

Introduction

Welcome to the third episode of Here Birdy, Birdy, Birdy! This is Inez de Tucson and today we're going to explore one of my very favorite birds that I have the honor of co-existing with here in the Sonoran desert, the vermillion flycatcher.

My love of birds began around the age of about four years old, but that's a story for another time, but basically, when I was in elementary school there was a small section of books, maybe 10 or 12 books about birds and I discovered them at some point and by 4th or 5th grade, those were the only books I was reading. I would take them out one after another and read them over and over and over. I remember spending hours and hours looking at the pictures, reading the descriptions, and memorizing the maps. One day, my mother and the librarian got together and decided that I really need to expand my reading repertoire. So, the next time we had library class, the librarian told me that I wasn't allowed to take out any more bird books. She very kindly took me over to the fiction section and helped me look at a few. I didn't really find anything I liked, but she recommended *Stuart Little* by E.B. White which I took out because I felt her frustration with me building. I tried to read *Stuart Little* but, I just couldn't get into it. It just wasn't very much fun for me. I don't even think I finish it. So I took the book back the next week and the librarian asked how I liked it and I said "I think I'm just not going to read anymore" Then I sat out the rest of the library session - the stubborn little girl that I was and didn't take anything out. The next week when we had the library again, the librarian came up, and told me that she and my mother talked and decided it was OK if I took out bird books again.

So that's first a story of my terrible stubbornness as a child and also a story of how much I really, really, really loved bird books. One of the books on that shelf was the *Field Guide to the Birds* by Roger Tory Peterson published in 1947 and has pictures of an Atlantic Puffin, a cardinal, and an evening grosbeak on a blue cover. I still have a copy of it in my bookcase. In that book are many birds with beautiful drawings pointing out the distinctive features of each bird. Being a small kid, fifth grade or so, I didn't get very many places, so there were birds in this book that I put on a list called, "I'm definitely never going to see that bird." This was a list of pretty much any bird that I hadn't already seen that was brightly colored. One of the birds on that list was the Vermilion Flycatcher and I don't know if you can hear behind me, but the Vermilion Flycatcher is one of the birds calling behind me and it's one that I hear almost every day.

I can remember the first time I saw Vermilion Flycatcher in real life. I was in Austin Texas with my friend and we had hired a bird guide for the day. He took us to all the hot spots around Austin and what's really interesting about Austin is that if you're on the eastern side of it, you see eastern birds, and if you're on the western side, you see western birds. So we were on the western side and he had put on a tape of a screech owl and within 30 seconds there were birds flocking in. I had my eyes on a fantastic bird which escapes me at the moment, but into my binocular view flew a bright orangy-red bird with black wings and I yelled out "Vermilion Flycatcher!" And then I doubted myself, it was like how did I know that bird? Are you sure? I had

never seen it before, but it was so ingrained in my memory from when I was a kid as a bird I was never going to see. And there he was, right there!

So for the kids out there, don't make judgments about what your life's going to be like and what you're going to see and not see. There's so much out there and you'll get to make your own choices one day.

So let's take a look at this bird the Vermilion Flycatcher.

Details

Let's start with the taxonomy because this one is fun! The genus and species for our typical Vermilion Flycatcher is *Pyrocephalus rubinus*. I say "typical" because there are about a dozen subspecies that have been identified in its range between the southwestern US south through Mexico, Central and South America, including the Galapagos Islands, but typically, it's counted as *P. rubinus*. And I love that name! Pyro from the Greek meaning "fire" and cephalus from the Ancient Greek meaning head, so fire-head. Rubinus from the Latin word ruber or red. So altogether it perfectly describes the bird as "red fire-head" *Pyrocephalus rubinus*. When you see this bird in full sunlight, his head really does blaze!

I also check my Guide to Birds of Mexico and Northern Central America and the authors, Howell and Webb, gave the bird the Spanish name "Mosquero Cardenal" which translates roughly to red flycatcher.

Giss & ID

As to the general impression of size and shape, the Vermilion Flycatcher is phoebe-like. In fact, *Pyrocephalus* is categorized with other phoebes within the tyrant flycatchers. I never knew this, but tyrant flycatchers are called that because of the vigorous way they defend their nesting sites.

