



Marshall Lake

a shallow wetland/meadow with ducks, grebes and elk
(AWWE script by Diane Hope & Rose Houk, May 2014)

Arizona Watchable Wildlife Experience
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Rose Houk: Located 12 miles south of Flagstaff, Marshall Lake sits in a broad grassy meadow on the southwest side of Anderson Mesa in the Coconino National Forest. Along with an inspiring panorama of the San Francisco Peaks, it's a wonderful place to view wildlife. Although more of a shallow wetland or marshy meadow for much of the year, Marshall Lake is vital habitat for waterfowl. During spring migration you'll find many of the usual duck suspects, but there's more than a brief spring burst of them here. Whether the lake's wet or dry, in the forest and meadow there are cavity-nesting birds and wild turkey, as well as quite a few elk. Later in this guide we'll introduce you to a songster of the reed beds, help you tell a grebe from a duck at a glance ... and offer a variety of elk vocalizations and what they mean.

Even on the drive up to Marshall Lake, there's some cool wildlife to stop and see. As you turn off Lake Mary Road and start climbing Anderson Mesa on Forest Road 128, you're entering a National Audubon Society 'Globally Important Bird Area' or IBA. The presence of pinyon jays is the main reason for this designation, but they won't be obvious on a casual drive-by. You'll need to get out for a stroll or just stop in your vehicle and wait with the windows rolled down – you may hear the distinctive, quavering call of these jays floating on the breeze before you see them. Look for the birds foraging on the ground around trees – they specialize in harvesting pinyon pine seeds. In contrast to fellow members of the crow family, pinyon jays lack feathers at the base of the bill – an adaptation that allows them to probe deep into pitch-laden cones without fouling their feathers. The size of a large song bird, this jays is a dull blue all over with a large pointed bill. Once you've located one, chances are the rest of the flock won't be too far away.

Pinyon jays have a fascinating and complex social system. Living in flocks of more than a hundred birds, they forage for pinyon nuts, bury them at traditional cache sites, and raise their young – all as one big group enterprise. They have excellent spatial memories and can relocate their hidden caches months later, even when the stores are buried under snow. They feed on these secret stashes of nuts through the winter - and when they start breeding - which happens long before spring officially arrives - usually in early February. Once fledged from the nest, the young birds gather in noisy 'jay nurseries'. Studies have shown that parents returning to collect their brood can recognize their own offspring's calls from within the large raucous group of youngsters. Destruction of pinyon-juniper habitat, and large-scale beetle kills of pinyon pines, have led to a decline in pinyon jay numbers -- but a healthy

population remains here. Because of the tight coevolution of pinyon jays and pinyon pines, the seed planting by jays is essential to the trees' survival.

Open water season

RH: The mile-long dirt road out to Marshall Lake is closed in winter, but as soon as the snow melts and the road opens, head on out with good binoculars or a spotting scope. That's when there's enough open water to host a wide range of waterfowl, including coots, grebes, and lots of ducks. The ducks fall into two broad groups. Dabbling ducks feed by tipping forward to graze on underwater plants like pondweed and to glean insects from the mud. In profile their bodies tend to be long and blunt, with tails that ride high out of the water. Among the dabblers here will be good numbers of pintail ducks, northern shovelers, cinnamon and green-winged teal, and countless mallards. Take time to get a good look at a northern pintail. With an elegant, long-necked silhouette, it's easy to pick out, and a beautiful sight. In spring breeding plumage, the males have handsome chocolate-brown heads with white necks and long black feathers extending from the tail. Females have the same graceful form with tan faces.

In contrast, diving ducks typically have a more compact profile. They dive underwater to catch aquatic insects and small fish. Species at Marshall Lake may include redheads, buffleheads, and lesser scaup. There are grebes too, which spend even more time submerged. So if you see what looks like a small duck diving under the water a lot ... it's probably a grebe! An easy identification tip is to get a good look at the bill. A duck's bill is often flattened horizontally so it can be used like a shovel – but a grebe's bill is flattened vertically – to help it catch fish. Grebes loop their necks as they dive, and will go underwater to escape predators. It's rare to see them fly, except when they migrate, and then they fly at night. Although grebes may swim like diving ducks, instead of having webbed feet with connected toes, they have lobes on each toe that extend out sideways to form paddles. These differences put grebes in a family all their own.

