A PETITION TO THE STATE OF CALIFORNIA FISH AND GAME COMMISSION

for action pursuant to section 670.1, Title 14, California Administrative Code, and sections 2072 and 2072.3 of the Fish and Game Code, relating to listing and delisting endangered and threatened species of plants and animals.

I. SPECIES BEING PETITIONED:

Canmon Name: Gilded Northern Flicker

Scientific Name: Colaptes auratus chrysoides

II. RECOMMENDED ACTION :

(Check the appropriate categories.)

Endangered: X List: X
Threatened: _____ Delist: _____

III. SUMMARY OF REASONS FOR RECOMMENDED ACTION:

(Provide a brief statement on why the action is being recommended. This should include an account of the status of the species involved and any factors listed in Section 670.1, Title 14, California Administrative Code, that threaten its survival. If the species is being recommended for delisting, tell why any one or a combination of the aforementioned factors no longer threaten its existence.)

In California, the Gilded Northern Flicker *(Colaptes auratus chrysoides)* is a permanent resident of mature cottonwood-willow riparian forests and Saguaros of the Sonoran desert area (the low desert area of southeastern California). The lower Colorado River historically has provided almost all of this habitat type in California. Here, the Gilded Northern Flicker was regarded as common, especially around Laguna Dam where Saguaros occurred. A small population also existed in the Joshua Tree woodland of Cima Dome in San Bernardino County. In recent years the species has undergone a drastic population decline attributable to the massive loss of mature riparian habitat and Saguaros in the Colorado River valley, and compounded by genetic swamping from hybridization with the Red-shafted Flicker *(Colaptes auratus cafer)* at Cima Dome. Due to this decline, the Gilded Northern Flicker was included on the California Department of Fish and Game's Bird Species of Special Concern List (Remsen 1978). In two recent surveys of bird populations and riparian habitat use along the Colorado River, Hunter (1984) estimated that there are no more than 40 Gilded Northern Flickers left in California and Laymon and Halterman (1986) did not see or hear any. Remsen (1978) estimates that the Cima Dome population is now down to one or two pairs. The continued existence of this species in California is seriously threatened primarily by further reduction of mature riparian habitat along the lower Colorado River due to water development projects and recent severe and prolonged flooding, and secondarily by genetic swamping from hybridization with the Red-shafted Flicker at Cima Dome.

The Gilded Northern Flicker is a native species in serious danger of becoming extirpated throughout all, or a significant portion, of its range in California, primarily due to loss of habitat, and should be classified as endangered pursuant to Section 2062 of the California Fish and Game Code.

SUPPORTING INFORMATION

IV. NATURE AND DEGREE OF THREAT:

> (Discuss types of direct or indirect threat to each population, significant portion of range or habitat. Indicate immediacy of threat and magnitude of loss or rate of decline expected without protective measures.>

In California, Gilded Northern Flickers are residents of the mature cottonwood-willow riparian forests along the lower Colorado River. In this area the most serious problem facing the species is the loss of old-growth riparian cottonwood-willow forests (Hunter 1984).

Hunter (1984) reported that in almost all historical accounts the lower Colorado River was described as being bordered by large forests of cottonwood *(Populus fremontii)* and willow *(Salix goodingii)* with intermittent riparian forests of honey mesquite *(Prosopis glandulosa).* The flow of the river was calm in the winter, but during late spring and early summer snow melt from the Rocky Mountains caused dramatically increased flows for a short duration (two weeks to a month). Although these flows often scoured areas and destroyed large tracts of forest, they also prepared seedbeds for future willow and cottonwood generation.

The quantity of cottonwood-dominated forest along the lower Colorado River has decreased from at least 5,000 acres in the 1600's to 500 acres by 1977 (Ohmart, Deason and Burke 1977), and to less than 200 acres in 1982 (Hunter 1984). Further damage to riparian habitat continues to occur. Reductions in the quantity and quality of native riparian forests were due to logging for fuel in the 1800's, clearing for agriculture in the early 1900's, and water development and flood control projects. During the last three years there has been extensive!, prolonged flooding along the lower Colorado River, causing further reduction in the remaining mature cottonwood-willow riparian forests.

