

JOB PROGRESS REPORT

State: California

Project Number: W-65 R-2 Subproject Title: Nongame Wildlife Investigations

Job Number: III-12 Job Title: Bird Species of Special Concern Status Program

Period Covered: July 1, 1984 - June 30, 1985 Job Type: Survey and Inventory

SUMMARY:

Colorado River Riparian Species Status Survey

The Administrative Report covering field work done in 1983 was completed and published. As a result, a petition was drafted to list the Gila Woodpecker, Gilded Northern Flicker, Vermilion Flycatcher, Sonoran Yellow Warbler and Summer Tanager as Endangered and the Brown-crested Flycatcher, Yellow-breasted Chat and Northern Cardinal as Threatened in California. Changes in California's endangered species laws and uncertainties in their implementation caused the petitioning process to be delayed until 1986.

Willow Flycatcher

A cooperative study to determine the status of the breeding population of Willow Flycatchers (Empidonax traillii) was begun in 1984. Additional surveys were conducted in 1985. Due to the timing of the survey, findings for 1984 were not reported during the last report period.

Surveys were conducted by Nongame Wildlife staff and 25 cooperators which included U.S. Forest Service biologists, researchers, and birders. Information also was solicited through notices published in various newsletters and ornithological journals.

Of the 81 sites surveyed in 1984, 46 had one or more male Willow Flycatchers present. A total of 105 breeding territories were located on public and private land. Cattle grazing appears to be a significant habitat degradation problem throughout the range of this species. The Willow Flycatcher is being considered for listing as a state Threatened or Endangered species.

Bank Swallow, Black Swift and Purple Martin

Data on Bank Swallows (Riparia riparia), Black Swifts (Cypseloides niger) and Purple Martins (Progne subis) were obtained from responses to notices published in newsletters and ornithological journals. Some surveys for Bank Swallows were conducted during surveys for Swainson's Hawks (Buteo swainsoni).

BACKGROUND:

Colorado River Riparian Species Status Survey

The desert riparian habitat along the lower Colorado River has been altered and reduced dramatically over the last 100 years. The avifauna of this unique cottonwood-willow-mesquite riparian forest also changed. Early ornithologists (eg. Grinnell, 1914) documented changes in the bird life.

Recent studies (Gaines 1977, Remsen 1978, Serena 1981, Anderson and Ohmart) have shown that some species dependent on certain riparian habitat types may be facing extirpation. William C. Hunter, a field worker from Anderson and Ohmart's Arizona State University studies along the lower Colorado River, was hired in 1983 to study ten species of birds whose status were unknown in the area. Hunter drew on previous information gathered by Anderson and Ohmart's studies and added field surveys to verify the current status of the species in question. Hunter's final report took a year to draft and wasn't ready for publishing until December 1984. A preliminary report was made during W-65-R-1 under Job III-10.

Willow Flycatcher:

Historically, Willow Flycatchers nested across the entire length and breadth of California, virtually wherever suitable willow habitats occurred. In the last few decades, they have been eliminated from most lower elevation habitats. No recent breeding records are available from the Sacramento or San Joaquin Valleys, including areas of apparently excellent nesting habitat.

The elimination of habitat and nest parasitism by Brown-headed Cowbirds (Molothrus ater) are blamed for the reduction in numbers of Willow Flycatchers. Changes associated with agricultural development in the Central Valley have reduced suitable Willow Flycatcher habitat. Cowbird nest parasitism is believed to be most responsible for virtually eliminating nesting Willow Flycatchers from southern California. Recent records indicate that the species breeds locally in montane willow thickets in the north where cowbird pressure is presumably less severe. The Willow Flycatcher was added to the Department's list of Bird Species of Special Concern in 1978.

During spring and summer 1982, surveys of Willow Flycatchers (Empidonax traillii) were conducted on six National Forests, (Inyo, Sierra, Stanislaus, Tahoe, Plumas, Lassen), Yosemite National Park, and along the South Fork of the Kern River, in an effort to determine the breeding status in California. Seventy-two singing males or pairs were located: 2 in the Inyo; 12 in the Sierra; 39 in the Tahoe; 4 in the Plumas, 8 in the Lassen; 5 in Yosemite; and 2 along the Kern River. An additional 49 records of singing males were provided by independent observers including 25 along the South Fork of the Kern River, in Kern County.

