrowing Owls living and nesting in their playground! It was a great opportunity to watch their behaviors, scope the burrow, and monitor the chicks growing up. We were able to post the educational signs they made all over the island for the public to view near burrow sites. This coming year, we are expanding the club to Gopher Tortoises as well. The program theme of "burow buddies" will assist in educating students about both threatened species living on Marco Island. Thank you to Stephanie Parker for this continued involvement. ■



Winter Shorebird Stewardship Program

AWE continues monitoring shorebirds, seabirds and wading birds at Clam Pass in Naples and Tigertail Beach, Sand Dollar Island and Caxambas Pass on Marco Island. From October through March the AWE program helps protect flocks from which are busily feeding and fattening up for the nesting season. In early summer they begin laying eggs and the birds and nests again require protection from humans who otherwise encroach too closely and from predation by crows, owls, rats, raccoons and other animals which destroy eggs or chicks. Research data from this winter stewardship season confirmed that 448 banded birds were re-sighted, the majority being Black Skimmers. Red tide affected our resting bird populations with the greatest concentrations in February. Unfortunately, many different species of birds had to be rescued this season due to neurological issues stemming from red tide including Red Knots, Great Blue Herons, Sandwich Terns, and a variety of gulls. Black Skimmer fledglings were hardest hit with many of those having been banded earlier by Audubon Florida biologists. Hundreds of vultures helped to naturally clean up the beach by disposing of the dead fish.

FY-2021/2022 SUPPORTERS

A special thanks to all our supporters and friends who made this commitment to care.

Eagle (\$25,000+)

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AWE Continues Its Foundational Role Protecting Endangered Florida Panthers

AWE's work to recover the Florida Panther began with the founding of the Friends of the Florida Panther Refuge. Since then, AWE has proactively and strategically pursued actions that have made enormous differences in the success of panther conservation. Notably, AWE and Florida Wildlife Federation in 1997 sued Collier County to require better protection of wetlands and panther habitats on 300,000 acres of rural private lands, resulting in the Rural Land Stewardship Program and Rural Fringe Mixed Use District. Recognizing that large expanses of rural private lands were key to conserving not only the Florida Panther, but Wood Storks, Gopher Tortoises, Burrowing Owls and many other imperiled species, AWE has collaborated with state, federal and local agencies, large private landowners, and conservation partners to create policies that have already put many tens of thousands of acres in permanent protection through easements and public acquisition. In the past year alone, AWE and its allies have helped protect over 12,000 acres of private lands in the Rural Land Stewardship Area, successfully advocated acceleration of the Conservation Collier buying schedule, and adding the Horse Pen Strand in Golden Gate Estates to the top conservation priorities for Collier County. AWE strongly believes these wildlife and water corridor initiatives on private lands are a critically needed model for the future of conservation in Southwest Florida. ■

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