The remaining habitat is vastly different from the original cottonwood-willow forest. The change in water flow patterns due to the construction of dams has favored the establishment of the exotic salt cedar *(Tamarix* sp.). This species is much better adapted to the new water flow regime than is cottonwood and it now dominates most riparian areas. However, salt cedar does not support many species of native fauna and is not used by the Gilded Northern Flicker. Alteration of river flow patterns also resulted in permanent flooding of former cottonwood and willow seedbeds. Flow pattern changes combined with salt cedar intrusion have prevented regeneration of naturally occurring cottonwood-willow and mesquite riparian forests.

Gilded Northern Flickers historically occurred and were especially abundant in the belt of Saguaros that existed within six miles of Laguna Dam on the

California side of the river (Grinnell 1914). The loss of the Saguaro habitat has contributed to the decline of the Gilded Northern Flicker population in California (Hunter 1984). The population in the Joshua Tree woodland at Cima Dome always was considered small and very peripheral (Grinnell and Miller 1944). Although overgrazing may have contributed somewhat to their decline, Remsen (1978) believes that the current threat in that locality is hybridization with invading Red-shafted Flickers. Competition with European Starlings for nest sites also could be a possible factor but the extent of this problem is unknown (Remsen 1978, Hunter 1984).

The Gilded Northern Flicker reaches the northern and western limits of its geographical range along the lower Colorado River and the loss of both riparian woodlands and Saguaros on the California side of the river has resulted in the serious decline of this population (Remsen 1978, Hunter 1984). The problem of declining habitat for Gilded Northern Flickers is critical since prolonged flooding in the early 1980's likely has degraded most of the remaining cottonwood-willow riparian forest. Prompt action is needed to reestablish these habitats before Gilded Northern Flickers disappear completely from the lower Colorado River valley and no longer occur in the State of California.

V. HISTORIC AND CURRENT DISTRIBUTION:

> (Historic- Indicate historical range by county and physiographic description and number of historical sites of species occurrence. Attach California range map.)
>
> (Current- Describe number and quality of known extant populations and assess potential for introduction to historical sites. detailed maps (15' scale topographic) of extant occurrences.)

The Gilded Northern Flicker has been described as occurring in California along the Colorado River valley and in the Joshua Tree woodland at Cima Dome (Figure 1) (Grinnell 1914, Grinnell and Miller 1944, American Ornithologists' Union 1957 and 1983, Remsen 1978, Hunter 1984). These areas include southeastern San Bernardino County, and the eastern edges of Riverside and Imperial counties in California.

Currently, the Gilded Northern Flicker only occurs in scattered locations along the California side of the Colorado River. Several sitings were made north of Blythe in the most recent survey conducted along the Colorado River valley by Hunter (1984) (Figure 2). However, Laymon and Halterman (1986) did not find any along the entire length of the Colorado River. More precise locations of the birds observed in Hunter's survey are shown on Attachments "A" through "C" (USGS 7.5' quadrangle maps)- **NOT INCLUDED IN PDF FORMAT**

The near-term prognosis for introducing Gilded Northern Flickers into historical sites is poor. The major reason for their decline is massive destruction of native riparian habitat, and large-scale, long-term revegetation projects would have to occur in the Colorado River valley before reintroductions of Gilded Northern Flickers can be considered. The existing population in areas outside the state may be able to naturally expand into these areas as they are developed and slowly become suitable, making special introduction projects unnecessary.