During July 1983, Willow Flycatchers were surveyed at two meadows in or near the Tahoe National Forest. Perazzo Meadow, on National Forest land, was about 100 acres in size and contained excellent stands of Willow habitat, suitable for breeding Willow Flycatchers. Lacey Valley Meadow, on private lands, owned by Webber Lake Ranch and Resort, also was an excellent habitat for Willow Flycatchers. The U.S. Forest Service has considered adding the Willow Flycatcher to its list of sensitive species.

Bank Swallow

This species once bred locally throughout much of California's lowland areas. It is now absent as a breeding bird from southern California. Portions of the Sacramento River may represent a significant fraction of the state's breeding population. Channelization of rivers is the greatest threat to this species. Planned bank protection on the Sacramento River would destroy many active colonies and may have an impact of statewide importance.

Black Swift

The Black Swift is a local breeder in four regions of California; the central and southern Sierra; the coastal areas of San Mateo, Santa Cruz and Monterey counties; parts of montane Southern California; and isolated areas in the Cascade Range.

Due to the inaccessability of nest sites this species may appear invulnerable to most kinds of disturbances. Rock climbers may represent a threat in local situations and water diversions can change water flow patterns which control the number and suitability of nest sites.

OBJECTIVES:

1. Determine the current distribution and abundance of selected bird species of special concern in California.
2. Determine the essential and limiting aspects of the breeding habitats of these species.
3. Identify and quantify the physical and biological factors which may be affecting the continued existence of these species.
4. Make management recommendations to perpetuate viable populations.

PROCEDURES:

Willow Flycatcher

The Department and 25 cooperators from the U.S. Forest Service, other agencies, and the private sector were involved in surveys during June and July, 1984. The Department provided materials, methodology, and a tape of Willow Flycatcher calls to all cooperators. Once surveys were conducted by a

cooperator, all information was forwarded to the Department for compilation and analysis.

Several areas that cooperators visited were sites where Willow Flycatchers had been detected in 1982. However, many additional areas also were surveyed by cooperators.

Bank Swallow, Black Swift, and Purple Martin

Information on Bank Swallows was obtained while surveying portions of the Sacramento River for nesting Swainson's Hawks. Active colonies and potential habitat areas were recorded on the same maps used to locate Swainson's Hawk and other raptor territories and sightings.

Information on Bank Swallows, Black Swifts and Purple Martins was obtained through responses to announcements published in National Audubon Society Chapter Newsletters, and the Western Field Ornithologists journal, Western Birds. Announcements requested information on the recent breeding locales of the species in question. These data are to be filed in a microcomputer data base on breeding bird concentration locales. These data will be useful in planning more intensive survey work designed to determine the breeding status of certain species.

FINDINGS:

Colorado River Riparian Species Status Survey

Attached is the final report cited below:

Hunter, W. C. 1984. Status of Nine Species of Special Concern Along the Colorado River. Wildlife Mgmt. Branch Administrative Report No. 84-2. Calif. Dept. of Fish and Game. 63 pp.

A petition was drafted to list the Gila Woodpecker, Gilded Northern Flicker, Vermilion Flycatcher, Sonoran Yellow Warbler and Summer Tanager as Endangered and the Brown-crested Flycatcher, Yellow-breasted Chat, and Northern Cardinal as Threatened in California. Additional endangered species laws (AB 3270 and AB 3309) were passed in California in 1984 and were to go into effect by mid-1985. There were uncertainties as to how these regulations were to be implemented and no action was taken to forward the petition to the Fish and Game Commission during 1984-85.

Willow Flycatcher

Due to the timing of this survey no findings were reported last period under job number III-9. Results of the cooperative 1984 survey and the survey of additional sites in 1985 are reported here.

Surveys were conducted by Nongame Wildlife staff and 25 cooperators. Cooperators included U.S. Forest Service biologists and citizen volunteers. Information also was gathered through publication notices asking for sightings of breeding Willow Flycatchers.

A total of 81 sites were surveyed on public and private lands (Tables 1 and 2). Of the sites surveyed 46 had one or more male Willow Flycatcher responses to taped calls. The total number of responses was 105. Of the 16 major Study Areas surveyed, four areas emerged as key Willow Flycatcher breeding areas based on study results (Table 2). These areas are roughly evenly divided between public and private land.

