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# Endangered and Threatened Wildlife and Plants; Determination of the Black-capped Vireo To Be an Endangered Species

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**50 CFR Part 17**

## Endangered and Threatened Wildlife and Plants; Determination of the Black-capped Vireo To Be an Endangered Species

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines the black-capped vireo (*Vireo atricapillus*) to be an endangered species. This bird formerly bred from Kansas through Oklahoma and Texas to central Coahuila, Mexico. The vireo no longer occurs in Kansas, is gravely endangered in Oklahoma, and is no longer found in several parts of its formerly extensive range in Texas. The black-capped vireo is threatened by brown-headed cowbird (*Molothrus ater*) nest parasitism and loss of habitat due to such factors as urbanization, grazing, range improvement, and succession. This rule implements the protection provided by the Endangered Species Act of 1973, as amended, for *Vireo atricapillus*.

**DATES:** The effective date of this rule is November 5, 1987.

**ADDRESSES:** The complete file for this rule is available for public inspection during normal business hours, by appointment, at the Service's Regional Office of Endangered Species, 500 Gold Avenue SW., Room 4000, Albuquerque, New Mexico 87103.

**FOR FURTHER INFORMATION CONTACT:** J. Allen Ratzlaff, Endangered Species Biologist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972).

**SUPPLEMENTARY INFORMATION:**

### Background

The black-capped vireo is a 4½ inch (11 centimeter), insectivorous bird. Woodhouse (1852) discovered the species when he collected two specimens on May 26, 1851, along the Rio San Pedro (now called Devil's River) in Sutton County, Texas (Deignan 1961).

Adult male black-capped vireos are olive green on the upper surface and white beneath and have faintly yellowish green flanks. The crown and upper half of the head is black with a partial white eye-ring and lores; this pattern is unique in the family Vireonidae. The iris is brownish red, the bill black. Adult females are duller colored, with the crown slate gray instead of black and the underparts washed with greenish yellow (Marshall *et al.* 1985).

The black-capped vireo formerly bred from Kansas through Oklahoma and Texas to central Coahuila, Mexico with an outlying, possibly temporary, colony in Nuevo Leon, Mexico. Winter residents ranged from Sonora to Oaxaca, Mexico, but occurred mostly in Sinaloa and Nayarit. The species disappeared from Kansas after 1953 (Grzybowski *et al.* 1984, Marshall *et al.* 1985). Graber (1961) believed that land use (grazing) and climatic conditions (drought) had made former habitat in southern Kansas unsuitable. The northernmost breeding areas found by Graber, from 1954 to 1956, were in northern Oklahoma. The present breeding range is from Blaine County, central Oklahoma south through Dallas, the Edwards Plateau, and Big Bend National Park, Texas to at least Sierra Madera in Central Coahuila, Mexico (Marshall *et al.* 1985).

In 1986, only 44–51 adult birds were located in Oklahoma and were limited to three small areas (Grzybowski 1987). Only 35–39 birds were found at these sites in 1985 when limited cowbird control measures were initiated (Grzybowski 1985a). A total of 280 adults were found at 33 sites in Texas in 1985. Though several Texas sites had slightly higher numbers of vireos in 1986, some sites experienced notable decreases (Grzybowski 1986). An estimated 24 adults were found in breeding areas in Mexico in 1983–1984 (Marshall *et al. 1985).*

Black-capped vireos and their habitat in the U.S. occur on Federal, State, and private land. The vireo's habitat consists of scattered trees and brushy areas. Woody vegetation occurs in clumps and is separated by bare ground, rocks, grasses, or wildflowers (Marshall *et al.* 1985); over 55 percent of black-capped vireo habitat is composed of non-woody elements (Grzybowski 1986). Foliage that extends to ground level is the most important requirement for nests. Most nests (90%) are found 16 to 49 inches (0.4 to 1.25 meters) above ground (Grzybowski 1986) and are screened from view by foliage (Grzybowski *et al.* 1984). Marshall *et al.* (1985) summarized known nest sites and found that 63 percent of all 164 documented nests were located in four species of woody vegetation: *Quercus marilandica, Q. shumardii texana, Q. stellata,* and *Rhus virens.* The remaining 37 percent were found in some 20 other species of plants. Grzybowski (1986) noted similar preferences but also noted variation between sites that depended on woody plant species availability.

Many black-capped vireo territories are located on steep slopes, such as the heads of ravines or along the sides of arroyos. On such areas, the shallow soils slow succession, and the microclimates provided by the rugged terrain perpetuate clumping of vegetation, thus sustaining an area suitable for the vireo (Graber 1961). On level terrain, vireo habitat tends to change through succession to prairie-grass, closed-canopy hardwood forest, or cedar brakes so dense that the necessary understory is suppressed (Grzybowski *et al.* 1984). Black-capped vireo habitat, under natural conditions, was maintained by wildfires and wildlife grazing that kept the vegetation in an early successional stage.