GILDED NORTHERN FLICKER

Historic Distribution in California

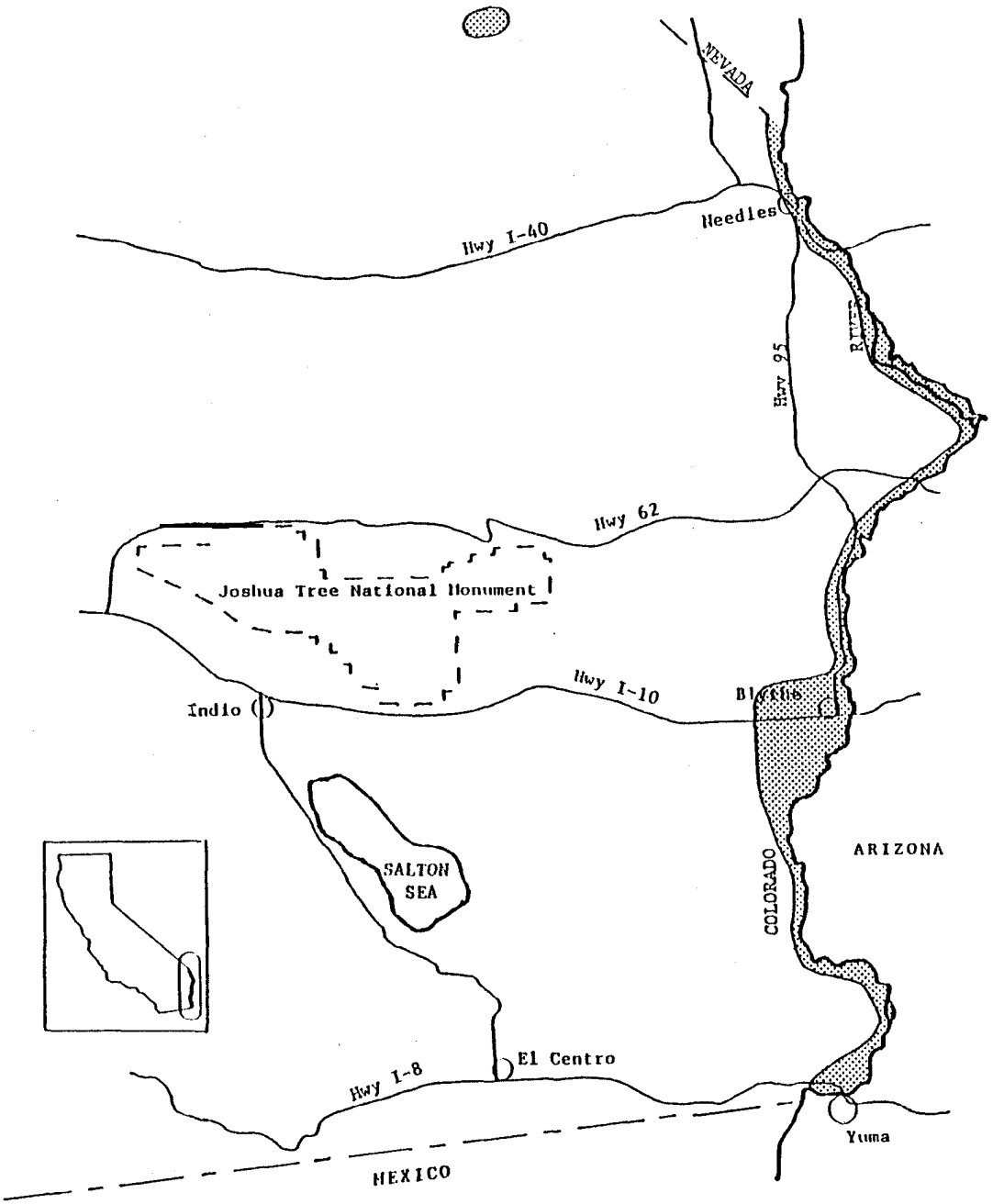

FIGURE 1. Historic Distribution of the Gilded Northern Flicker (Colaptes auratus chrysoides) in California; as described by Grinnell 1914, Grinnell and Miller 1944, and AOU 1957 and 1983.

