INTRODUCTION

When I moved to Arizona in the early 2000s and began looking for interesting places to bird, particularly locations where there might be waterbirds, I noticed San Carlos Lake on the map. Asking around, I learned that very few birders had been there, and reports were scant in the Arizona/New Mexico listserv archives. I made my first trip there 18 October 2003, and Keith Kamper and I returned 21 February 2004. On that visit, we found two Snowy Plovers, a species that is casual to rare in migration and accidental from November through March in Arizona. This hooked us.

Often accompanied by Kamper, I have been to the lake many times, and our reports have inspired many other birders to make the trip since those first trips in 2003 and 2004. The lake has been visited in all 12 months at least once in the past 16 years. During this period, we know of 221 species that have been reported, including 5 on the Arizona Bird Committee’s Review species list and 12 on the Sketch Details species list maintained by the Arizona editors for North American Birds (ABC 2017). The vast size of the lake and infrequency of visits, however, still mean that this is an underbirded area with considerable potential for many more rarities. In order to encourage more birders to enjoy this challenging and often exciting birding location, this article provides information about birding San Carlos Lake and how to access its 158 mi of shoreline (InterTribal Council 2017).

BACKGROUND

San Carlos Lake was created in 1930 when the Coolidge Dam was completed on the Gila River in the San Carlos Apache Nation (Figure 1). When full, the lake stretches 23 mi, with a maximum width of two miles and a maximum surface area of 19,500 acres, making it most of the time one of the largest lakes in the state (Figure 2). Because of drought and irrigation demands from farmers in the Coolidge and Florence areas, the water level drops low enough in some years to kill the lake’s fish. Since the dam was completed 87 years ago, the lake has been nearly empty at least 20 times, and has been full only 3 times (Leisure and Sports Review 2017). It is at its highest levels when above-average snowmelt flows in from the western New Mexico mountains of the Gila River drainage. Periodic drops in water level require restocking the lake with fish, but when water levels remain high for a few successive years, fish can grow very large. The lake then becomes a popular fishing location for largemouth bass, flathead catfish, and black crappie. The lake holds the state record for that last species (AZGFD 2013).
In addition to the Gila River, the San Carlos River empties into the lake from the north. The Apache town of San Carlos was located on the flats near the mouth of the San Carlos until the area was flooded by the lake. The town was relocated about a dozen miles to the north; with more than 4,000 residents, this is now the Nation’s largest town (Wikipedia 2017). When the water recedes, the ruins of stone buildings are a reminder of the town that once was there. On the bluff overlooking Old San Carlos, a memorial honors Geronimo and the Apache people. According to an inscription at the site, the two statues were completed in 2009 with funds raised from Apaches throughout the United States.

The elevation of San Carlos Lake is 2460 ft, and the biotic community surrounding it is Arizona Upland Sonoran Desertscreb (Brown 1980), with a typical flora comprising velvet mesquite (Prosopis velutina), creosote bush (Larrea tridentata), jojoba (Simmondsia chinensis), catclaw acacia (Acacia greggii), Mormon tea (Ephedra nevadensis), desert broom (Baccharis sarothroides), soaptree yucca (Yucca elata), banana yucca (Y. baccata), graythorn (Ziziphus obtusifolia), crucifixion thorn (Canotia holacantha), saguaro (Carnegiea gigantea), cholla (Cylindropuntia spp.), devil’s club cholla (Grusonia emoryi), fire barrel (Ferocactus acanthodes), compass barrel (F. wislizeni), prickly pear cactus (Opuntia spp.), hedgehog cactus (Echinocereus spp.), and golden flower agave (Agave chrysantha). Close to the lakeshore, tamarisk (Tamarix spp.), seep willow (Baccharis salicifolia), and, in a few spots, Fremont cottonwood (Populus fremontii) and Gooding willow (Salix gooddingii) can be found. In years with good blooms, the desert around the lake is ablaze with wildflowers. Throughout this habitat, many species of resident and migrant passerines have been reported.

The lake is wholly in the San Carlos Apache Nation, but it encompasses parts of three Arizona counties: Gila to the north, Graham to the east and southeast, and Pinal to the south.