The black-capped vireo was included as a category 2 species on the Service's December 30, 1982, Notice of Review (47 FR 58454), but was changed to a category 1 species in the September 18, 1985, Notice of Review (50 FR 37958). Category 1 includes those species for which the Service currently has substantial information to support the biological appropriateness of proposing to list the species. In the December 12, 1986, **Federal Register** (51 FR 44808–44812), the Service published a proposed rule to determine endangered status for this species.

### Summary of Comments and Recommendations

In the December 12, 1986, proposed rule and associated notifications, all interested parties were requested to

submit factual information that might contribute to the final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices, inviting general public comment, were published in the *Express-News* in San Antonio, Texas on January 13, 1987; the *American-Statesman* in Austin, Texas on January 20, 1987; the *Oklahoman* in Oklahoma City on January 10, 1987; and the *Pioneer* in Fort Stockton, Texas on January 11, 1987. Seventeen responses were received in support of the proposal and six responses expressed neither support nor opposition. Summaries of the comments follow:

The National Wildlife Federation, the Sportsmen's Clubs of Texas, Inc., the Bureau of Economic Geology (University of Texas, Austin), the City of Austin, the Texas Natural Heritage Program, the Oklahoma Department of Wildlife Conservation, the Oklahoma City Audubon Society, Dr. Keith Arnold (Curator of Birds, Texas A & M University), Dr. Frederick Gehlbach (Dept. of Biology, Baylor University), Col. L.R. Wolfe, Richard Spotts (Defenders of Wildlife), and seven private individuals supported the proposal. The Texas Parks and Wildlife Department did not respond to the proposed rule. In response to a pre-proposal notification letter, that agency supported listing the black-capped vireo, though only as threatened. Letters that expressed neither support nor opposition were received from Big Bend National Park, Texas, the editor of *American Birds*, the Texas Air Control Board, Dr. F. Bryant (Texas Tech University, Lubbock, Texas), and Dr. A.R. Phillips.

*Issue 1:* Commentors recommended critical habitat be designated. *Service response:* Because the black-capped vireo occurs in scattered, small areas, critical habitat would be difficult to delineate and would offer no benefit to its recovery. Furthermore, due to the dynamic nature of its habitat (changes through succession), the location of the patches of optimal habitat will not necessarily be the same from year to year or decade to decade. The Service also believes that, due to the popularity of the bird, publication of critical habitat maps in the **Federal Register** would increase the likelihood of harassment that could affect reproductive success. In the future the Service could publish a proposal in the **Federal Register** to designate critical habitat.

*Issue 2:* Dr. W. M. Pulich (Associate Professor of Biology, University of Dallas Station, Texas) though not opposed to listing, questioned the extent of previous black-capped vireo status work. The Texas Parks and Wildlife Department also suggested that more habitat for the vireo likely exists on private land. *Service response:* Though it is impossible to search everywhere, over 700 areas of "suitable" black-capped vireo habitat have been surveyed over the last several years. Almost all private range lands are presently being grazed by introduced herbivores (e.g., goats, cattle), and thus the bulk of any remaining vireo habitat is not very likely to continue in suitable condition. The number of vireos on private range land (which represents the vast majority of its historic habitat) is expected to be relatively low. Undoubtedly more vireos exist than have been noted, but the marked decline and/or complete absence of the black-capped vireo over the majority of its historic range warrants the actions being taken.

*Issue 3:* The Texas Parks and Wildlife Department also suggested that the Service has the technology and personnel to manage cowbirds over the range of the vireo. *Service response:* Cowbird control is very labor intensive and can only offer relief to the vireos in a very limited area. Further research is needed to find more efficient and effective long term management techniques. The Animal Damage Control Program was transferred to the Department of Agriculture about 2 years ago.

*Issue 4:* In response to a pre-proposal notification letter, the Texas Parks and Wildlife Department thought the vireo only warranted threatened status, as the State of Texas was then proposing to add to its own list of endangered and threatened species. *Service response:* The Service has reviewed the status of the vireo throughout its range, not just Texas, and finds that the species does warrant endangered status because it is in danger of extinction over a significant portion of its range in the next several decades, unless appropriate management occurs.

**Summary of Factors Affecting the Species**

After a thorough review and consideration of all information available, the Service has determined that the black-capped vireo (*Vireo atricapillus*) should be classified as an endangered species. Procedures found at 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 were followed. A species may be determined to be an 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 black-capped vireo are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Major threats to black-capped vireo habitat include possible development; grazing by sheep, goats, and other exotic herbivores (which remove vegetative cover near ground level that is necessary for vireo nesting); and range improvement that involves the removal of broad-leaved, low woody vegetation (Marshall *et al.* 1985). In addition, any activity that divides habitat into narrow strips can make vireo nests more vulnerable to cowbird parasitism (Grzybowski *et al.* 1984).

In the Austin area, which contains the largest known concentration of black-capped vireos, 88 percent of the vireo population is presently threatened with extirpation because of development activity and road construction (J. Carrasco, City Manager of Austin, *in litt.*). The City of Austin's Department of Planning and Growth Management estimates that most of the habitat for this population will be lost in less than 10 years, if the anticipated rate of development is realized. The Austin City Manager further states that "Proposed development plans and roadway improvement *presently* before the City of Austin for consideration could eliminate 20 pairs in the immediate (1 to 5 years) future" (J. Carrasco *in litt.*).

