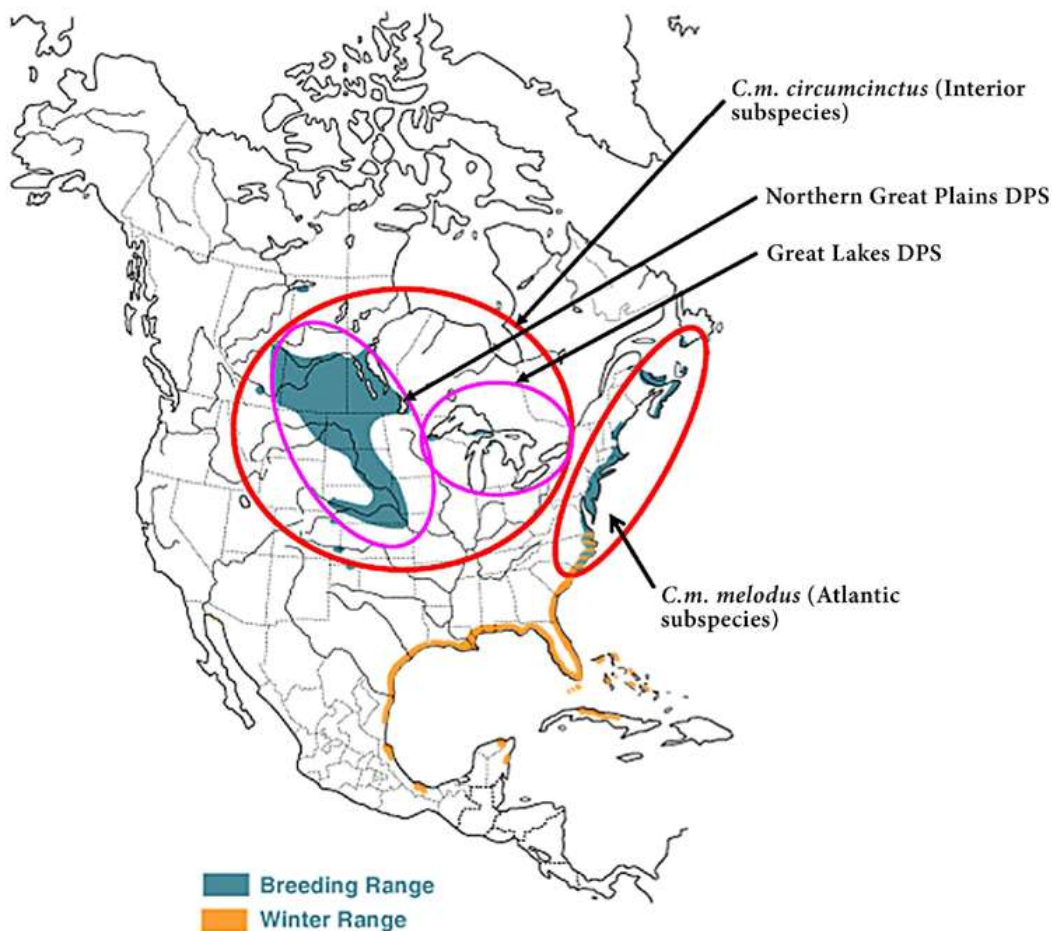


Piping Plovers in Texas – Where did they come from, and what do they want?

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Piping Plovers are amazing birds that depend on the Gulf coast for much of their life, but they do not nest here. They nest on river sandbars and other bare ground features such as beaches in the northeast US and Canada, but most of the ones we see in Texas come from the Northern Great Plains DPS (that's "distinct population segment"). That designation refers to how they are managed. They only spend a couple months in their breeding grounds. The rest of the year – up to 9 months – they spend on the coast! That means they're here for about $\frac{3}{4}$ of their lives, and *that* means we have a responsibility to show them hospitality by being respectful of their needs while they're here. They're not just visiting to "hang out on the beach." They're here to *SURVIVE!!!*



Researchers have been studying this species for many decades, and it has a limited population – less than 8,000 individuals. There are probably more people in your town than there are Piping Plovers in the whole world. For this reason, they are given additional protection under the Endangered Species Act. This is a law that Congress passed years ago to try to prevent species from going extinct, and it has worked! Without it, we may have lost wolves, brown pelicans, and bald eagles.

Since Texas is so important for the species, we've done a lot of research locally to figure out what makes them tick.

We did surveys of Piping Plovers along this 42-kilometer stretch of beach on Mustang and Padre Islands (by Corpus Christi). The colors in the bar offshore represent the density of the species. Places we found them more frequently are orange and red, while "cooler" colors like yellow and blue are places we hardly found any at all. Notice there's an area where the bar is broken (no color). No birds there!



