

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB42

Endangered and Threatened Wildlife and Plants; Proposed Rule To List the Golden-cheeked Warbler as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to list the golden-cheeked warbler (*Dendroica chrysoparia*) as an endangered species, under the authority contained in the Endangered Species Act of 1973 (Act), as amended. Critical habitat is not being proposed. This small, insectivorous bird nests exclusively in central Texas in mature Ashe juniper-mixed oak woodland or forest. The golden-cheeked warbler is threatened by habitat loss and fragmentation, which result from widespread clearing of juniper as a range management practice, and urban encroachment into the range of the warbler. The threat of brown-headed cowbird parasitism increases in magnitude as habitat becomes more fragmented.

DATES: Comments from all interested parties must be received by July 3, 1990. Public hearing requests must be received by June 18, 1990.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, 9A33 Fritz Lanham Building, 819 Taylor Street, Fort Worth, Texas 76102. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Robert Short, Field Supervisor (see ADDRESSES) at (817) 334-2961 or FTS 334-2961.

SUPPLEMENTARY INFORMATION:**Background**

The golden-cheeked warbler is a member of the family Emberizidae. The species was discovered in Guatemala by Osbert Salvin in 1859, and described in 1860 by Philip Lutley Sclater and Salvin (Pulich 1976).

The golden-cheeked warbler is a small, insectivorous bird. In breeding plumage, the male has yellow cheeks outlined in black, with a black stripe extending through the eye to the side of

the nape. Its crown, upperparts, throat, neck, upper breast, and streaking along the flanks are jet black. Wings are black with two distinct white bars, and the tail is blackish. The female is less colorful than the male. Her upperparts are yellowish-olive green, the wings and tail are grayish, and the cheeks are not as bright yellow as the male (Pulich 1976).

This species is the only endemic breeding bird of Texas whose entire nesting range occurs within the State (Wahl *et al.* 1990). It occurs in central Texas from Palo Pinto and Bosque Counties, south through the eastern and south-central portions of the Edward Plateau (Shaw 1939). Pulich (1976) considered 31 counties in central Texas to be the nesting range of the golden-cheeked warbler. The breeding range of the golden-cheeked warbler coincides closely with the range of *Juniperus ashei* (Ashe juniper). The golden-cheeked warbler depends on Ashe juniper for nesting materials and substrate, and singing perches (Kroll 1980, Pulich 1976, Shaw 1989, Wahl *et al.* 1990). The golden-cheeked warbler uses strips of Ashe juniper bark to construct its nest. The strips of bark are bound together with cobwebs to form a compact little cup, which is then lined with fur and feathers. The nest is commonly located about 4.5 meters (15 feet) from the ground, although it varies from 1.5-10 meters (5-32 feet) (Pulich 1976).

Golden-cheeked warbler habitat consists of Ashe juniper and various species of oak, such as *Quercus durandii breviloba* (scrub oak) and *Quercus buckleyi* = *Q. texana* (Texas oak). Oaks (especially deciduous species) apparently provide essential foraging substrate (Wahl *et al.* 1990). The golden-cheeked warbler feeds on whatever insects are available, including caterpillars, green lacewings, small green cicadas, katydids, walkingsticks, flies, adult moths, and small butterflies. The birds also eat spiders (Pulich 1976).

The golden-cheeked warbler winters in Guatemala, Honduras, Nicaragua, Mexico, and possibly Belize. It arrives in Texas on the breeding territory in mid-March. The golden-cheeked warbler returns to the same area year after year (Pulich 1976). The species has a narrow tolerance in habitat requirements. If habitat is destroyed, the birds that are dependent upon it are eliminated from the breeding population (Pulich 1976).

The presence of mature Ashe junipers is apparently a major requirement for habitat of golden-cheeked warblers. Even nests in other tree species contain long strips of Ashe juniper (Pulich 1976). Ashe juniper trees begin sloughing bark near the base at about 20 years, and at

the crown by 40 years (Kroll 1980). The golden-cheeked warbler is mature forest dweller because of its dependence on several old-growth attributes of Ashe juniper-oak woodland, including nearly closed canopy, canopy height, and shredding bark of older junipers (Wahl *et al.* 1990).