The data were organized according to major geographic divisions and land ownership designations (Table 3). Although 14 National Forests were invited to participate in surveys and about 80% of those agreed to visit 2-3 sites, only 8 actually conducted searches for Willow Flycatchers (Table 1). The El Dorado N.F. was the only one to provide a significant level of survey effort (15 sites visited). One other significant survey was done at Camp Pendleton along the Santa Margarita River (U.S. Marine Corps base) (Table 2). Fifty-seven percent of all sites surveyed had a male Willow Flycatcher respond to a taped call. The subjective condition evaluation of all sites surveyed was fair to slightly better than fair.

Eighteen sites were surveyed in 1985 (Table 4). A total of 74 singing males were located for an average of 3.1 singing males per site. The average condition of the eighteen sites was 2.4 or "fair" to "good." Of the 18 sites, 8 had some cattle grazing influences. The average condition of the grazed sites was 2.9 or "fair." The average condition of the 10 ungrazed sites was 2.1 or "good." Grazed meadows had an average of 4.0 singing male Willow Flycatchers per site while ungrazed areas averaged 4.2 per site.

Bank Swallow

Surveys for Bank Swallows have been conducted incidental to other work since the species was identified as a bird species of special concern in California. Two colonies were located along the Sacramento River between Colusa and the Sacramento-San Joaquin Delta in 1984. In 1985 19 colonies were located along the Sacramento River between Red Bluff diversion dam and the Delta.

Black Swift

No surveys for Black Swift (*Cypseloides niger*) have been conducted by the Department thus far. However, some preliminary information on historic and recently active nest sites has been gathered via response to notices published in ornithological journals and from other sources. To date we have compiled information on 9 breeding sites statewide.

Purple Martin

No surveys for Purple Martin (Progne subis) have been conducted by the Department thus far. However, some sightings have been provided by researchers and birders who have responded to requests for information published in ornithological newsletters and journals. We have locational information on 27 breeding sites statewide.

ANALYSIS:

Colorado River Riparian Species Status Survey

The new endangered species laws didn't change the basis for the listing of new species. However, they did call for a formalizing of the listing procedure. A standard procedure should be established during 1985-86 and a new petition can be drafted at that time. It remains to be seen whether the Department has the resources to manage these species, even if they are listed by the Fish and Game Commission, as the current endangered species program already is understaffed and underfunded.

Willow Flycatcher

The concept of an interagency study appeared to be attractive at the onset, but it has turned out that less participation by U.S. Forest Service personnel could be guaranteed than was hoped for. The survey was regarded by the Department as one that could fit into existing work schedules without causing much disruption. However, since the survey had no firm commitment of time allotted to it, it often received a low priority when competing with other work (even last-minute, unexpected projects) Forest Service personnel were involved with.

On the other hand, cooperation by the private sector was excellent and even though results are incomplete, it appears in at least one instance that a vigorous survey effort was made and yielded much useful information.

Future surveys of this nature should be designed with adequate time dedicated and commitments made by formal agreement at the onset, rather than trying to fit the work into existing schedules. This may require a greater amount of pre-planning and long lead time to get agreements for cooperative research efforts.

Bank Swallow, Black Swift and Purple Martin

Field surveys especially designed for these species are needed to determine the breeding status in California. Due to threats to habitat, work on Bank Swallow has the first priority. Work on the other species will progress as funds become available. Meanwhile, information gathering from the ornithological and birding communities will continue.

RECOMMENDATIONS:

1. Preserve currently existing cottonwood-willow and mesquite riparian habitats through direct land purchase or conservation easements, particularly along the lower Colorado River.
2. Support large-scale (≥ 50 acres) habitat revegetation efforts needed to initiate the recovery of those endangered species requiring cottonwood-willow and mesquite habitats. Such revegetation efforts should be made with native plants and include artificial snags for cavity nesting species.
3. List the Gila Woodpecker, Gilded Northern Flicker, Vermilion Flycatcher, Sonoran Yellow Warbler and Summer Tanager as Endangered.
4. List the Brown-crested Flycatcher, Yellow-breasted Chat and Northern Cardinal as Threatened.
5. Work with the Bureau of Reclamation to investigate the effects of the 1983 high water flows along the lower Colorado River on critical habitat types and the avifauna associated with those habitats.
6. Continue monitoring Willow Flycatcher populations in order to determine the breeding status of this species in California.
7. Work with other agencies to reduce the adverse impact of grazing and erosion on willow stands in meadows on public land and to re-establish willow where it is absent in areas of otherwise suitable Willow Flycatcher habitat.
8. Continue research to determine the impact of nest parasitism by Brown-headed Cowbirds.
9. Monitor the development of hydroelectric projects with respect to their possible impact to areas of known or potential Willow Flycatcher habitat.
10. Analyze current data to determine if Willow Flycatcher populations are so reduced that they require special protection as a Threatened or Endangered species.
11. Initiate status surveys of Bank Swallows, Black Swifts, and Purple Martins.

