

Sharing the Shoreline

2022 John Martin Reservoir Piping Plover and Interior Least Tern Newsletter



**US Army Corps
of Engineers®**

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The Year in Review

The 2021 season was another banner year for plovers and terns at John Martin Reservoir! The U.S. Army Corps of Engineers (USACE) continued its' long-standing partnership with Colorado Parks and Wildlife (CPW) and the U.S. Geological Survey (USGS) to monitor and protect the birds. Continue reading for highlights from this past season, new hall of fame records, and facts about these birds and John Martin's monitoring program!

2021 Nesting Season

Most of the nests we found in 2021 were plover nests, and many of these were successful and produced chicks. There were fewer tern nests and unfortunately, all known nests failed. Two terns and 15 previously banded plovers returned to breed at John Martin. Of the returning plovers, three were hatched here and banded as juveniles in 2017, 2018, and 2019, respectively. They have since returned "home" every year to nest. Other familiar faces included plovers F89 (banded in 2018) and F72 (banded in 2017), and tern 14 (banded in 2017), each of whom nested this year. Four previously banded birds returned to the reservoir, but did not nest. Plovers F87 and F89 reared 4 chicks in 2020 and paired up again this year, but their nests failed. USGS biologists banded two new adult plovers and one new adult tern, as well as 10 plover chicks.



2021 Accomplishments

In 2021, USACE Rangers improved nesting habitat by removing invasive tamarisk from the shoreline. On National Public Lands Day, our staff and volunteers removed over 4,000 pounds of dead tamarisk from the South Shore (**Fig. 1**). We continued this work throughout the winter to create suitable habitat for next season's nesting plovers and terns.

Our Rangers also expanded outreach efforts by visiting local schools and speaking to over 100 students about how they can help plovers and terns (**Fig. 2**). Additionally, we gave a virtual presentation to the Arkansas Valley Audubon Society about John Martin's monitoring program.



Figure 1. USACE staff loaded cut tamarisk into the woodchipper.

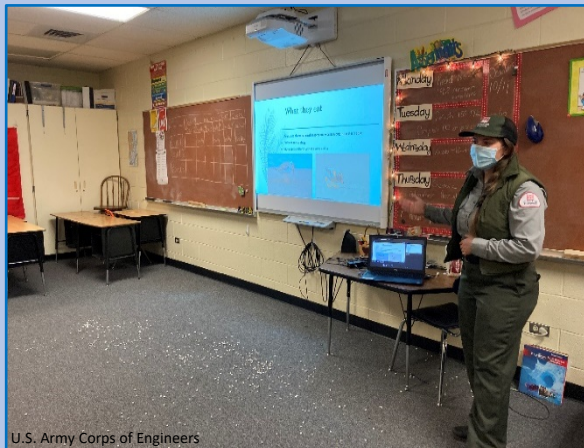


Figure 2. A USACE Ranger talked to students about plovers and terns. Later, students played a game and pretended to be birds looking for food along the shoreline.