The golden-cheeked warbler breeding season is mainly in April and May. Usually three or four eggs, rarely five, are laid. The eggs are white or creamy white with varying amounts of brown and less predominant shades of purple. The female incubates the eggs for 12 days. The male plays an active role in feeding and care of the young. The young leave the nest when 8 or 9 days old, but remain nearby in a loose family group while being cared for by both parents (Pulich 1976). Second nesting attempts are made only when the first nest is destroyed or deserted. In one year, 63 percent of the nests were deserted because of brown-headed cowbird parasitism (Pulich 1976). Nest desertion is also caused by habitat destruction, rat snakes, storms, and possibly squirrel predation. Nesting success appears to be low for this species (Pulich 1976).

Pulich (1976) estimated the total adult golden-cheeked warbler population at 15,000-17,000 birds. Wahl *et al.* (1990) reported the median density for all study sites where golden-cheeked warblers were found to be 15 pairs/100 hectares (247 acres). It was estimated that in urban counties, 19,400-55,750 hectares (47,900-137,750 acres) of suitable habitat for golden-cheeked warblers remain. In rural counties, an estimated 12,750-51,000 hectares (31,500-126,000 acres) of suitable golden-cheeked warbler habitat remain. Based on the assumption that all suitable habitat is occupied, then the carrying capacity of the available suitable habitat area would support between 4,800-16,000 pairs of golden-cheeked warblers at a density of 15 pairs/100 hectares (247 acres). Probably not all golden-cheeked warblers in the population are paired, however, and all habitat is not occupied at even the medium density of 15 pairs/100 hectares (247 acres) because of habitat fragmentation (Wahl *et al.* 1990).

In the December 30, 1982, Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species (47 FR 58454), the golden-cheeked warbler (*Dendroica chrysoparia*) was included as a Category 2 species. Category 2 comprises taxa for which information now in possession of the Service indicates that proposing to list as endangered or threatened is possibly

appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support a proposed rule. In both the September 18, 1985, Review of Vertebrate Wildlife; Notice of Review (50 FR 37958), and the January 6, 1989, Animal Notice of Review (54 FR 554) the golden-cheeked warbler was retained in Category 2.

A petition was received by the Service on February 2, 1990, requesting that the Service prepare an emergency listing for the golden-cheeked warbler because the normal listing procedure could be inadequate to protect the bird and its habitat from imminent destruction from clearing and development. The Service treated this document as a petition under the Administrative Procedure Act. The Service has conducted an extensive review of the status of the golden-cheeked warbler and has determined that an emergency posing a significant risk to the well-being of the golden-cheeked warbler exists. An emergency rule is being issued concurrent with this proposed rule. The emergency rule shall cease to have force and effect after 240 days, unless the rulemaking procedure initiated by this proposed rule is completed prior to that time.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the golden-cheeked warbler (*Dendroica chrysoparia*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* A juniper or "cedar" eradication program (including Ashe juniper) was implemented in Texas in 1948, and from the 1950's to the 1970's, about 50 percent of the juniper acreage was cleared for pasture improvement and urbanization. At one time, juniper was used for aromatic oils, fuel, and fence posts, but more recently it is usually burned on the cleared site. Several counties that had been golden-cheeked warbler habitat, including portions of Gillespie County, all of Mason County, and others, no longer contained suitable habitat by the 1970's (Pulich 1976).

Widespread clearing of juniper as a range management practice and urban encroachment continue to threaten the golden-cheeked warbler and its habitat. Loss of woody cover through clearing reduces the total habitat acreage available to the golden-cheeked warbler and causes fragmentation of larger patches into smaller ones (Wahl *et al.* 1990). Larger areas of continuous cover are often owned by a single person, and these areas are often subdivided and fragmented, especially near expanding population centers such as Austin, San Antonio, and the Austin-San Antonio corridor. Because of the growth and development in this corridor, the greatest rate of golden-cheeked warbler habitat loss has occurred in the southern and eastern portions of the Edwards Plateau (Wahl *et al.* 1990).