Prepared by: Ronald W. Schlorff Approved by: Kent A. Smith
Ronald W. Schlorff
Wildlife Biologist

Kent A. Smith
Nongame Wildlife Coordinator

Approved by: W. E. Granfree
for Eldridge G. Hunt, Chief
Wildlife Management Branch
California Department of
Fish and Game

Date: 3-13-86

Table 1. 1984 Willow Flycatcher Survey - All Sites Visited

<u>Forest or Area</u>	<u>County</u>	<u>Site Name</u>	<u>No. of Male WF</u>	<u>Livestock Grazing</u>	<u>Habitat^{1/} Condition</u>
El Dorado NF	El Dorado	19-18	0	Cattle	4
El Dorado NF	El Dorado	19-20	0	Cattle	4
El Dorado NF	El Dorado	19-21	0	Cattle	5
El Dorado NF	El Dorado	19-15	0	Cattle	5
El Dorado NF	El Dorado	19-16	0	Cattle	4
El Dorado NF	El Dorado	19-12	1 poss.	Cattle	2
El Dorado NF	El Dorado	19-17	1	Cattle	3
El Dorado NF	El Dorado	29-54	0	No	4
El Dorado NF	El Dorado	29-56	1	Cattle	3
El Dorado NF	El Dorado	29-57	0	No	4
El Dorado NF	El Dorado	29-59	0	No	4
El Dorado NF	El Dorado	29-72	0	No	4
El Dorado NF	El Dorado	29-50	0	No	4
El Dorado NF	El Dorado	29-58	0	No	4
El Dorado NF	El Dorado	29-67	0	Cattle	4
Sierra NF/PVT	Fresno	Bear (Byles (Jamison)	0	Cattle	3
Sierra NF/PVT	Fresno	Steven Ck @ Shaver Dam	0	No	3
Sierra NF/PVT	Fresno	Poison	3	Cattle	2
Sierra NF/PVT	Fresno	Markwood	0	Cattle	3
Sierra NF/PVT	Fresno	Lost	0	Cattle	3
Sierra NF/PVT	Fresno	Long	6	Cattle	2
Sierra NF/PVT	Fresno	Dinkey	4	No	2
Sierra NF/PVT	Fresno	Lily Pad	1	No	2
Sierra NF/PVT	Fresno	Summit Ck #1	3	Cattle	2
Sierra NF/PVT	Fresno	Summit Ck #2 (Pollard Camp)	2	Cattle	2
Sierra NF/PVT	Fresno	Unnamed (Brad's)	0	Cattle	3
Sierra NF/PVT	Fresno	Exchequer	0	Cattle	3
Sierra NF/PVT	Fresno	Glen Meadow Ck (Riparian)	0	Cattle	3
Sierra NF/PVT	Fresno	Stevenson & Mark- wood Ck con- fluence	1 poss.	Cattle	3
Sierra NF/PVT	Fresno	Sulfer Ck	0	No	3
Sierra NF/PVT	Fresno	Swanson	1 poss.	Cattle	3
Sierra NF	Fresno	Hoffman	0	Cattle	3
Nature Conservancy	Kern	S.F. Kern River (Slough Channel)	4	No	1
Nature Conservancy	Kern	S.F. Kern River	7	No	1
Nature Conservancy	Kern	S.F. Kern River (Sprague Meadow)	1	No	2
Nature Conservancy	Kern	S.F. Kern River (Prince Pond)	10	No	1

Table 1. 1984 Willow Flycatcher Survey - All Sites Visited (continued)