**BIRDLIFE**

The most notable of the 221 species reported from the lake to date are American Golden-Plover, Pomarine Jaeger, Laughing Gull, Iceland Gull (Thayer’s), and Arctic Tern. A well-described American Golden-Plover has been confirmed once (Gila County, 9 May 2009); a second golden-plover in 2004 (Graham County) could not be identified to species. Neither report was submitted to or reviewed by the ABC.

The report of an immature Pomarine Jaeger photographed 14 November 2014 is still being considered by the ABC (2017). If accepted, this will be a first record for all three counties surrounding the lake. It will also be one of very few reports in the state away from the Colorado River area, where it is a casual late fall migrant.
Laughing Gull has been documented three times, twice in the spring (Pinal County 30 April 2004 and 15 May 2015) and once in the fall (Pinal and Graham counties 10 November 2013) (Figure 3).

The report of a single Arctic Tern 2 June 2010 in Graham County has been accepted by the ABC (2017).

The most recent rarity was an Iceland Gull (subspecies *thayerii*) reported 8 November 2017 in Pinal County. Acceptance by the ABC (2017) is pending (Figure 4).

Sketch-detail species reported from San Carlos Lake are Greater Scaup, Surf Scoter, White-winged Scoter, Horned Grebe, Whimbrel, Semipalmed Sandpiper, Short-billed Dowitcher, Red Phalarope, Herring Gull, Least Tern, Little Blue Heron, and Rough-legged Hawk.

The list of birds recorded at the lake (Appendix A) is drawn from eBird, Arizona Bird Committee reports, personal correspondence, and the archives of the AZ/NM listserv and its predecessor, listserv.arizona.edu/archives/birdwg05.

According to the Arizona Game and Fish Department, there are several Bald Eagle nests in the general vicinity of the lake (pers. comm. J. McCarty), and eagles are seen foraging on most visits year-round (Figure 5). Wintering and migrant Ospreys are expected from fall through spring, but have also been observed in midsummer. In some years, Great Blue Heron and cormorant rookeries have been reported near the lake. For most of the 2000s, Double-crested Cormorants were by far more numerous, but in the last five or six years, reports and numbers of Neotropic Cormorants have increased, corresponding to the general trend in the state. They have been observed nesting alongside Double-crested Cormorants in rookeries at the mouth of the San Carlos River. Double-crested Cormorants have nested at the lake since at least the 1960s (Monson and Phillips 1981).
One of the most notable features of the lake's birdlife is the large population of *Aechmophorus* grebes. Western and Clark's grebes usually number in the hundreds, and counts can exceed 1,000. Estimates tend to be conservative, as the vast size of the lake makes precise counts difficult; observers usually see only part of the lake's surface on any one visit.

The grebes are present year-round, with the highest numbers in winter; lowest numbers are recorded when receding water levels have led to significant fish kills. Typically, Western Grebes are found all across the lake, and they are usually the only *Aechmophorus* found in the deeper water at the west end near the dam. Clark's Grebes are generally found in the shallower water at the east end.

Surveys conducted from 1993 to 2001 for the Arizona Breeding Bird Atlas detected grebes at the lake, but found no evidence of breeding (Corman and Wise-Gervais 2005). Survey teams and other birders may have visited the lake when nesting wasn’t occurring, as breeding has been confirmed numerous times in the past dozen years. The first report was of two family groups of Western Grebe and two of Clark's Grebe on the south side of the lake 3 July 2005. Since then, downy young, including some on the backs of adults, have been reported between May and August in some years (Figure 6). Most noteworthy was the discovery of an estimated 100 nests of *Aechmophorus* grebes in shallow water among flooded tamarisk clumps 16 July 2015. At least 10 of the nests were positively identified as Clark's, although there were likely more. No young were observed, but adults were sitting on some nests, and active nest building was observed, with grebes carrying sticks to nests.

San Carlos Lake hosts one of the larger concentrations of American White Pelicans in the state. Although the number varies, some are present in every month. The highest number reported was 635 on 9 September 2016. The fluctuating population includes wandering nonbreeding birds and migrants. Brown Pelican is of annual occurrence, with observations in every month but March. The highest number observed thus far has been 12.

Large, sometimes massive numbers of waterfowl, including 22 duck species, 4 goose species, and Tundra Swan, winter at the lake or pass through in migration. Especially notable are reports of 3,000 Green-winged Teal and 1,200 Canvasbacks, both of which may be the highest concentrations recorded in Arizona for those species. Some 3,000 Northern Pintails is also one of the higher counts for the state. A high count of 240 Canada Geese is remarkable for this region. Up to 20 Mallards of the "Mexican" subspecies *diazi* have been reported.