Plover Genealogy

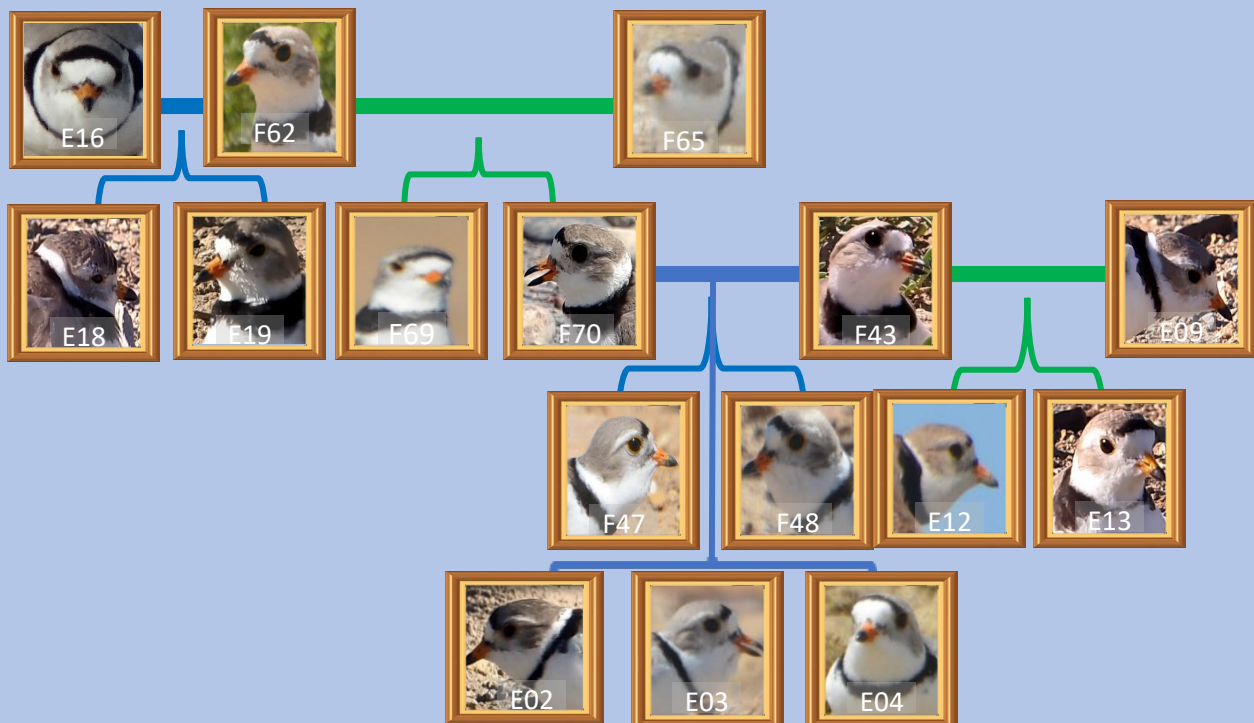
Banding allows us to identify individuals and estimate survival, as well as track migration.

In 2021, USACE continued its partnership with the U.S. Geological Survey (USGS) to band birds (**Fig. 3**). Banding adults and juveniles allows us to estimate annual survival, determine how many chicks hatched at John Martin Reservoir returned to breed, and see where the birds are breeding and wintering. It also allows us to ID individuals, see which individuals are partnered together, and build family trees.



Figure 3. A USGS employee held a recently banded plover. Banding does not harm the birds and provides critical data about survival.

Below is one such tree, showing five generations of plovers from John Martin Reservoir, created from banding data. Colored lines represent pairings among plovers, and individuals are assigned alphanumeric codes; for example, F43 partnered with F70 in 2019 and 2020 to produce a total of five chicks, but partnered with E09 in 2021 to produce two chicks.



John Martin Reservoir Hall of Fame

John Martin is home to some awesome birds! Below are some of the records from the past 5 seasons. Alphanumeric codes refer to individual birds.

Old Timers

Tie: Plovers F62 and F72 (at least 5 years old)

Both banded as adults in 2017 and returned to breed 2019–2021

Tern 14 (at least 5 years old)

Banded as an adult in 2017 and returned to breed 2019–2021



Plover F62 walked along the shoreline at John Martin.



Tern 14 tended to their eggs.

New Recruits

Plover F70

Hatched in 2017 and returned 2019–2021

Plover F87

Hatched in 2018 and returned 2019–2021

Plover F37

Hatched in 2018 and returned in 2020 and 2021

Plover F47

Hatched in 2019 and returned in 2020 and 2021



Plover F70 provided shade for their eggs.

Lonely Hearts Club

These birds returned to John Martin but did not find a mate:

Plovers F56, F80, F83, and F90



Plover F90 hoped for better luck in 2022.

All About Plovers and Terns

What are Piping Plovers and Interior Least Terns?

Piping Plovers (*Charadrius melodus*) and Interior Least Terns (*Sterna antillarum athalassos*) are small, migratory shorebirds. Every spring they travel hundreds of miles to their breeding grounds. One of the places they choose to raise their chicks is John Martin Reservoir.

Adult plovers (**Fig. 4**, top left) have a sandy-colored back, white belly, black collar and “unibrow,” orange and black bill, and orange legs. Juveniles (**Fig. 4**, top right) appear similar to adults but lack the collar and unibrow and have an all-black bill.

Adult terns (**Fig. 4**, bottom left) have black heads with a white triangle on the forehead, grey backs, and yellow bills and legs. Young birds (**Fig. 4**, bottom right) have black bills and a black smudge behind their eye.

When are they here?

Plovers and terns leave their wintering grounds and travel hundreds of miles to southeastern Colorado. While plovers arrive in mid-April, terns show up in May. The birds leave us at the end of August and spend their winter along the Atlantic Coast of North and South America, as well as in the Bahamas and Caribbean Islands.

Why are they important?

