KERN RED-WINGED BLACKBIRD (*Agelaius phoeniceus aciculatus*)

Terri Gallion, Southern Sierra Research Station, PO Box 1316, Weldon, CA 93283 (PO Box 335, Onyx, CA 93255); vulturewatcher@yahoo.com

Criteria Scores

Population Trend	Range Trend	Population Size	Range Size	Endemism	Population Concentration	Threats
5	0	10	10	10	0	15

Special Concern Priority

Not currently considered a Bird Species of Special Concern. No subspecies were included on the original list (Remsen 1978), and this subspecies was not included on the CDFG's (1992) list.

Breeding Bird Survey Statistics for California

Data inadequate for trend assessment (Sauer et al. 2000).

General Range and Abundance

The Kern red-winged blackbird is endemic to California. Its known breeding range is restricted to two mountain valleys of east central Kern County. They are resident in the Kern River Valley likely from Kernville to the California Fish and Game Canebrake Ecological Reserve and a small population probably exists in Walker Basin (Mallaird 1915b) (Grinnell 1944) (Gallion, 2001 unpubl. data). The highest density of nesting occurs in the South Fork Kern River Valley from the east end of Lake Isabella Reservoir to the CDFG's Canebrake Ecological Reserve. The Kern red-winged blackbird's wintering habits are uncertain. They are thought to winter near their breeding range Bent (1958). After nesting season, van Rossem (1926) stated that they depart their breeding grounds entirely and that the bulk of the individuals probably winter in the San Joaquin Valley. Supporting movement to the San Joaquin Valley in winter, one female Kern red-wing (30 December) and one male (14 April – not breeding) were taken at Buena Vista Lake (van Rossem 1926).

Several thousand red-winged blackbirds winter in the South Fork Kern River Valley (South Fork Valley Christmas Bird Count data, http://birdsource.tc.cornell.edu/cbcdata/). The numbers of Kern red-wings among those wintering is not known.

Seasonal Status in California

Occurs year round; breeding season extends from mid-April to June.

Historical Range and Abundance in California

Malliard (1915b) described the Kern red-winged blackbird as limited to a "few individuals" in Walker Basin and the remaining population in the Kern River Valley as "usually in small groups and colonies, and far from numerous". Grinnell and Miller (1944) described this subspecies as "Fairly common locally in summer". No qualitative estimates of historic abundance or population size exist.

Based on Malliard (1915a,b) and van Rossem (1926), the Kern red-winged blackbird historic nesting range was described in Grinnell and Miller (1944) as, "restricted area in the mountain valleys of east-central Kern County. Life-zone, Upper Sonoran. Altitudinal range, 2500 to 3400 feet." They were known from four or five miles east of Isabella, Weldon and Onyx, on the South Fork of the Kern River, Bodfish, and Walker Basin (Malliard 1915b).

Two winter records from Buena Vista Lake, Kern County (van Rossem, 1926).

Recent Range and Abundance in California

The current range of the Kern red-winged blackbird appears to be much the same as it was originally described except for some losses of nesting areas. Part of the historic nesting area, described by Malliard (1915b) as, "on the South Fork of the Kern River, some four or five miles above its junction with the North Fork " and again by Grinnell (1944) as "five miles east of Lake Isabella" has been lost. After 1954, Lake Isabella Reservoir inundated and destroyed several miles of riparian and wetland nesting areas for the Kern red-winged blackbird. The largest population still occurs in the South Fork Kern River Valley and may number as many as 500 individuals (T.

Gallion, pers. obs.). During a one-day visual survey in Walker Basin, June 2001, about 50 red-winged blackbirds were found (T. Gallion, pers. obs.). All were in breeding habitat and did appear to be this subspecies. A more thorough investigation is required to assure that the Kern red-winged blackbird still occurs in Walker Basin and, if so, to determine the population size.

The current nesting range might be most accurately described as the town of Lake Isabella and the wetlands along the South Fork Kern River from the east edge of Lake Isabella Reservoir to the Department of Fish and Game Canebrake Ecological Reserve about five miles east of the town of Onyx. Much of this is private land, but important nesting areas are protected on Audubon California's Kern River Preserve (Weldon) and CDFG Canebrake Ecological Reserve. There have been reports of red-winged blackbirds nesting near the town of Kernville on the northwest side of Lake Isabella Reservoir. These are likely, but not confirmed, to be Kern red-winged blackbirds. The probable Walker Basin population is scattered among a few man-made ponds and one natural marsh area. The largest nesting population occurs in a large marsh on the Rankin Ranch.

Ecological Requirements

The ecological requirements of the Kern red-winged blackbird are much the same as for other red-winged blackbirds. Kern red-winged blackbirds breed in fresh water cattail (*Typha* spp.) and tule (*Scirpus* spp.) marshes, marsh vegetation surrounding natural and man-made ponds, in marsh and willows in the draw down area at the east end of Lake Isabella Reservoir and in riparian forest bordering wetlands, irrigation ditches or wet pasture land (T. Gallion pers. obs.). Open desert and pasturelands are important foraging areas for Kern red-winged blackbirds.

The non-breeding diet of the red-winged blackbird is primarily plant matter, in general, consisting of wild seeds and waste or crop grains according to what is available to foraging birds. In the breeding season, the diet is primarily animal matter (insects) (Yasukawa, 1995).