Six species of terns and seven of gulls have also been reported from San Carlos Lake (Figure 7). The Arctic Tern in 2010 was only the sixth record for the state. High numbers of 15 Caspian Terns, 7 California Gulls, and 150 Ring-billed Gulls have been reported, and it is often a good place to view migrant Franklin's and Bonaparte's gulls during the proper season. The lake can also be an excellent place to view shorebirds, though viewing conditions vary greatly with the water level. Lower levels result in sandy spits, islands, and more rarely extensive mudflats, which attract a wide variety of shorebirds and waders. In addition to those previously mentioned, the list of “rare-but-regular” shorebirds observed includes both Sanderling and Black-bellied Plover. Conditions can be good during spring migration, but the best shorebirding is usually encountered from August to November.
The greatest diversity of species is reported in spring and fall, when there are many migrants passing through and the species and numbers present can change daily. Winter visits can also be rewarding, with an excellent chance for observing waterfowl and gulls. The six-week period 1 June-15 July, which for most species falls between the spring and fall migrations, hasn’t attracted many birders, but among the possibilities at this season are such lingering migrants or wanderers as Caspian Terns, Forster’s Terns, California Gulls, Canada Geese, and Brown Pelicans.

NEARBY AREAS

Several other nearby areas exist that can be checked for birds. Wastewater treatment ponds are located on the east side of Indian Route 3 (Coolidge Dam Road) 1.9 mi from Peridot. Noteworthy birds reported from here include Surf Scoter, Greater Scaup, Sora, Common Gallinule, Tropical Kingbird, and Eastern Kingbird. Immediately to the south of these ponds, irrigated hayfields often attract geese and Ferruginous Hawks in the winter. Migrant Swainson’s Hawks stop over here, and a pair of the species reported in early July 2017 suggests the possibility of local breeding.

In November 2013, the Arizona Field Ornithologists organized a single-day expedition of nine volunteers along an approximately four-mile stretch of the San Carlos River north and south of the lake. Among the 54 species recorded in this riparian strip, which is approximately 0.25 mi wide, were several that had not been reported around the lake, among them Barn Owl, Mountain Chickadee, Brown Creeper, and White-breasted Nuthatch (Jenness 2013). An expedition in late spring could reveal more about the breeding species of that corridor.

Another nearby location is Cottonwood Spring, about 0.2 mi. south of Indian Route 3 toward the east end of the lake in Graham County. This small cottonwood oasis attracts migrants including owls, orioles, tanagers, flycatchers, and, on one occasion, a Rose-breasted Grosbeak.

ACCESS TO THE LAKE

Coming from either the west or the east, San Carlos Lake can be reached from the town of Peridot, 20 mi east of Globe and 70 mi west of Safford on US 70 (Figure 8). From Peridot, take Indian Route 3 11.9 mi south to the Coolidge Dam. There is a good viewing spot overlooking the lake immediately above the dam. Western Grebes, cormorants, herons and egrets, Osprey, Bald Eagle, swifts, and swallows can be observed here. Canyon and Rock wrens are usually heard on the rocky cliffs that tower above the dam.

The road crosses the dam, and mergansers and Common Goldeneyes can often be spotted on the Gila River here in winter. Over the next 1.2 mi east of the dam, there are a half-dozen pull offs from which the lake can be viewed. Flocks of waterfowl and grebes may be present, and if the water level is low, there may be spits and islands with pelicans, geese, gulls, and terns.

After these viewpoints, paved Indian Route 3 proceeds away from the lake, but eight dirt roads going north offer access to the lake. The roads are numbered, but most of the signage is gone or illegible. Google Earth and tribal maps assign different names to these roads; wherever possible, the tribal names are used below. All of these roads can be rough in places, and though sedans are usually adequate, high-clearance vehicles are suggested.

