

AZFO FIELD EXPEDITION

Santa Cruz River Green Kingfisher Survey Summary - 1 July 2023



Arizona Field Ornithologists' most recent field expedition visited the Santa Cruz River near Tubac on 1 July 2023, to determine the number of Green Kingfishers along a nine-mile section of the river, until now a data gap in Arizona birding knowledge. This species seems to be increasingly reported in Arizona, particularly in Santa Cruz County, usually as a flyby. Birders have observed juvenile birds and confirmed nesting, but this was the first organized survey to assess the population's size in the state.

Green Kingfishers are year-round residents along the Santa Cruz River, measuring 12 inches with a two-inch bill that looks enormous for such a small bird. The male has emerald green upperparts and head with white spots in the wing, a rufous band across the chest and greenish streaks on the side of an otherwise white belly. Adult females have similarly colored crown, wings, and back but two greenish bands across the breast with no rufous. Immature birds are often heavily spotted on the head and back but mostly resemble the adult female, although young males sometimes have small splashes of rufous orange mixed with the greenish chest bands. They often perch on a small branch just above the surface of the river, watching for small fish to prey upon. When feeding they fly to the spot and quickly plunge straight down into the water to make their catch. For nesting, Green Kingfishers burrow holes into the vertical dirt bank often among, exposed tree root tangles along the river, 2-3 feet deep to lay their eggs. A typical nest will have 3-5 eggs.

Dividing into two teams, eight participants did an amazing job of slogging through the mud and avoiding logjams and cattle fences while enduring 103° F temperatures. Their job was to survey the Santa Cruz River for Green Kingfishers between the Tubac Golf Resort and Palo Parado Road crossing. Each team was challenged to safely navigate the river obstacles as they were constantly watching the entire river corridor and listening for that soft "tic, tic, tic" call, while expecting these stealthy birds to fly around them, sneak up from behind, or dart away quickly, long before the group reached their hiding spots. Anyone that has pursued a Green Kingfisher knows that they are very good at not being seen.



At 6:30 am, after a short tailgate session and safety briefing about the objectives for the day and the expected hazards that might be encountered, the teams shuttled cars to the ending spot at the Tumacacori Trailhead of the Anza Trail. The north team then headed to the Tubac Golf Resort, carefully crossed the edge of the course, and dropped down into the now dry portion of the Santa Cruz River. Until earlier in the week, the north team had planned to start where the river crosses Chavez Siding Road, about 1.8 miles north of here. However, since there have been no monsoon rains so far this summer, the river is at its low point and there is no longer surface water north of the resort. The team quickly encountered some puddles and then running water as they moved south. After it began heading south, a rare, summer female American Redstart was seen—an excellent way to start the day.



The south team also had its starting point adjusted during the week leading up to the count, since there was still a good flow under the bridge on Palo Parado Road. Participants drove to the Anza Trailhead on the east side of the river and then hiked about 0.2 miles north and walked west until they reached the river. They began their long river trek to the north from there.



Both teams made their way slowly along their respective portions of the route, dodging various debris piles, rocks, cattle fencing, and submerged objects of all kinds. Local breeding birds provided the background noise and were continually flushed from the water's edge where they had come to drink. Team members positioned themselves so there were always eyes on the river while watching for kingfishers to fly by on either side of their group. One person kept notes of all the birds seen, mostly through eBird checklists, recording specific information about each kingfisher sighting. Teams were asked to try to determine age, sex and coordinates for each Green Kingfisher they encountered. The teams were conservative in their counts, and great care was taken to avoid double-counting individual birds.

No actual kingfisher nest burrow were found along the way, but one team did suspect nearby nesting and carefully skirted the edge of that location to minimize disturbance. The groups continued to walk towards each other until reaching the east end of the Tumacacori "River Trail", a short spur of the Anza Trail. Despite a few minor "hiccups" along the way, both teams arrived safely, around the same time, a little after noon. Due to the extreme heat of the day, one of the teams left the river just short of the rendezvous point, but this only adds to the confidence that the final count is conservative.