= historic distribution

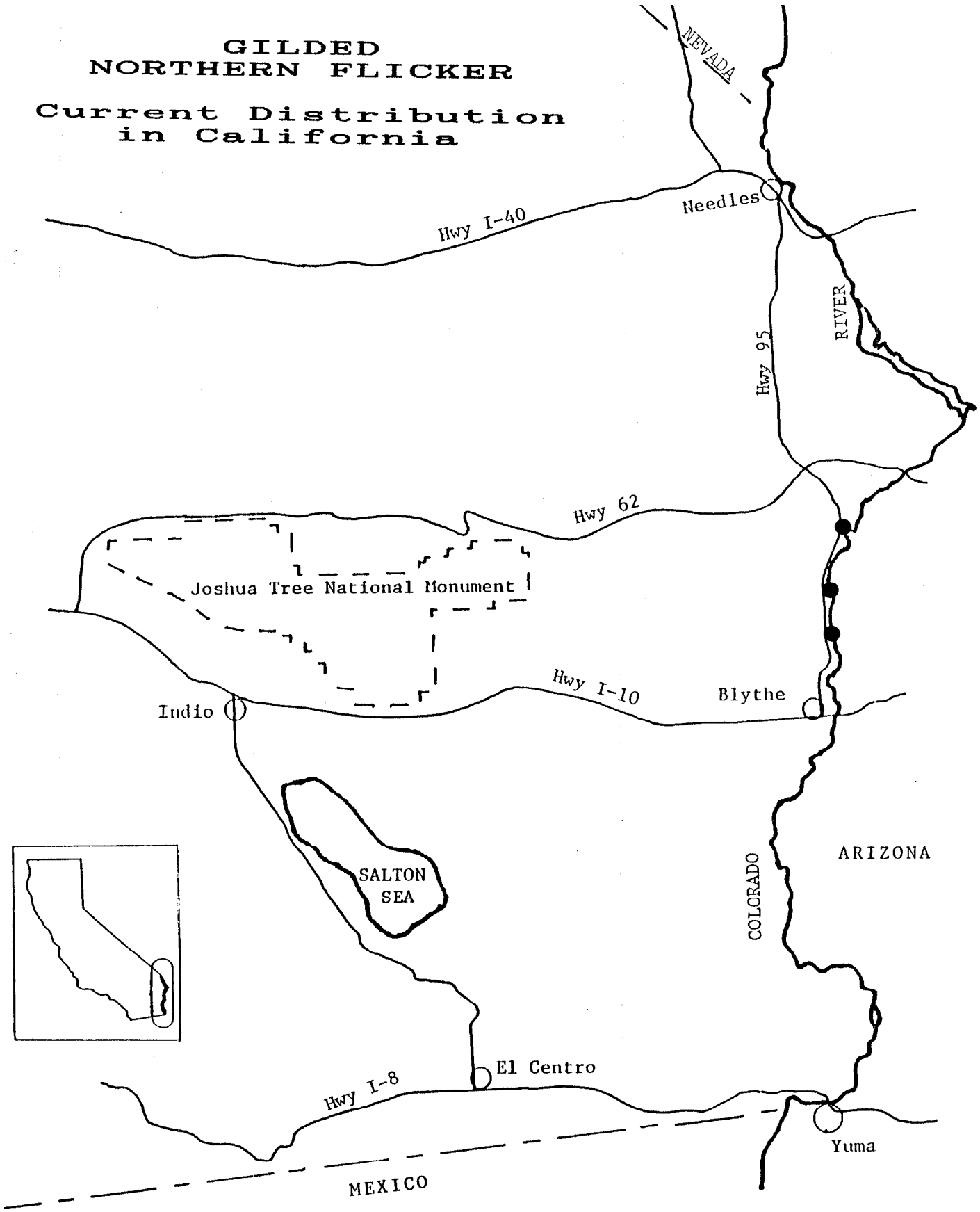

FIGURE 2. Current Distribution of the Gilded Northern Flicker in California; after Hunter 1984, and Laymon and Halterman 1986. (See Attachments "A" through "C" for exact locations.)

• = 1984-86 sitings

VI. HISTORIC AND CURRENT ABUNDANCE:

(Provide historic and current population numbers, densities, vigor, sex and age structures and explanation of population fluctuations relative to natural events or threats.)

Historically, the Gilded Northern Flicker was considered to be fairly common locally along the Colorado River, especially in areas where Saguaros occurred (Grinnell 1914, Bent 1939, Grinnell and Miller 1944, Remsen 1978). The peripheral population at Cima Dome probably was always small. Hunter (1984) points out that since historical accounts rarely separated the Red-shafted subspecies from the Gilded subspecies it is difficult to judge actual historical abundance. He feels that Gilded Northern Flickers should be considered uncommon residents throughout the Colorado River valley that were associated primarily with Saguaros and secondarily with cottonwood forests.