The first road is 1.7 mi from the dam; it is not numbered. The second, Indian Route 571, is 2.9 mi from the dam, and is marked by an old and unreadable sign set in cement at its entrance. The next road, Indian Route 572, is 0.2 mi farther east and also has an old cement marker. Another 0.9 mi on is Indian Route 574, which is marked and has a sign reading “campsite.” Indian Route 576 is 4.9 mi east of the dam. Indian Route 577 is 5.0 mi from the dam.
The next road, Indian Route 578, is one of the most heavily used points of access to the lake; a sign here indicates that it goes to County Line Campground. This access, 5.6 mi from the dam, roughly follows the Pinal-Graham county line, and leads to an area that often has sandy spits and sometimes mudflats.

Farther east, there are three roads in Graham County, usually productive only when the water level is high. The first, 2.9 mi east of the County Line Campground road, is Indian Route 579, which goes 0.5 mi to a bluff that provides an excellent lookout north and east toward the mouth of the San Carlos River.

Indian Route 580, marked Quail Spring, is 3.7 mi from the County Line Campground road, and leads to a boat landing. Another 1.8 mi from the boat landing brings you to Corral Wire road.

The distance to the lake from all of these access roads varies from 0.5 to 1.6 mi. Most of them have several forks, and trial and error may be necessary to get to a good vantage point. When the water level is high, the eastern roads are best, but if the water is very low, the more western roads are worth a try.
On the north side of the lake, the best observation point is often the area around the San Carlos Memorial. To get there, go 2.8 mi from US 70 on Indian Route 3 to Indian Route 510, where a big sign points toward the San Carlos Memorial. Take Indian Route 510 toward the southeast. At the first fork, keep to the right on Indian Route 510. At the next two forks, keep to the left on Indian Route 513; there is signage that will point you to the Memorial, which is 5.2 mi from Indian Route 3, on a bluff overlooking the mouth of the San Carlos River with good views over a wide area. If the water level is right, the best birding in this area can be found by taking the road just before the Memorial down to the flats, where shorebirds, waders, terns, gulls, and pelicans often congregate. This can also be a good point for spotting raptors.

To reach other observation points on the north shore, go south from US 70 on Indian Route 3 about 7.5 mi to the southern loop of Indian Route 510, which is marked by huge signs pointing to several destinations.

Turn on to Indian Route 510 and follow it east. Four roads go south about 1.75 mi toward the lake. The first, 1.0 mi from Indian Route 3, is Indian Route 518. The next is Indian Route 516, 1.5 mi from Indian Route 3. At 3.3 mi from Indian Route 3, turn on to Indian Route 515, which goes to the lake.

At 5.0 mi from Indian Route 3, Indian Route 510 meets Indian Route 513. Take Indian Route 513 0.2 mi to the right to Indian Route 514. Following Indian Route 514 about 1 mi will take you to an area with blue ramadas over picnic tables and a couple of boat landings. This area offers a good lookout, and in years when the water is very low, the mudflats have had many shorebirds. Returning to Indian Route 513, follow it east to the San Carlos memorial.

About 8 mi from US 70 on Indian Route 3, there is a big sign pointing to Soda Canyon boat landing. In winter, this site has been good for resting gulls. Just a little farther on, there is an RV park with a convenience store. Inca Doves, American Robins, and Western Bluebirds have been spotted in this area.

The San Carlos Apache Nation welcomes visitors, but a recreational use permit must be purchased ($10 per day) to camp, picnic, hike, or drive onto back roads off the U. S. highways. Permits can be obtained at the San Carlos Recreation and Wildlife Center, on US 70 1.4 mi east of the turnoff to Indian Route 3; the opening hours are 8:00 AM to 4:30 PM weekdays and 8:00 AM to 12:00 PM Saturdays, but the Center is closed on Sundays. Early birds can purchase permits at two 24/7 stores on the east side of Globe: Circle K 1.25 mi. west of the intersection of US 70 and AZ 79, and Good to Go 2.3 mi west of the same intersection. Boats, including kayaks and canoes, are permitted on the lake, and some birders have kayaked to areas not accessible by land.

Hopefully, more birders will explore and enjoy this intriguing location to discover more of the unusual birds that surely pass through every year. We will be pleased if this article helps encourage further exploration.