Both species have seen population declines in recent decades, due in large part to habitat loss. Additionally, the populations at John Martin Reservoir are small and isolated (**Fig. 5**). Piping Plovers are federally threatened, whereas Interior Least Terns are classified as endangered by the state of Colorado.



Figure 4. Adult (top left) and juvenile (top right) Piping Plovers. Adult (bottom left) and juvenile (bottom right) Interior Least Terns.

Did you know?

Terns often use items such as sticks and rocks to help them find their nests after returning from fishing.

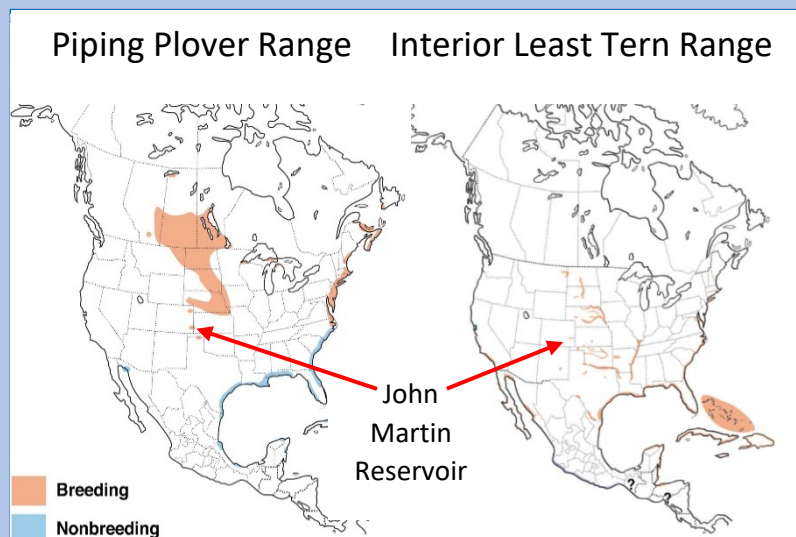


Figure 5. The ranges of Piping Plovers and Interior Least Terns in North America. The John Martin Reservoir populations are indicated by the red arrows. Maps courtesy of the Cornell Lab of Ornithology.

What is the U.S. Army Corps of Engineers doing to help?

John Martin Reservoir is managed by the U.S. Army Corps of Engineers (USACE), who manage the dam to minimize flood risks, conserve water, protect natural resources, and offer recreation opportunities. We partner with CPW to protect the birds at the reservoir. We improve nesting habitat by removing invasive tamarisk from the shoreline (**Fig. 6**) and temporarily close nesting areas. Rangers monitor the birds and record nesting data. We also educate the public about plovers and terns. Additionally, we continued our partnership with the USGS to band the birds. Banding allows us to identify individuals to estimate chick and adult survival, as well as track migration.

How can I help?

The easiest and best thing to do is to stay away from nesting sites. Plovers and terns are very wary of intruders. When people/predators enter their habitat, they feel they have no choice but to flee, leaving their eggs and chicks unprotected. Eggs and chicks are also very hard to see (**Fig. 7**) and can be accidentally crushed. Nest sites are marked by signs and brightly colored twine (**Fig. 8**). Please visit the John Martin Reservoir Facebook page and the South Shore kiosk for the most recent closures. It's also important to pick up litter and throw it away in a trash can. Leftover trash can attract predators, harm wildlife, and potentially injure visitors. If you're fishing, avoid landing in closures and bring all your lines and hooks home with you. Keep your pets leashed; even a well-behaved dog looks like a predator to a nesting bird.

Lastly, help us protect these birds by spreading the word about plovers and terns! Talk to other visitors about what you've learned and follow us on Facebook for future updates.

What if I have questions?

USACE Rangers are happy to answer any questions you have. See the next page of this newsletter for our contact information.



Figure 6. A USACE Ranger removed tamarisk from the South Shore.



Figure 7. Chicks are camouflaged and hard to see. Can you find both tern chicks in this picture?



Figure 8. A sign marked where birds nested in 2021.

Found a dead bird?

Please contact us immediately (see below) if you find a dead plover or tern. Take a picture and let us know where the bird is. This information is very important and helps us immensely.

Please Let Us Know

If you see someone in a closed area, please let us (number below) or CPW know (John Martin State Park Office (719) 829-1801). A Park Ranger will go and explain why the area is closed.

Contact Information

US Army Corps of Engineers-John Martin Reservoir
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Website:

www.spa.usace.army.mil/Missions/Civil-Works/Recreation/John-Martin-Reservoir/

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