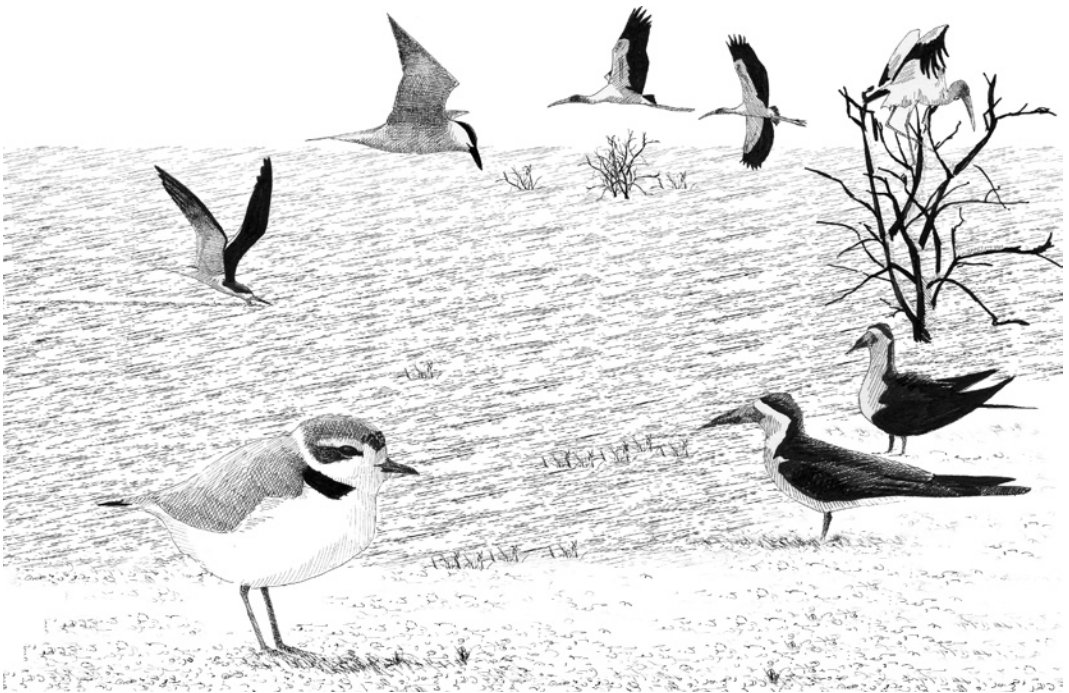


II

SPECIES ACCOUNTS



Andy Birch

PDF of Yellow Rail account from:

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YELLOW RAIL (*Coturnicops noveboracensis*)

JOHN STERLING

Criteria Scores

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

Range not mapped because so little information is available for both the historic and recent periods. Historic breeding records from Mono County (plus April records from Plumas County) and recent breeding-season records from Siskiyou and Modoc counties suggest the breeding range may have encompassed much of northeastern California. Winter records span the length of the coast, and formerly the northern San Joaquin Valley, but are mainly from the greater San Francisco Bay region (including recently Suisun Marsh).

SPECIAL CONCERN PRIORITY

Currently considered a Bird Species of Special Concern (breeding, wintering), priority 2. Included on the list since its inception (Remsen 1978, highest priority; CDFG 1992).

BREEDING BIRD SURVEY STATISTICS FOR CALIFORNIA

Data inadequate for trend assessment (Sauer et al. 2005).

GENERAL RANGE AND ABUNDANCE

Precise breeding and wintering ranges and relative abundances difficult to discern fully because of the species' secretive behavior within its marsh habitat (Bookhout 1995). Known contiguous breeding range extends very locally from the boreal zone near Great Slave Lake in the Northwest Territories east to James Bay and the Gaspé Peninsula of Quebec, and south through eastern Alberta and northeastern Montana, northern Wisconsin, northern Michigan, northern Maine, and (probably) Nova Scotia (AOU 1998). Isolated breeding populations in south-central Oregon were

rediscovered in 1982 and surveyed in 1988–1992 (Stern et al. 1993) and 1995–1998 (Popper and Stern 2000). Formerly bred as far south as northern Illinois, central Ohio, and eastern California, but apparently extirpated (AOU 1998), except in northern California, where recent observations suggest small, isolated breeding populations persist (see below). Winter range extends from coastal North Carolina to Florida and west along the Gulf of Mexico to the central coast of Texas (AOU 1998) and includes central California (CBRC 2007).

SEASONAL STATUS IN CALIFORNIA

The Yellow Rail occurs year round in California, but in two primary seasonal roles: currently as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region (Grinnell and Miller 1944; McCaskie et al. 1979; NAB 56:482, 57:541; CBRC 2007). The length of the breeding season is poorly known in California, but on the basis of information from Oregon it probably extends from May through early September (Popper and Stern 2000).