The male Vermilion Flycatcher is a bright orange-red bird with brownish-black wings and a matching bandit mask over his eyes. He's a stout "puffy" bird as one of my friends recently called him when comparing it to a cardinal. Although he's not as big as a cardinal, he does have a rather plump body and a little shagginess on the crown of his head.

I've often confused the female Vermilion Flycatcher with Say's Phoebe and always have to stop and think about it when I see a bird with pinkish undersides. An easy way to tell the two apart is to look for the contrast between white and pink-ish on the Vermilion Flycatcher as opposed to the gray and pink of the Say's. The Say's phoebe's pink-ish parts are also more salmony in color if you get a good look at it. One would think after all these years, I would be able to tell the

difference, but it was reassuring to see the confusion between the two birds written in a couple of places so I must not be the only one.

Habitat

The Vermilion Flycatcher is another bird, like the Crissal Thrasher we talked about a while back, who is a resident of riparian areas. It typically prefers kind of open country with scrubby trees and bushes like we have here in the Sonoran desert: mesquite, greasewood, and cottonwoods. This is because of the way it feeds. It uses “flycatching” which is where the bird sits in one place for a while and then swoops down to catch its prey from its perch. Then it usually returns to the same perch. Sometimes they might swoop between two different perches on different trees, but they keep coming back to the same spot over and over.

Behavior

I'll read here from Pete Dunn in his Essential Field Guide Companion,

A consummate, but fairly casual perch hunter. Perches in the open, often high at the top of a bush; low atop a stiff weed or fence line; or on a branch below an open canopy. Move threateningly on its perch, turning its entire body, inclining its head, fanning and bobbing its tail with a flourish. Usually takes prey in the air but also makes forays to the ground where it sometimes hovers above the prey or settles with wings raised in a V. Very often returns to the same perch after a sortie.

Vermilion Flycatcher can usually be found perched alone, but often there's a mate nearby, especially during the breeding season.

Song

Its song reminds me of a short police whistle like you might hear when they are directing traffic. It kind of zips up and then down and repeats, like this...

While researching information about the song of this bird, I came across a new-for-me word, oscine (pronounced 'ä,sīn), that's spelled (o-s-c-i-n-e). Oscine birds are a suborder of *passerines*. *Passerines* are basically all the perching birds and oscine birds are those perching birds that have highly adapted vocal apparatus for singing. Examples of oscine birds are orioles, finches, larks and thrushes, like the American Robin.

Our vermilion flycatcher is not a part of this suborder. It is referred to as a suboscine. A suboscine has a different syrinx musculature and is considered more primitive than an oscine.

DNA sequencing and other data suggests that oscines and suboscines evolved from a common ancestor into two distinct clades which means the split happened quite a while ago and each one is now evolutionarily independent from one another.

All of the suboscines that live in the Americas except one, are of the suborder Tyrannides and the vast majority of them live in South America. They include birds like antbirds, antthrushes, manakins, gnateaters. Here in North America, tyrant flycatchers are pretty much the only suboscine birds we have.

Honestly, as often as I have listened to flycatchers and tried to distinguish which one was which by ear, I never really thought about those sounds not really being songs at all! Scientists call the sound a vermilion flycatcher makes Regularly Repeated Vocalization or RRV. We'll just call it song here because it serves the same purpose as a song in other birds.

One of the really special things about suboscines is that, unlike their oscine counterparts, their vocalizations seem to develop organically. In other words, they don't learn the song from another adult of the species. They have been shown to know their song even when they've never heard it before and I think that's pretty special!

So, remember I said that the song of the vermilion flycatcher sounded like a police whistle? If you were a bird and only had a police whistle to blow as your song, how could you differentiate yourself from other males? How would you attract a mate? Well, while the male can't change that sound, a study by Alejandro Areil Rios Chelen and team in Mexico, found that vermilion flycatchers can use the number of repetitions of the sound and the length of the pauses in between these sounds.

They also noticed that the males (quote) not only sang more (increased their song rate), but also sang longer songs (unquote) after nest building. They hypothesize that this change may be related to female fertility. Interesting....

Breeding

Its nest is a shallow bowl of twigs and grassy fibers placed in a horizontal fork of a tree. Look for it in the middle-ish range of the tree - not too high and not too low.