Serena (1981) conducted a survey along the Colorado River during the summers of 1976 and 1977. She felt that her calculated number of 283 Gilded Northern Flickers breeding on both sides of the river was an overestimate since it falsely assumed that birds occupied all available habitat from Nevada to Mexico. Although this may have been true north of Blythe, it definitely was not true south of Blythe. Her estimate was adjusted to approximately 50 to 55 breeding pairs on both sides of the river, with probably no more than ten pairs breeding on the California side.

Hunter (1984) conducted an extensive survey along the Colorado River and estimated that approximately 53 Gilded Northern Flickers could occur in existing riparian habitat along the California side of the river, but felt that the actual number was no more than 40 individuals. Laymon and Halterman (1986) did not see or hear any Gilded Northern Flickers during their survey along the entire length of the Colorado River. Remsen (1978) pointed out that Gilded Northern Flickers are rarely reported along the Colorado River and he feels that they may have vanished as a breeding bird. He adds that the peripheral population at Cima Dome now consists of only one or two pairs.

VII. SPECIES DESCRIPTION AND BIOLOGY:

(Include applicable information on species identification, seasonal activity or phenology, reproductive biology, mortality/natality, longevity, growth rate, food habits and use of habitat.)

The Gilded Northern Flicker is a large primary cavity nester that is now a very rare resident of the mature cottonwood-willow riparian forests that border the Colorado River. It becomes locally common in the Saguaro belt outside of California in the southwestern desert regions.

Gilded Northern Flickers are approximately 12½ inches long with a brown barred back, white rump, yellow wing and tail-linings, brown crown, grey cheek and throat, and spotted underparts with a black crescent bib. (Peterson 1961, National Geographic Society 1983). Males have a red whisker stripe, which females lack. Juveniles are similar to adults in coloration but are generally duller, grayer, and less distinct (Bent 1939).

Gilded Northern Flickers are non-migratory residents along the Colorado River. During winter their range overlaps with Red-shafted Flickers as the latter migrate into the area for the season. In spring Red-shafted Flickers migrate out of the area, leaving Gilded Northern Flickers to breed without danger of interbreeding. The range of the Gilded Northern Flicker extends from southeastern California, northeastern Baja California and central Arizona south to Sonora and northern Sinaloa (American Ornithologists' Union 1957, 1983. Along the Colorado River, Gilded Northern Flickers nest in cottonwood and willow snags, whereas in other portions of their range they nest in Saguaros (Grinnell 1914, Gilman 1915, Bent 1939). In the Cima Dome area they nest in Joshua Trees (Grinnell and Miller 1944, Remsen 1978). Throughout their breeding range nest sites are primarily in Saguaros and secondarily in cottonwood and willow (Gilman 1915, Hunter 1984). Along the Colorado River Grinnell (1914) saw two pairs nesting in dead cottonwood stumps in a flooded area of the riverbottom. Since this species is morphologically well adapted for excavation in softwood rather than hardwood snags, they are restricted to using cottonwood and willow snags (and Saguaros) for nest cavities (Brush, Anderson and Ohmart 1983).

Usually nests in cottonwood and willow are placed 5 to 25 feet up the tree and those in Saguaros are placed 11 to 25 feet from the ground (Gilman 1915). The entrance to the nest hole ranges from 2¾ to 4¾ inches in diameter and the depth of the cavity ranges from 5½ to 24 inches. The inside of the cavity is not circular, varying from 4 to 7 inches in either direction. Generally the shallower holes tend to have the smallest openings and the deeper holes have the largest openings (Gilman 1915). When excavated in a Saguaro the cavity is probably uninhabitable until the sap hardens (Bent 1939) l

Three to five eggs are laid on the floor of the cavity but many eggs seem to be infertile, resulting in two to four young (Bent 1939). Little is known of parental behavior. Rosenberg, Ohmart and Anderson (1982) report that two clutches may be raised in one season, with fledging generally occurring at the end of May and again at the end of June or early in July.

Food items reported by Bent (1939) include ants and various insects and wild fruit and berries. At a feeding station they ate watermelon. They have been observed foraging in corn fields, and they consume Saguaro fruit and pulp (Gilman 1915).