HISTORIC RANGE AND ABUNDANCE IN CALIFORNIA

The historic range and abundance of the Yellow Rail in California is incompletely known because of its highly secretive habits and the lack of observer coverage at many remote inland, and some coastal, locations with suitable habitat. The Yellow Rail was documented breeding in Mono County in Long Valley in 1922 and 1939 and in Bridgeport Valley in 1939 (Dawson 1923, McCaskie et al. 1979, CBRC 2007). April records in the late 19th century from Quincy, Plumas County (CBRC 2007), may indicate either birds at a former breeding site or passage of spring migrants through the northern Sierra Nevada. There is no information on this rail's former breeding numbers or the full extent of its range, primarily because of a lack of coverage of large areas in northeastern California with seemingly suitable habitat.

The greater number of wintering records along the coast indicates that this rail may have been more common there than in the interior of the state in summer. It seems likely that rails wintering on the coast came from the interior of the state, Oregon, and perhaps elsewhere outside of California. Nearly all of the 57 historical records, with the preponderance prior to 1917, were from coastal and bay marshes from Humboldt County south to Newport Bay, Orange County, more than half of those coming from the San Francisco Bay Area counties (CBRC 2007). Five November or December records from 1908 and 1915 from Merced County suggest that Yellow Rails formerly wintered in the San Joaquin Valley (CBRC 2007). Other inland winter records come from Shandon, San Luis Obispo County, on 9 October 1917 and near Corona, Riverside County, on 31 January 1914 (Garrett and Dunn 1981). Dates of records of birds wintering at tidal or freshwater marshes on the coast or the interior range from 2 October to 10 April (CBRC 2007).

RECENT RANGE AND ABUNDANCE IN CALIFORNIA

Yellow Rails continued to breed in Bridgeport Valley, at least, in 1949, 1950, and 1954 (WVZ egg set #'s 86,354, 86,355, 144,451, 167,458, and 167,459). A bird at Mono Lake County Park on 15 July 1985 (Gaines 1992, CBRC 2007) likely was a migrant or postbreeding disperser.

There are recent breeding season records that probably represent small breeding populations (CBRC 2007, references below). At Cowhead

Slough, northeast of Ft. Bidwell, Modoc County, there was one singing bird from 27 May to 24 June 2002 (NAB 56:482), one from 24 May to 28 June 2003 (NAB 57:541), and one on 3 June 2005 (H. T. Harvey & Associates 2005, NAB 59:650). Singing rails found near Mt. Shasta, Siskiyou County, were one to two from 15 to 25 July 2002 (NAB 56:482), two from 2 June to 29 July 2003 (NAB 57:541), one on 22 June 2004 (NAB 58:596), and two from 2 to 23 July 2005 (NAB 59:650).

Although the Yellow Rail is still considered extremely rare in California, recent records indicate that small numbers winter regularly in a few coastal marshes and the Suisun Marsh region, where the Central Valley merges with the San Francisco Bay estuary. There are, however, no recent records from Merced County or elsewhere in the heart of the Central Valley. At Tomales Bay, Marin County, there have been records of at least a dozen individuals, including one specimen (CAS #84063), since 1986. Other valid coastal records since 1970 are from the Smith River mouth, Del Norte County (30 Oct 1999; Humboldt State Univ. #8523); the Eel River mouth and Somoa, Humboldt County (2 Jan 1987, 7–17 Feb 1987); Alameda, Alameda County (12 Dec 1985); the Palo Alto Baylands, Santa Clara County (17 Jan 1988 and 12 Dec 1993); Harkins Slough, Santa Cruz County (dead rail photographed, 25 Oct 2003); Pt. Pinos, Monterey County (2 Oct–1 Nov 1970); Santa Barbara, Santa Barbara County (12 Nov 1996; SBMNH #6629); Manhattan Beach, Los Angeles County (20 Oct 1998; LACM #110747); and Santee, San Diego County (16 Dec 1998, SDNHM #50186; CBRC 2007). Two were captured during the trapping and marking of Ring-necked Pheasants (*Phasianus colchicus*) at Grizzly Island in the Suisun Marsh, Solano County, from 10 January to 12 February 2002 (Cole and McCaskie 2004), and singles were seen there on 11 and 17 December 2002 (NAB 57:253). Additional fall/winter records that have not yet been reviewed by the CBRC include one at Bolinas Lagoon, Marin County (15 Nov 1980; J. Evens pers. comm.); one at Corte Madera Marsh, Marin County (1–2 and 29–30 Dec 1982; J. Evens pers. comm.).

ECOLOGICAL REQUIREMENTS

Because of its secretive behavior in densely vegetated marshes, the life history of the Yellow Rail is poorly known. For breeding, Yellow Rails require sedge marshes/meadows with moist soil or shallow standing water (Bookhout 1995). In southern

Oregon, breeding Yellow Rails inhabit densely vegetated montane sedge meadows/marshes (*Carex* spp. and *Juncus* spp.) between 4150–5000 ft (1266–1524 m) in elevation (Stern et al. 1993, Popper and Stern 2000). These habitats are seasonally flooded with water at depths of 2–30 cm, have saturated and poorly drained soils, and are bordered by coniferous forests. Popper and Stern (2000) studied nest sites at one marsh in Oregon, where they found 34 nests. Made of sedges and rushes, each nest had a canopy of senescent (dead and rooted) vegetation and/or a dome of live vegetation woven over the nest cup, typically concealing it from view. Nests were placed an average of 5 cm above the ground, and water depth at active nests ranged from 0.5 to 5.0 cm. Cover in 1-m² plots surrounding nests averaged 49.7% senescent vegetation, 48.7% live vegetation, and 1.6% bare ground. Presence of senescent vegetation was considered an important requirement for nests. Yellow Rails raise one brood per year; however, females may renest if the first clutch fails (Bookhout 1995).