Threats

The primary threats to the Kern red-winged blackbird are, habitat degradation and loss from residential development, lowered water table and exotic invasive plant species. The Kern red-winged blackbird is restricted to a very small range mainly in two mountain valleys with the greatest population occurring in the South Fork Kern Valley. Most of the breeding areas for this bird are in private ownership and are being affected by changing land use. Local ranches often burn the cattail marshes and weedy irrigation ditch edges to keep them clear and to stimulate new forage for horses and cattle. This burning occurs during the late spring when Kern red-winged blackbirds would be nesting. Hundreds of acres of land are being converted from pastures to carrot row crop farming. Sprinkle irrigation used for these crops is causing a drop in the water table that could have long-term effects on the health of wetlands along the South Fork Kern River. In addition, pesticide and herbicide runoff from these fields could have detrimental effects on the river and associated wetlands. The loss of open pasture lands to carrot row crops and the associated use of pesticides will limit forage and foraging areas for the Kern red-winged blackbird, especially during breeding season.

The population in the Kern River Valley is projected to double, from a current fifteen thousand to about thirty thousand people in coming years. This increase in residential growth and development will have effects on ground water levels, predation of nests, nestlings and adults by domestic cats (*Felis domestica*) and other pets, loss of foraging areas in surrounding desert and pasture lands and direct loss of wetlands.

The intrusion of salt cedar (*Tamarix* spp.) into the riparian and wetlands along the South Fork Kern River threatens the breeding habitat of the Kern red-winged blackbird. Expanding salt cedar populations would deteriorate the quality of the riparian forests for foraging and maintenance of water quality. In addition, salt cedar's exclusion of native riparian and marshland species could reduce or eliminate some current nesting grounds for this species. The integrity of the marshes and

wetlands along the South Fork Kern River are also threatened by the invasive exotic, purple loosestrife (*Lythrum salicaria*).

Management and Research Recommendations

Like other red-winged blackbird populations, the Kern red-winged blackbird is affected by changes in wetlands and surrounding agriculture and land use.

Specific management recommendations include:

- Purchase and protect more lands along the South Fork Kern River. Riparian forest and wetlands also need "buffers" of surrounding open land and pasture that are traditional, critical foraging areas for the Kern red-winged blackbird.
- Obtain cooperative and regulatory agreements with ranchers and other landholders limiting burning and maintenance activities in ditches and wetlands during the breeding season.
- A concentrated program to eliminate the known upstream seed source of purple loosestrife (*Lythrum salicaria*). Removal and control of purple loosestrife with the goal of eliminating it from the South Fork Kern River drainage.
- Removal and control of salt cedar (*Tamarix* spp.) in the South Fork Kern River drainage with the goal of eliminating it from the South Fork Kern River drainage.
- Ensure that future residential development plans consider impacts, direct or indirect, on nesting and foraging areas for the Kern red-winged blackbird.

Specific research recommendation include:

- Survey and establish the complete extent of the Kern red-winged blackbird's breeding and wintering range. Color banding would be effective for helping determine population demographics, site use within their range and could aid in documenting wintering areas.
- Determine more accurate population size and trends.
- Survey and map all Kern red-winged blackbird nesting areas.

- Determine the natural history perimeters for this subspecies.
- Implement studies to determine the impact of brown-headed cowbirds and nest predators on the nesting success of the Kern red-winged blackbird.
- Obtain recordings and create sonograms of the songs and calls of the Kern red-winged blackbird to analyze its potentially unique vocalizations.
- Encourage DNA and other basic research studies to determine the origins and uniqueness of this subspecies.

Monitoring Needs

The Breeding Bird Survey is inadequate for assessing the population or monitoring changes in the population for the Kern red-winged blackbird. Current MAPS banding stations do not provide enough data for monitoring the Kern red-winged blackbird. MAPS stations are located on both CA Audubon's Kern River Preserve and CDFG Canebrake Ecological Reserve; however, very few Kern red-winged blackbirds are mist-netted at these stations.

- Monitor nesting locations and habitat changes for the Kern red-winged blackbird.
- Monitor population size and trends with yearly surveys.
- Monitor the amount and effects of pesticide and other run-off pollutants.
- Groundwater monitoring.

Acknowledgments

This account benefited from assistance and review by Robert Barnes.

Literature Cited

Bent, A.C. 1958. Life Histories of North American Blackbirds, Orioles, Tanagers, and Allies. Smithsonian Institution United States National Museum. Bull. 211.

Grinnell, J. and Miller, A.H. 1944. The distribution of the birds of California. Pac. Coast Avifauna 27.

Mailliard, J. 1915a. The Kern redwing – Agelaius phoeniceus aciculatus. Condor, 17:12-15.

Mailliard, J. 1915b. Further remarks upon the Kern redwing. Condor, 17: 228-230.

Sauer, J. R., Hines, J. E., Thomas, I., Fallon, J., and Gough, G. 2000. The North American Breeding Bird Survey, results and analysis 1966-1999. Version 98.1, USGS Patuxent Wildl. Res. Ctr., Laurel MD (http://www.mbr-pwrc.usgs.gov/bbs/bbs.html).

van Rossem, A. J. 1926. The California races of Agelaius phoeniceus (Linnaeus). Condor, 28:215-230.

Yasukawa, K., Searcy W.A. 1995. Red-winged Blackbird (Agelaius phoeniceus).In The Birds of North America, No. 184 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologist's Union, Washington, D.C.