Rosenberg, Ohmart and Anderson (1982) studied food habits of riparian birds in the southwestern desert region. In this case, Gilded Northern Flickers used Saguaros in the adjacent desert areas for nesting but foraged regularly in the riparian forest. They mainly used pecking, probing, and gleaning as methods of foraging, spending the majority of time searching on the ground and in leaf litter. They also foraged in the understory and mid-canopy areas of cottonwood and willows and on dead cottonwood and willow snags, searching in the bark along the inner part of larger branches (mostly greater than 20 cm in diameter) close to and including the trunk. Prey size was very small, less than 10 mm, and consisted almost entirely of ants and termites, with a few Hemiptera (true bugs). Because they are not morphologically adapted for hardwood excavation, Gilded Northern Flickers use nonexcavating foraging techniques such as probing, pecking and gleaning on trees, snags and on the ground (Brush et al. 1983).

VIII. HABITAT REQUIREMENTS:

(Describe physical habitat required for all life history stages of species including plant community, soils, microhabitat, slope, aspect, elevation, setting, climate and any other specific requirements.)

Grinnell and Miller (1944) described the Gilded Northern Flicker in California as a common resident of mainly Saguaros, but also old-growth riparian cottonwoods and willows of the southeastern desert areas, and occasionally Joshua Trees. They occurred at that time (early 1900's) in the belt of Saguaros on the desert mesa a few miles above Laguna Dam (Grinnell 1915), and in Joshua Trees at Cima Dome (Remen 1978). Bent (1939) described the center of abundance of the species as the southwestern desert area where Saguaros occur, adding that they also occur in other trees, such as cottonwoods, willows, and Joshua Trees. The American Ornithologists' Union (1983) simply describes the habitat as desert, primarily with Saguaros.

Hunter (1984) found that Gilded Northern Flicker densities were significantly correlated with habitat type and that the birds prefer the densest types of old-growth cottonwood-willow riparian forest. Along the Colorado River there was a strong relationship between Gilded Northern Flickers and high foliage density and diversity coupled with high numbers of cottonwoods, willows and mesquite in the riparian habitat. In the Bill Williams River Delta on the Arizona side of the Colorado River, Rosenberg et al. (1982) found that Gilded Northern Flickers used Saguaros in the adjacent desert areas for nesting, but they forged regularly in the cottonwood-willow riparian habitat. In the riparian habitat of the Colorado River valley Anderson and Ohmart (1977) describe them as structural specialists, being significantly correlated with foliage above 9 meters in height. Serena (1981) found that along the Colorado River north of Blythe, Gilded Northern Flickers breed in the few remaining cottonwood stands, in mesquite habitat with cottonwood snags on the California side of the river, and in desert washes with Saguaros on the Arizona side of the river. South of Blythe on the California side they breed in a few remaining pure willow stands, and mixed willow and honey mesquite stands. She found the highest densities in cottonwood-willow habitat.

In their study of habitat selection and resource availability among cavity-nesting riparian birds, Brush et al. (1983) found that the occurrence of Gilded Northern Flickers in southwestern riparian habitats is dependent on the availability of nest sites in softwood. The Gilded Northern Flicker is a primary cavity nester (they excavate their own cavities) whose population density is greatly dependent on the availability of snags. In both summer and winter Gilded Northern Flickers preferred cottonwoods and willows and were rare in mesquite or snagless habitats. Brush et al. pointed out that this species is not morphologically adapted for hardwood excavation but more suited for softwoods, which accounts for the greater use of nonexcavating types of foraging, dependence on softwood snags for cavity excavation, and less frequent occurrence in mesquite habitats. Gilded Northern Flickers did not use tamarisk snags at all. Grinnell and Miller (1944) also felt that the primary factor for their presence seemed to be tree trunks or Saguaros that are soft enough to allow nest hole excavation.

IX. CURRENT AND RECOMMENDED MANAGEMENT:

(Explain existing state, federal, local or private management of known populations and available protection mechanisms. Indicate any methods or procedures useful for protecting the physical and biological features of the environment for conservation of the species. Describe activities necessary to insure the survival of the species.)