In winter, Yellow Rails inhabit wet meadows and coastal tidal marshes, but there are few data on their requirements at that season (Bookhout 1995).

Yellow Rails pick food from the ground, vegetation, and sometimes (3–4 cm) below the water's surface. Their diet consists of small snails, earthworms, insects, and other invertebrates, with seeds becoming an important component in fall and winter (Bookhout 1995).

Studies of factors limiting populations of the Yellow Rail are lacking, especially for the wintering grounds. There is a strong degree of annual variation in breeding-site occupancy that probably reflects variation in water depths; however, it is not known how this affects rail productivity (Bookhout 1995).

THREATS

Throughout its range, the loss of habitat is probably the greatest threat to populations of the Yellow Rail (Bookhout 1995). In southern Oregon, the primary threat has been the draining of occupied sedge marshes during the 1980s and early 1990s, rendering those locations unsuitable as rail habitat (Stern et al. 1993). It is not known if draining of sedge marshes has recently degraded occupied or suitable habitat in California. The effects of cattle grazing on breeding habitat are unclear: the recent breeding season site near Mt. Shasta has active cattle grazing, whereas the Cowhead Slough site is fenced to exclude cattle (J. Sterling pers.

obs.). Cattle grazing was not mentioned in the descriptions of occupied breeding sites in southern Oregon (Stern et al. 1993), but at least one site was described as ungrazed (Popper and Stern 2000). Overgrazing probably will increase the likelihood of eggs getting crushed by trampling from cattle and degrade habitat by removing vegetative cover.

In tidal marshes in winter, barriers to, or elimination of, high-tide refugia increase predation from herons and egrets, and potentially from raptors, the introduced Red Fox (*Vulpes fulva*), feral cats (*Felis catus*), and other mammals (J. Evens and R. Stallcup pers. comms.). Contaminants could threaten Yellow Rails directly through poisoning or indirectly by reducing prey availability, but these potential threats have yet to be studied (Bookhout 1995). In Louisiana, Yellow Rails have been killed by farm machinery during mowing and hay baling at wintering sites (Lowery 1974).

MANAGEMENT AND RESEARCH RECOMMENDATIONS

- Develop, fund, and implement new adaptive management plans to restore, enhance, improve protections for, or avoid loss of occupied and suitable unoccupied habitat.
- Evaluate current management practices on protected federal or state lands to determine whether they are adequate to maintain Yellow Rail habitat, including sufficient water levels and adequate cover throughout the breeding season and adequate cover (including access to high-tide refugia) during winter.
- Replace Yellow Rail habitat lost as a result of management, other activities, or natural events (e.g., large fires, extreme drought). Such compensatory restoration should be implemented before project impacts on habitat are incurred or after large-scale natural impacts have occurred.
- Avoid construction-related and other activities (such as mowing wet fields) that could disturb Yellow Rails at breeding or wintering sites.
- Conduct a survey of Yellow Rails in all potential breeding habitat in the northern interior of the state to estimate the size of the breeding population and to identify the areas of suitable habitat deserving protection and monitoring.
- Identify all known or potential wintering habitat along the coast and in Suisun Marsh to enable prioritization of areas deserving of protection and monitoring.

- Develop appropriate techniques for surveying and monitoring wintering populations of Yellow Rails.
- Investigate the effects of heron and egret predation on wintering Yellow Rails and, if effects are significant, then develop and implement an effective management plan to reduce these impacts to a tolerable level.
- Study the effects of cattle grazing and other land-use practices on this rail's breeding and winter habitats.

MONITORING NEEDS

All standard monitoring programs, such as the Breeding Bird Survey, Christmas Bird Counts, and the MAPS program, are inadequate for monitoring changes in the populations of Yellow Rails. Species-focused surveys are necessary to find and subsequently monitor the populations of this cryptic rail on a landscape scale. This species should be monitored annually throughout its known and historic breeding range in May and June following protocols developed for surveys in southern Oregon (Stern et al. 1993): broadcasting calls (tape playback or clicking stones to simulate the calls) from roads every 0.5 km in suitable habitat during evening and night hours. Any birds found during these surveys should be monitored throughout the breeding season and in subsequent years. If feasible, water levels and changes in land use that may affect rail productivity should be monitored in occupied habitat throughout the breeding season.

Wintering populations should be monitored annually at locations where Yellow Rails have been seen in recent years, especially at Tomales Bay and Grizzly Island. Extreme high tide surveys at Tomales Bay and pheasant surveys in fields at Grizzly Island have proven somewhat successful in detecting this species. It is unlikely, however, that the silent winter populations of this secretive species could be monitored effectively at key sites, let alone throughout the winter range, until appropriate techniques are developed.

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