Junipers often are removed from private and public lands for enhancement of game populations, range improvement, and enhancement of viewsheds. Removal of junipers from old-growth, Ashe juniper—mixed oak woodlands has two negative effects on the quality or warbler habitat: (1) It removes sources of required nesting material, and (2) it reduces total canopy cover, often to the extent that the stand will no longer support warblers. Clearing junipers to benefit game species such as deer and turkey that occupy mid-successional habitats may adversely affect the golden-cheeked warbler, because it eliminates late successional communities needed by the golden-cheeked warbler and other mature growth species.

Wahl *et al.* (1990) estimated the area of potentially suitable habitat remaining for the golden-cheeked warbler across its entire breeding range. The areas sampled by Wahl *et al.* (1990) experienced loss of 15–45 percent of warbler habitat over a period of about 10 years. The rate of habitat loss is greater in areas subject to urban growth and real estate development, particularly in Travis County. Western Travis County experienced a 40 percent loss in warbler habitat over a 10-year period (4 percent loss/year) and only 10 percent of the county was covered by warbler habitat at the start of the 10-year period (Shaw 1989, Wahl *et al.* 1990). The urban corridor between Austin and San Antonio experienced a 4.4 percent annual loss of golden-cheeked warbler habitat over a 10-year period. Most breeding golden-cheeked warblers inhabit the rapidly changing urban counties on the eastern Edwards Plateau. In the northern portion of the golden-cheeked warbler's range, there was a 15 percent loss of habitat over an

8-year interval. In rural areas, the rate of habitat loss has been steady at about 2–3 percent/year for the last 20 years (Wahl *et al.* 1990). At present rates, the estimated maximum carrying capacity of the habitat will be 2,256–7,527 pairs of golden-cheeked warblers by the year 2000, a reduction in population size of more than 50 percent. Any increase in rates of habitat loss from human effects or other causes will reduce the population further (Wahl *et al.* 1990).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* None known at this time.

C. *Disease or predation.* Several species have been named as nest predators for golden-cheeked warblers, including scrub jays, grackles, feral cats, rat snakes, and possibly squirrels (Pease and Gingerich 1989, Pulich 1976). The difficulty in observing golden-cheeked warbler nests makes it difficult to assess the extent of nest predation (Wahl *et al.* 1990).

D. *The inadequacy of existing regulatory mechanisms.* The golden-cheeked warbler is subject to the Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*). Under this Act, a Federal permit is required to take, capture, band, or otherwise handle the nest, eggs, or individuals of migratory bird species.

The Texas Parks and Wildlife Department lists the golden-cheeked warbler as a threatened species. Departmental regulations make it illegal to shoot or physically harm, possess, sell, or transport golden-cheeked warblers without a permit. However, there is no provision for protection of habitat in these regulations. Listing this species under the Act would provide additional protection, especially for habitat, and encourage active management through the "Available Conservation Measures" discussed below.

E. *Other natural or manmade factors affecting its continued existence.* Habitat destruction that causes habitat fragmentation is an immediate threat to the golden-cheeked warbler. Habitat fragmentation increases the degree of isolation between patches of suitable habitat and breaks available habitat into smaller pieces (Pease and Gingerich 1989). Habitat quality is affected by habitat patch size, distance between patches, configuration of patches (ratio of edge to area), corridor availability, and adjacent land use (Shaw 1989). Fragmentation in urban counties has limited the number of suitable size habitat patches to between 16–46 percent of the total vegetation structurally suitable for warbler use, and in rural areas the values range from

11-44 percent (Wahl *et al.* 1990). In Travis County, less than 47 percent of the total golden-cheeked warbler habitat is in patches of 50 hectares (124 acres) or more (Wahl *et al.* 1990).

An increased ratio of edge/area in small patches of suitable habitat has an impact on breeding bird species because of increased levels of nest predation, brood parasitism, and interspecific competition in edge habitats (Pease and Gingerich 1993).

Brown-headed cowbirds are abundant throughout the golden-cheeked warbler's breeding range, and threaten other species often associated with warblers. Habitat patch size and proximity to high cowbird densities (e.g., near livestock, corrals, urban areas, fields) are the primary determinants of degree of threat from cowbirds (Wahl *et al.* 1990). The effects of cowbird parasitism increase with increasing edge or habitat fragmentation. Golden-cheeked warblers occasionally are able to produce at least one fledgling from a parasitized nest. However, as the golden-cheeked warbler population continues to decline and habitat fragmentation increases, the relative threat of cowbird parasitism increases (Wahl *et al.* 1990).