The groups were exhausted and definitely ready for a cool down as they reached the trailhead. They couldn't help but smile as they realized they each had accomplished something that likely has never been done in Arizona before—as a group, they had seen a total of **14 Green Kingfishers** in a single day!



The teams kept their focus on the river and adjacent banks, so it was impressive that they found a total of 66 species of birds along the route with a combined total of 1,521 individuals. (Table 1) Not surprisingly, riparian forest breeding birds that are typically vocal like Brown-crested Flycatcher, Yellow-breasted Chat, Summer Tanager, Phainopepla, and White-winged Dove were found in large numbers. Lucy's Warbler was the most frequently recorded, with 197 individuals, an obvious indication that the young birds have already left the nest. 34 adult Gray Hawks were tabulated but no fledglings, which suggests that there are between 15 and 20 nesting pairs within this stretch, or roughly one breeding pair every half-mile. When the juveniles leave the nest, one might estimate that the total number of Gray Hawks will be amazingly close to 60 birds. There were 13 Yellow-billed Cuckoos reported, which offers a nice data point for those monitoring this threatened and declining species.

Table 1. Bird species detected along the Santa Cruz River from just north of the Palo Parado Bridge to just south of the Tubac Golf Resort on 1 July 2023.

SPECIES	#	SPECIES	#
Mallard	3	Bell's Vireo	28
Mexican Duck	30	Common Raven	16
Wild Turkey	6	Bridled Titmouse	17
Eurasian Collared-Dove	2	Verdin	14
Inca Dove	6	Northern Rough-winged Swallow	3
Common Ground Dove	36	Barn Swallow	9
White-winged Dove	61	White-breasted Nuthatch	7
Mourning Dove	52	Black-tailed Gnatcatcher	1
Yellow-billed Cuckoo	13	Bewick's Wren	19
Black-chinned Hummingbird	2	European Starling	3
Anna's Hummingbird	1	Northern Mockingbird	8
Costa's Hummingbird	1	Phainopepla	64

Broad-billed Hummingbird	11	House Finch	38
Great Blue Heron	3	Lesser Goldfinch	53
Green Heron	1	Rufous-winged Sparrow	2
Black Vulture	2	Black-throated Sparrow	1
Turkey Vulture	14	Song Sparrow	143
Cooper's Hawk	2	Abert's Towhee	35
Gray Hawk	34	Yellow-breasted Chat	80
Zone-tailed Hawk	2	Hooded Oriole	1
Green Kingfisher	14	Bullock's Oriole	2
Gila Woodpecker	69	Red-winged Blackbird	2
Ladder-backed Woodpecker	13	Bronzed Cowbird	1
Northern Flicker	2	Brown-headed Cowbird	21
Black Phoebe	27	Lucy's Warbler	197
Say's Phoebe	1	Common Yellowthroat	11
Vermilion Flycatcher	41	American Redstart	1
Dusky-capped Flycatcher	13	Yellow Warbler	65
Brown-crested Flycatcher	56	Summer Tanager	44
Tropical Kingbird	10	Northern Cardinal	17
Cassin's Kingbird	27	Black-headed Grosbeak	1
Thick-billed Kingbird	4	Blue Grosbeak	34
Western Kingbird	5	Varied Bunting	19

Many thanks to the AZFO field expedition team for its tireless efforts and dedication under extreme weather conditions. Team members included Troy Corman, Luke Safford, Christine Jenkins, Steve West, Malcolm Chesworth, Vernie Aikins, Jeremy Sunshine, and Jim Newell. Bill Lisowsky provided the photos accompanying this article. (Note: The bird photos are from other locations.) A special shout-out goes to the Tubac Nature Center who partnered with AZFO and help synthesize the data and publicize the event.

True to the AZFO's mission, this field expedition answered a burning question for a number of Arizona birders. Green Kingfisher sightings are so sporadic that it has been difficult to even guess at how many birds there are along the river. Most folks will be surprised to learn that at least 14 individuals were seen within this nine-mile stretch.

AZFO began field expeditions in 2006 as a way to fill data gaps in Arizona bird distribution and seasonal status like this one, and we plan to continue.

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