<u>Forest or Area</u>	<u>County</u>	<u>Site Name</u>	<u>No. of Male WF</u>	<u>Livestock Grazing</u>	<u>Habitat^{1/} Condition</u>
Nature Conservancy	Kern	S.F. Kern River (Nature Trail) (Main Channel)	1	No	2
Lassen NF	Lassen	Blue Lake Ranch	1	Cattle	3
Lassen NF	Lassen	Susan River Hwy. A-21 & Siher Lk.	0	No	3
Lassen NF	Lassen	Duck Lake	0	Cattle	4
Inyo NF	Madera	Minaret Falls	0	No	3
Inyo NF	Madera	Agnew	0	No	3
Inyo NF	Mono	Lower Laurel (Shewin Ck)	0	Cattle	3
Inyo NF	Mono	Rush Ck. So. of Silver Lk.	0	No	3
Inyo NF	Mono	Big Bend Mdw (Lee Vining Ck)	0	Sheep	4
Inyo NF	Mono	Parker Ck = Rush Ck, N. Br.	0	Sheep	4
Inyo NF	Mono	Dexter Ck, E. of Crooked Mdws.	0	Cattle	4
Tahoe NF	Nevada	Sagehen Ck	2 poss.	No	3
Tahoe/PVT	Nevada	Sagehen Ck	0	No	3
Tahoe/PVT	Sierra	Lacey Valley	10	Sheep	2
Tahoe/PVT	Sierra	Perazzo Mdw	12	Cattle	2
Tahoe/PVT	Sierra	Webber Lk (pgnd.)	2?	No	3
Tahoe/PVT	Sierra	Little Truckee R. II	2 poss.	No	3
Shasta-Trinity	Trinity	Union Creek	0	No	3
Sequoia	Tulare	Quaking Aspen	0	No	3
Sequoia	Tulare	Holby	0	No	4
Anza-Borrego	San Diego	Coyote Creek	2	No	3
Modoc NF	Modoc	Blue Lake Ranch	0	Cattle	3
Pt. Arena	Mendocino	Garcia R. w/Hwy 1	1	No	3
Camp Pendleton (15 sites)	San Diego	Santa Margarita R.	16	No	1
Kings Canyon NP	Tulare	Big Stump Mdw	1+	No	2
Kings Canyon NP	Tulare	Grant Grove Mdw	1+	No	2
Kings Canyon NP	Fresno	Cedar Grove	1	No	2
Kings Canyon NP	Fresno	Hotel Creek	1	No	2
Sequoia NP	Tulare	Bearpaw Mdw	1	No	2
Tehachapi Mtn. Pk.	Kern	Lower Entrance	3	No	2
Carlsbad	San Diego	Buena Vista Ck	2	No	3

^{1/} Habitat Condition Rating: 1=Excellent, 2=Good, 3=Fair, 4=Poor, 5=Unsuitable

Table 2. Key Willow Flycatcher Breeding Areas

<u>Study Area</u>	<u>Landowner</u>	<u>No. Male WF</u>	<u>% of Total Sightings</u>
Kern River Preserve	Nature Conservancy	23	22
Santa Margarita River	U.S. Marine Corps	16	15
Perazzo Meadow	U.S. Forest Service	12	11
Lacey Valley	Webber Lake Resort	10	10
	Totals	61	58

Table 3. 1984 Willow Flycatcher Survey Study Areas

<u>Study Area</u>	<u>No. Sites Surveyed</u>	<u>No. w/WF (%)</u>	<u>Total Male WF</u>	<u>Average^{1/} Habitat Condition</u>	
El Dorado NF	15	3	20	3	3.9
Sierra NF/PVT	17	8	47	21	2.6
So. Fk. Kern (TNC, PVT.)	5	5	100	23	1.2
Lassen NF	3	1	33	1	3.3
Inyo NF	7	0	0	0	3.4
Tahoe NF/PVT	6	5	83	28	2.7
Shasta-Trinity NF	1	0	0	0	3.0
Sequoia NF	2	0	0	0	3.0
Anza-Borrego St. Park	1	1	100	2	?
Modoc NF	1	0	0	0	?
Garcia R./Hwy. 1	1	1	100	1	3.0
Santa Margarita R.	15	15	100	16	2.0
King Cyn. N.P.	4	4	100	4+	2.0
Sequoia N.P.	1	1	100	1	2.0
Tehachapi Mtn. Park	1	1	100	3	2.0
Buena Vista Ck (San Diego Co.)	1	1	100	2	3.0
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Totals	81	46	57	105+	2.7

^{1/} Habitat Condition Rating: 1=Excellent, 2=Good, 3=Fair, 4=Poor, 5=Unsuitable