There are several factors that affect whether Piping Plovers like a certain stretch of beach or not.

Where are the most heavily used areas (most orange/red)? Sections 1 and 2 are part of Mustang Island State Park. Section 6 is a stretch of Padre Island National Seashore where vehicles are not allowed.

And the gap in the bar, where we found practically ZERO plovers? That is an area where there is really heavy traffic, lots of visitors, hotels right near the beach.

When Piping Plovers are on the beach, they are usually there because they're hungry. The prey they eat include little bugs and worms that live in the wet sand. That's also where people like to be. When there get to be so many people on the beach, there can be NO ROOM left for plovers! Also, some beach managers think beaches look prettier when the natural debris (wrack, seaweed) is removed, so they scrape it away and bulldoze and re-grade the sand the way they think it looks nice. What do you think

happens to the prey that lives in that sand when that happens? Buried, or washed away. If there's no prey for birds on the beach, they will starve.



This picture shows what “beach cleaning” does. Notice there’s no natural wrack on the beach. The little prey items plovers like to eat are buried. This photo is from section 4 in the previous image. What do you see there? Very few plovers use it.

Here’s a happy Piping Plover – he can forage along the water line, and find some other delicacies by picking through the natural debris (seaweed) on the beach. If it is windy and the plovers want to rest, they’ll often use these bits of debris to hide behind and get out of the cold or wind.



So, what do we learn from all this? Piping Plovers do better on protected beaches where they are not constantly being messed with by people. With proper management that considers their needs, they can thrive.

Piping Plovers don't spend their whole time on the beach though. Sometimes they are very hard to find on the beach, even when the beach looks great for them. Where do they go?

It's hard to know without doing some more research. In a couple places along the Texas coast, we caught birds and "banded" them. This is one of the birds we caught. There is no other Piping Plover with the same color combination, because all of this has to be coordinated through the federal Bird Banding Lab. The red flag tells me it's one of mine, the red band below that tells me what project of mine it was for, and the red over black bands on the other leg tell me which specific bird this is, so when I see him again I won't confuse him with anyone else.



But to figure out where they're actually going when we can't find them, we put some tiny little radiotransmitters on their backs. With this, we could go out with a receiver and antenna and point it in various directions until we could "hear" the beep of the transmitter. Then we could go that direction and hone in on it until we figured out exactly where they were. It turns out, when birds aren't using the beach, they are on the extensive sand and mudflats in the bays (behind the barrier islands). On the beach they are very territorial – each one has one little stretch of beach it claims, and if another Piping Plover gets in another one's territory, they get fussy, and one usually gets chased off. But when they are in the bays, they forget all about that and seem to get along great. There you can sometimes find 50 or more plovers hanging out in one spot! They roost (sleep, relax) together, they feed together... "Kum ba yah, my plover, kum ba yah."

Once we've relocated each bird a bunch of times over a season, we can show on a map where they've been. Here are a couple examples. These are in Galveston Bay near San Luis Pass.



Notice when this bird was on the Gulf beach, he was almost ALWAYS found around the same spot. That's HIS SPOT! The green dot is where we caught him in the first place. Now notice the other dots – those are all on sand/mudflats in the bay. When tides are low in the middle of the winter, those flats are really expansive and full of critters plovers eat. Why do they hang out together on the flats? They can learn from each other, for one. If one of them knows about a particularly good spot for food, the others can follow and enjoy it too. They can also explore a big area if the whole flock spreads out a little and each one “samples” a small area. Someone is bound to find a good spot, then the others will notice and can join that one. Also, *safety in numbers!!!* Safe from what, you ask? Predators like raccoons and coyotes would love to eat a little plover for dinner, but if the birds are out on the flats, surrounded by water, they can see a predator coming a long way off, or they will definitely hear them splashing if they get close. There are also two types of falcon – Peregrine falcon and Merlin – that like to eat shorebirds. By being in a group and flying as a flock, they can use evasive maneuvers like a school of fish moving in synchrony to confuse the falcon. If one of the plovers gets “out of line” then that’s most likely the one the falcon will single out and chase down. So, don’t get out of line...

Here’s another one, same area. This bird is a neighbor of the other one while on the beach, but has a territory a little further east. But when she’s not on the beach, where is she? Same places as the other one, getting along swimmingly on the flats in the bay.



How many Piping Plovers are in this flock? Well, actually it's zero. This is a flock of tens of thousands of Dunlin – another type of shorebird that breeds in the Arctic but depends on Texas bays during migration. Here they are stretching their wings and evading falcons while they fatten up for the next leg of their migration. They can fly for several days without stopping, from Texas all the way above the Arctic circle! After I learned that, I quit complaining about having to take the trash all the way out to the curb.