In the mature Ashe juniper-mixed oak forests of the Balcones Canyonland sub-region of the Edwards Plateau, deciduous species generally are not well represented within the younger age classes. In most of these areas, long-term successional changes are leading toward evergreen woodlands dominated by Ashe juniper. These areas are not suitable for golden-cheeked warblers because they lack deciduous oaks for foraging. Lack of reproduction of deciduous trees may be caused by browsing by unnaturally high populations of white-tailed deer, introduced feral ungulates, including feral and domestic goats, or by an oak wilt fungus (*Ceratocystis* spp.) that kills the trees (Wahl *et al.* 1990).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the golden-cheeked warbler as endangered. The species has experienced severe population declines throughout its range. Because of its narrow habitat requirements, and its habit of returning to the same area every year, habitat destruction leads to elimination of populations. Urban development is accelerating in the most important part of the golden-cheeked warbler's range. This species is vulnerable to increased

threats of nest parasitism and predation as habitat becomes more fragmented. Threatened status would not accurately reflect the population decline and imminent threats to this species. Critical habitat is not being proposed for the reasons discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. For the golden-cheeked warbler, the Service has concluded that critical habitat is not presently determinable. The Service's regulations (50 CFR 424.12(a)(2)) state that critical habitat is not determinable if information sufficient to perform required analyses of the impacts of the designation is lacking or if the biological needs of the species are not sufficiently well known to permit identification of the area as critical habitat. Much of the golden-cheeked warbler's habitat has been fragmented by land clearing activities. Some of the remaining habitat patches may be too small or isolated to support viable subpopulations of the species. The minimum patch size requirements of the golden-cheeked warbler are not determinable at this time.

During the proposed rule comment period, the Service will seek additional agency and public input on critical habitat, along with information on the biological status of, and threats to, the golden-cheeked warbler. The Service intends to use this and other information in formulating a decision on critical habitat designation for the golden-cheeked warbler.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species

that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Projects authorized, funded, or carried out by the Federal Highway Administration that may affect the golden-cheeked warbler, such as clearing of golden-cheeked warbler habitat, and activities on military installations that contain golden-cheeked warbler habitat would be subject to section 7 consultation.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or

suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;
- (2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
- (3) Additional information concerning the range, distribution, and population size of this species; and
- (4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Ecological Services

Field Office, Fort Worth, Texas (see ADDRESSES).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

Kroll, J.C. 1980. Habitat requirements of the golden-cheeked warbler: management implications. *Journal of Range Management* 33:60-65.

Pease, C.M., and L.G. Gingerich. 1989. The habitat requirements of the black-capped vireo and golden-cheeked warbler populations near Austin, Texas. Report prepared for Austin Regional Habitat Conservation Plan. Biological Advisory Team, Austin, Texas. 55 pp.

Pulich, W.M. 1976. The golden-cheeked warbler, a bioecological study. Texas Parks and Wildlife Department, Austin, Texas. 172 pp.

Shaw, D.H. 1989. Applications of GIS and remote sensing for the characterization of habitat for threatened and endangered species. Unpublished Ph.D. thesis, University of North Texas, Denton, Texas.

Wahl, R., D.D. Diamond, and D. Shaw. 1990. The golden-cheeked warbler: a status review. U.S. Fish and Wildlife Service, Fort Worth, Texas. 63 pp. plus appendices and maps.

Author

The primary author of this proposed rule is Sonja Jahrsdoerfer, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Fish, Marine mammals, Plants (agriculture).

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1543; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.11(h) by adding the following in alphabetical order under "Birds," to the list of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
BIRDS							
Warbler, golden-cheeked.....	<i>Dendroica chrysoparia</i>	U.S.A (TX), Mexico, Guatemala, Honduras, Nicaragua.	Entire.....	E	387E,—	NA	NA

Dated: April 30, 1990.
Richard N. Smith,
 Acting Director, Fish and Wildlife Service.
 [FR Doc. 90-10433 Filed 5-3-90; 8:45 am]
 BILLING CODE 4310-55-M