You may see three different grebes at Marshall Lake. Pied-billed grebes are small, with 'chicken-like' bills. If you see a larger grebe with a long elegant neck, blackish-gray on top, white underneath with a bright red eye, that's a western grebe. Perhaps most striking of all is the eared grebe. It's an iridescent black with golden-russet ear tufts and flanks, slate gray neck, bright red eyes, and a thin dark bill. When the black crest feathers are raised, the profile of the head is a distinctive 'wedge' shape. Believe it or not – this species is the most abundant grebe in the world!

Dry season and neighboring forest habitat

RH: By late spring or early summer Marshall Lake has sometimes shrunk to a marshy wetland with just a few puddles and ponds. But there's still wildlife to find here – including one of the first New World birds ever cataloged– by the great naturalist Linnaeus in 1766. It's the common yellowthroat, a warbler that's widespread in swampy, reedy habitats. A broad, black face mask topped by a thin white line, with a bright yellow throat and chest, gives the male the air of a flamboyant bandit. The females are more discrete, browner in color and lacking the mask – but with a yellow blush at the

throat and under the tail. It can be fun to stalk these furtive birds as they skulk through the tangled vegetation at the edges of tall reeds and cattails as the lake dries out in late spring and early summer. Although they're shy to show themselves, yellowthroats are very vocal ... this distinctive chatter giving their location away. So with a bit of patient stalking you should get a close up, if fleeting, view. Another good place to bird here is among the trees on the ridge above the lake, where the Arizona Trail comes down from the top of Anderson Mesa. Because the forest here hasn't been logged, there are plenty of old and dead trees that support cavity-nesting birds. Look for white-breasted and pygmy nuthatches, mountain chickadees, bluebirds, and woodpeckers.

Signs of wild turkey and the sound of males gobbling have been reported from the vicinity of Marshall Lake. Your best chance of finding them here is south and east of the lake on the edge of Anderson Mesa. Turkeys prefer hillier habitat and typically choose night time roosts in the upper third of tall pine trees, next to ground that drops away so it's easy for them to fly off in the morning. Go in spring early morning or late evening, when males will be gobbling and searching for females. Young turkeys hatch around the first two weeks of June, and as the chicks grow, turkey families often band together into groups of several hens and their broods.

Elk calls

RH: During the warmer months, camping is popular around Marshall Lake. If you're out there on a summer evening, you should be able to hear elk from the comfort of your tent long after it's too dark to see them. Many people associate elk calls with the piercing screams of the bulls during the fall rut, or breeding season. But there's much more than bugling to hear. When not in rut, the bulls go off by themselves and a matriarch – one of the senior females, or cows, leads the herd. Elk cows, young calves, and yearlings are very social ... and vocal, animals – they stay in touch with each other with calls, chirps, and mews almost year round. These sounds are surprisingly high-pitched ... even whiney, for such a large and imposing mammal...

Another sound you may hear is an alarm bark – that's from the elk cows, especially when they have young but also during the hunting season. If they feel threatened – perhaps sensing the presence of a hunter – they'll issue a single sharp bark. In this recording, the time between this series of alarm barks, recorded on a still night with a beautiful echo, has been reduced to demonstrate the range of bark sounds you can expect to hear – typically single barks will be spaced several minutes apart. This call communicates the danger to the rest of the herd – which then runs off. A hunter knows he's lost his chance whenever that happens!

Bull elk hang out in bachelor groups for eight to ten months of the year. It's only during the fall breeding season that they get noticeably vocal - trying to assert their dominance in the male hierarchy. The wild bugling is mostly for bulls to communicate their dominance, in order to maintain ownership of a group of cows and ultimately pass along their genes. Bugles are varied, depending partly on whether the bull is young or old – they can sound like a donkey braying ... even a car alarm gone wild! They can be long and drawn out, guttural or high pitched...

Elk calls can be heard at any time from around sunset right through the middle of the night. Sometimes bull elk even bugle during the day in the middle of the fall rut, when hormones are running high. Always, it's one of nature's most electrifying sounds.

Outro

RH: For more elk, as well as deer and pronghorn viewing, visit Rogers Lake in summer through fall. And for another site with great waterfowl viewing and access all winter, take a trip to the Kachina Wetlands, a few miles south of Flagstaff. You'll find visitor information and audio guides to both these sites, and many others, on the AWE web site.