The primary reason for the decline of the Gilded Northern Flicker population in California has been the removal of essentially all of the native riparian habitat along the Colorado River. The river is near the western edge of the geographical range of this species, and although relatively common in Arizona, especially in areas dominated by Saguaros, the only places they occur in California at this time are along the Colorado River in the remnants of old-growth riparian woodland, and possibly at Cima Dome. There are presently no existing state, federal, local or private management programs for known populations of Gilded Northern Flickers aimed at insuring their continuing existence in California. Acquiring, creating, maintaining and enhancing riparian woodland along the Colorado River are the only ways to insure the continued survival of the Gilded Northern Flickers in the state.

Gilded Northern Flickers are limited by the availability of nest sites whether they are inhabiting riparian woodland or upland desert habitats. In order to excavate nest cavities, softwood snags such as cottonwood and willow, of a size large enough in diameter to accommodate a nest cavity, must be present. Mature (old-growth) cottonwoods and willows that have died and become snags in a dense riparian forest are the preferred nest sites along the Colorado River. Additionally, Gilded Northern Flickers have been known to nest in nearby Saguaros when they are available and then forage in the riparian habitat, utilizing the abundant resources to successfully raise broods. However, there presently are no Saguaros in California.

The only effective approach for long-term preservation of all lower Colorado River riparian forest species will be to restore the native habitat by careful revegetation of large tracts of cleared land or land vegetated by exotics along the banks of the river. Renovation and management of existing habitat can occur by selectively removing exotic salt cedar and replanting with native vegetation.

Experimental large-scale revegetation (>50 acres) conducted under contract with the Bureau of Reclamation along the Colorado River has been quite successful (Hunter 1984) and might provide the solution for expanding habitat and increasing numbers of Gilded Northern Flickers and other riparian forest bird species in California, In this experimental program, it took five growing seasons to convert desolate dredge spoilings with little vegetation and wildlife to a young healthy cottonwood-willow woodland, with growth of up to 10 feet per year. Although the trees on this site will not be large enough to provide snags of sufficient size for 25-50 years, careful interim management including development of artificial nest sites could attract Gilded Northern Flickers and provide improved habitat. Smaller revegetation efforts (<25 acres) might be advantageous in areas adjacent to existing riparian woodlands, thus adding to the overall extent of suitable habitat.

Acquiring and preserving remaining tracts of mature old-growth cottonwood-willow riparian habitat that are presently in private ownership along the Colorado River, especially any areas that are fairly extensive, are necessary in a short-term approach to preserving the Gilded Northern Flickers and the other species of Colorado River riparian birds. However, very little of this habitat is left, and what exists is primarily on Indian land and/or under the jurisdiction of other governmental agencies.

In lieu of, or prior to, actual habitat acquisition, it would be prudent to initiate land stewardship and educational programs that stress the importance of these existing remnants of riparian woodlands to wildlife, as well as their recreational value. The importance of snags to wildlife must be stressed. These programs should include farmers, ranchers, resort owners, Native Americans, and governmental agencies.

Besides acquiring and safeguarding existing riparian woodland, additional management efforts should be made to make the habitat productive and attractive to Gilded Northern Flickers, and to ensure the riparian woodland's continued existence. Proper control of flooding with the purpose of enhancing existing riparian forests is an extremely important management tool. River management activities and high water or prolonged flooding have the potential to either enhance or destroy existing woodlands. Prolonged abnormal flooding during late summer and fall or for several consecutive years can cause the death of most or all mature riparian trees resulting in total destruction of the habitat.

A method of attracting Gilded Northern Flickers to existing but sub-optimal riparian woodlands would be to provide additional nesting opportunities where few or none presently exist. Gilded Northern Flickers can only excavate cavities in softwood snags of sufficient diameter to contain a completed nest cavity at a safe height above the ground. In riparian areas where the cottonwood-willow vegetation is young and fairly dense or if softwood trees are large but there are no snags, nest boxes could be provided, or a few selected trees of appropriate size could be girdled so that they become snags. This would not only benefit the primary cavity nester in this case, the Gilded Northern Flicker, but all of the Colorado River riparian bird species that are secondary cavity nesters dependent upon previously excavated nest-holes.

X. INFORMATION SOURCES:

(Cite literature, specimen collection records and other pertinent reference materials. Attach documents critical to recommended action. List names, addresses and telephone numbers of persons cited.)

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