ACKNOWLEDGMENTS

Special thanks to Keith Kamper, who has joined me on many trips to San Carlos Lake, looked over early drafts of the article, and provided many of the photos. Dave Stejskal and Rick Wright made many appreciated suggestions to the final draft. Thanks also to Ed Dunn for his reports from the lake, the use of a photo, and for looking over the final draft.
## LITERATURE CITED


## APPENDIX A

### 221 SPECIES REPORTED AT SAN CARLOS LAKE

* Review species
# Sketch Details Species
! Species Currently Under ABC Review

<table>
<thead>
<tr>
<th>Ross’s Goose</th>
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<th>Rock Pigeon</th>
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American Avocet
Black-bellied Plover
American Golden-Plover *
Snowy Plover
Semipalmated Plover
Killdeer
Whimbrel #
Long-billed Curlew
Marbled Godwit
Stilt Sandpiper
Sanderling
Dunlin
Baird’s Sandpiper
Least Sandpiper
Pectoral Sandpiper
Semipalmated Sandpiper #
Western Sandpiper
Short-billed Dowitcher #
Long-billed Dowitcher
Wilson’s Snipe
Wilson’s Phalarope
Spotted Sandpiper
Lesser Yellowlegs
Willet
Greater Yellowlegs
Wilson’s Phalarope
Red-necked Phalarope
Red Phalarope #
Pomarine Jaeger !
Bonaparte’s Gull
Laughing Gull *
Franklin’s Gull
Ring-billed Gull
California Gull
Herring Gull #
Iceland Gull (Thayer’s) !
Least Tern #
Caspian Tern
Black Tern
Common Tern
Arctic Tern *
Forster’s Tern
Common Loon
Neotropic Cormorant
Double-crested Cormorant
American White Pelican
Brown Pelican
Great Blue Heron
Great Egret
Snowy Egret
Little Blue Heron #
Cattle Egret
Green Heron
Black-crowned Night-Heron
White-faced Ibis
Turkey Vulture
Osprey
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper’s Hawk
Swainson’s Hawk
Zone-tailed Hawk
Red-tailed Hawk
Rough-legged Hawk #
Golden Eagle
Western Screech-Owl
Great Horned Owl
Belted Kingfisher
Gila Woodpecker
Red-naped Sapsucker
Ladder-backed Woodpecker
Northern Flicker
Gilded Flicker
American Kestrel
Merlin
Peregrine Falcon
Prairie Falcon
Olive-sided Flycatcher
Western Wood-Pewee
Willow Flycatcher
Hammond’s Flycatcher
Gray Flycatcher
Pacific-Slope Flycatcher
Black Phoebe
Say’s Phoebe
Vermilion Flycatcher
Ash-throated Flycatcher
Brown-crested Flycatcher
Cassin’s Kingbird
Western Kingbird
Loggerhead Shrike
Bell’s Vireo
Plumbeous Vireo
Warbling Vireo
Woodhouse’s Scrub-Jay
Common Raven
Horned Lark
Purple Martin
Tree Swallow
Violet-green Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow
Verdin
Bushtit
Rock Wren
Canyon Wren
House Wren
Marsh Wren
Bewick’s Wren
Cactus Wren
Blue-gray Gnatcatcher
Black-tailed Gnatcatcher
Ruby-crowned Kinglet
Western Bluebird
Mountain Bluebird
American Robin
Curve-billed Thrasher
Crissl Thrasher
Sage Thrasher
Northern Mockingbird
European Starling
Phainopepla
House Sparrow
American Pipit
House Finch
Pine Siskin
Lesser Goldfinch
Green-tailed Towhee
Rufous-crowned Sparrow
Canyon Towhee
Abert’s Towhee
Chipping Sparrow
Clay-colored Sparrow
Brewer’s Sparrow
Vesper Sparrow
Lark Sparrow
Black-throated Sparrow
Lark Bunting
Savannah Sparrow

Song Sparrow
Lincoln’s Sparrow
Swamp Sparrow
White-crowned Sparrow
Dark-eyed Junco
Yellow-breasted Chat
Yellow-headed Blackbird
Eastern Meadowlark
Western Meadowlark
Hooded Oriole
Bullock’s Oriole
Scott’s Oriole
Red-winged Blackbird
Bronzed Cowbird
Brown-headed Cowbird
Brewer’s Blackbird

Great-tailed Grackle
Orange-crowned Warbler
Lucy’s Warbler
Common Yellowthroat
Yellow Warbler
Yellow-rumped Warbler
Wilson’s Warbler
Summer Tanager
Western Tanager
Northern Cardinal
Black-headed Grosbeak
Blue Grosbeak
Lazuli Bunting
Indigo Bunting