

SPECIES SPOTLIGHT: *by Felix Ratcliff*¹

Loggerhead Shrike (*Lanius ludovicianus*): *A Small Grassland Bird with a Big Appetite*

A fence lizard basks on a cozy sunbaked rock. A rare moment, when there's no need for alarm. No snakes, no kestrels in sight—just warm sunshine and the melodic voices of songbirds. Suddenly it is pinched, lifted from the rock, and skewered on a barbed-wire fence. In its shock, it barely notices the gray and black songbird flying away, uttering a metallic trill.

Loggerhead shrikes (*Lanius ludovicianus*) are among the more unusual songbirds to inhabit California's grasslands. Weighing only 50 grams — somewhere between a towhee and a blackbird — these voracious hunters do not content themselves with seeds and small invertebrates. The prey they hunt places them in a foraging guild with their larger cousins: Birds of prey (raptors). Their carnivorous diet mostly consists of large insects, but also includes a variety of small vertebrates: Lizards, rodents, and even other birds. Unlike hawks, falcons, and owls, these small songbirds did not inherit large, strong feet or talons to grasp and kill vertebrate prey on the spot. However, their bills are tipped with a sharp, decurved hook with a tomial "tooth" on either side (Yosef 1996, Sustaita and Rubega 2014), which allows them to sever the neck of small vertebrates (Yosef 1996, Cade and Atkinson 2002). Shrikes will also kill and store their prey by impaling them on sharp objects in their environment—cacti, agaves, plum trees, acacias, and yes... barbed wire. Noxious prey, such as the darkling beetle (see photos next page), is impaled for longer periods to allow the noxious exudate to dissipate before consumption (Yosef 1996).

Although not as abundant as some grassland birds, Loggerhead Shrikes are widespread throughout California grasslands and savannas and are year-round inhabitants of lowland areas across the state (Humple 2008). They require a mixture of open and shrubby vegetation for foraging and nesting, and can frequently be seen perched along fence lines (Yosef et al. 1996).

¹Felix Ratcliff is a postdoctoral researcher at the University of California, Berkeley, where he studies the effects of rangeland management practices on plants and animals in California. He first became interested in Loggerhead Shrikes in 2007 while walking miles of barbed wire fence line in eastern Contra Costa County and encountering a surprising diversity of shrike prey items.

Between 1966 and 2015 Loggerhead shrike populations fell by 76% across North America (Cornell Lab of Ornithology 2017), and they are declining in California at a rate of approximately 2% per year (Sauer et al. 2017). Major threats to shrikes are bio-accumulation of pesticides (Anderson and Duzan 1978), habitat loss to intensive agriculture or housing development (Humple 2008), habitat conversion in shrub-steppe due to cheatgrass (*Bromus tectorum*) invasion (Humple and Holmes 2006), and collisions with automobiles (Humple 2008). In California's Central Valley, shrikes prefer grasslands grazed by cattle (Pandolfino and Smith 2011), and grazed rangelands can be a good place to see these exceptional birds.

So the next time you're roaming the lowland Californian range, keep an ear out for a metallic trill, and watch for quick wing-beats and the telltale

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Inset: Loggerhead shrike. Photo: Zach Smith

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Loggerhead Shrikes hunt a variety of small vertebrates and large invertebrates; impaling prey on sharp objects. These photos of shrike prey were taken on barbed wire fences in eastern Contra Costa County, California. *Photos: Felix Ratcliff*

Loggerhead Shrike *continued*

black and white flicker of feathers that identify the shrike. Even if you don't see the bird, you might see the remnants of their last meal on a barbed-wire fence, a sharp stick, or a cactus spine.



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