In 2008, Kevin Ellison, of the American Bird Conservancy, documented in the Wilson Journal of Ornithology, that several pairs of Vermilion Flycatcher reused their nests during a single season to raise more than one clutch, and these reused nests are more successful than newly constructed nests. He stated that the main advantage of this would be reduced nest predation.

In other words, the nest has already proven itself to be in a good location away from predators which is something that bird pairs have to consider when building a nest - is it high enough or remote enough so snakes and mammals can't blunder in and eat all the eggs? Of course, there may be no getting away from the dreaded Bronze-headed Cowbird! Also, resusing a nest saves the birds about 8 days worth of time available for south Texas where Ellison made his study.

Feeding

So what do these guys eat? They're flycatchers and we would assume that's what they eat...flies. Actually, flycatchers eat all kinds of flying insects, including bees, wasps, beetles, and grasshoppers. They sit on a perch, swoop down and around to catch that tasty bug and return to their perch to eat it. Pretty normal stuff, right?

Well, here's one weird thing. In 1993, Brenda Andrews, Marie Sullivan, and J. David Hoerath who work for the U.S. Fish and Wildlife Service and the Bureau of Land Management, documented a sighting on December 2nd and again on December 4th 1993 of adult male Vermilion Flycatcher eating a small fish! Yes, fish! Wait, that's the second invertebrate eater that's been reported eating fish, remember that American Dipper in episode 2?

So, the first time the vermilion flycatcher was seen it already had the fish in its mouth so we can't know whether it caught the fish itself or scavenged it from the river bed, but the second incidence, the bird was observed directly catching the fish. (quote) Andrews returned to the area on 4 December 1993 and observed an adult male vermilion flycatcher on a small mesquite tree branch 2.5 m directly over the water (so they're talking about the Hassa/yampa River Rest Area which is southeast of Wickenburg in Maricopa county, Arizona).

Continuing with the quote, after several minutes of observation, the flycatcher flew down, breaking the surface of the water. It then hovered just above the water for several seconds before darting down into the water. The bird hovered then darted into the water two more times. All four attempts were unsuccessful (unquote). They checked the water and didn't find any insects or other invertebrates in that area, but they did find large schools of longfin dace which is an abundant native fish. They also saw a black phoebe at the same spot making a successful dart for a fish.

Status

The Vermilion Flycatcher is common in the southwest and is harder to find in the winter than in the summer. Birds in the northern parts of its range seem to migrate, but some birds stick around all year round. That's the case here in Tucson. I'm sure to see a couple of Vermilion Flycatcher when I visit the dog park and the park down the street from me even in the winter, especially if it's a warmer, sunny day, but they are much more common in the summer months.

In June 2020, an article was published in the Journal of Avian Biology that looks at the breeding success factors of one of the *Pyrocephalus* subspecies (*nanus*) which resides in the Galapagos. The birds there have had a significant decline in population and are classified as having a high extinction risk. The breeding success has been pretty much miserable, so they experimented with a couple of different causes, one of them being the infestation of a parasitic fly, *Philornis downsi*, that has been introduced. According to the Charles Darwin Foundation for the Galapagos Islands, an international non-profit organization dedicated to scientific research, *P. downsi*, also known as avian vampire fly was accidentally introduced and is causing havoc with a dozen bird species on the Galapagos, including the little Vermilion Flycatcher *nanus*. The fly is adept at searching out bird nests and laying their eggs in the nests. Once the eggs hatch, the larvae find and feed on the blood of the baby birds and kill them hence the nickname vampire fly. In the 2020 study, the researchers reduced the number of larvae by half in some of the nests and used other nests as a control. And surprise! Once the larvae were reduced, the success of the nestlings was higher. Seriously though, this fly infestation is quite serious. What would the Galapagos be without its finches?

Future

Back in the U.S., the vermilion flycatcher is in less danger. Cornell's All About Birds website lists the Vermilion Flycatcher as a bird of low concern over much of its range. However, like all desert species dependant on water supplies, the Vermilion Flycatcher is, of course, sensitive to our use of water, groundwater pumping, and land development that makes the land not suitable for breeding.

So that's it! The third episode of Here birdy birdy birdy. I hope you enjoyed it and learned something from it. I surely did! If you'd like to hear more episodes, be sure to subscribe and if you can, give us a good review wherever you downloaded this podcast so we can reach a bigger audience. Until next time, stay birdy and nerdy my friends!

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