In addition, extensive evidence of heavy grazing, trampling and browsing exists on the Edwards Plateau. Besides a substantial Angora goat enterprise, the Plateau contains a variety of herbivorous, exotic game species (Marshall *et al.* 1985).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The black-capped vireo is especially attractive to ornithologists and amateur birders. Nests have failed or been abandoned due to excessive activities of photographers; one territory was possibly abandoned because of frequent harassment from tape-recorded songs (Marshall *et al.* 1985).

C. *Disease or predation.* Black-capped vireos are remarkably free of disease and ectoparasites (Graber 1961). However, eggs and young vireos are subject to some predation. Of 134 eggs lost, Graber (1961) found 12 (9 percent) lost to predators, including snakes and a fox squirrel. Graber also found 16 of 95 hatchlings (17 percent) lost to predators, including snakes and ants. Grzybowski

(1986) also noted that scrub jays (*Aphelocoma coerulescens*) may be depredating vireo nests. Little evidence of predation on adults exists. The first known instance of predation on an adult occurred in 1985: A female brooding young on a low nest was eaten during the night by an unknown predator (Marshall *et al.* 1985).

D. *The inadequacy of existing regulatory mechanisms.* The Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*) protects this species from being killed or taken captive. However, this Act does not provide any protection to the species' habitat. The state of Texas listed the black-capped vireo as a threatened species on March 1, 1987, but this action provides no protection to the habitat of the vireo.

E. *Other natural or manmade factors affecting its continued existence.* Graber (1961) found that 55.1 percent of all black-capped vireo eggs laid were lost before hatching and, of this loss, 72.3 percent was due to brown-headed cowbird (*Molothrus ater*) nest parasitism. During the nestling period, the major loss was also due to cowbird activity. Cowbirds lay their eggs in vireo nests before the vireo clutch is complete. Cowbird eggs hatch 2–4 days before vireo eggs, and, by the time the vireos hatch, the cowbird nestlings outweigh them tenfold. In all cases where a cowbird occupied the nest, no vireo chicks survived (Graber 1961). Grzybowski (1986) summarized cowbird nest parasitism from 1983 to 1986 and found that overall cowbird nest parasitism on black-capped vireos was 80 percent in study areas in Texas and Oklahoma. However, when cowbird trapping was initiated in those same areas, nest parasitism dropped to as low as 22 percent (Grzybowski 1985b).

Manmade changes in landscape and land use patterns, in particular the opening up of forested areas and the spred of cattle over the past 150 years or so, have apparently favored the brown-headed cowbird. The brown-headed cowbird is an "edge species" and appears to have increased in abundance, range, and the number of species it parasitizes. Cowbirds feed near cattle and agricultural areas and commute daily to areas where they search for nests; therefore, host populations nesting in extensive unbroken tracts may escape parasitism entirely (May and Robinson 1985). Because of brush clearing and the consequent interspersion of scrub habitats with potentially more suitable cowbird feeding habitats, the vireos may be more accessible to cowbirds than in the past (Grzybowski 1985b).

Vegetational succession may also lead to a reduction in vireo habitat. On level terrain with good soil, succession will convert vireo habitat either to prairie grass, closed-canopy hardwood forest, or cedar brakes so dense that the necessary understory is suppressed (Grzybowski *et al.* 1984).

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 make this rule final. Based on this evaluation, the preferred action is to list the black-capped vireo (*Vireo atricapillus*) as endangered. A decision to take no action would exclude it from protection provided by the Endangered Species Act. A decision to list as threatened would not adequately reflect the severity of the threats facing this species throughout a significant portion of its range and the resulting danger of this species becoming extinct. For the reasons given below, no critical habitat has been designated for this species.

## Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species that is considered to be critical habitat at the time the species is determined to be endangered or threatened. For this particular situation, however, the Service has concluded that there is no demonstrable benefit to the vireo in designating critical habitat and therefore such an action is not prudent. The habitat of the black-capped vireo occurs in scattered, small patches; occupied habitat would be difficult to delineate and may vary over time due to succession. Service recovery actions will continuously update and address the vireo's habitat management needs. In addition, as mentioned under "B" in "Summary of Factors Affecting the Species", the black-capped vireo is popular among bird-watchers. Possible increased harassment could occur due to the publication of critical habitat maps. Should that Service receive additional information on this subject, which would warrant reconsideration of this decision, the Service could propose critical habitat in the furture. Future proposal of critical habitat would require an additional **Federal Register** publication.

## 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 Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species.

These recovery actions are initiated by the Service following listing. Such actions may also be initiated prior to listing if circumstances permit. Probable recovery actions will likely include continued monitoring of known populations, additional work to locate other populations, cowbird trapping in nesting areas, and land management practices to maintain black-capped vireo habitat in a suitable successional stage. Also, additional information will likely be collected on the ecology of the species to further identify possible life history parameters that can be enhanced to aid in the species' recovery.

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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. 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 a listed species. If a Federal action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service.

Federal lands on which vireos have been reported recently include the National Park Service (NPS), the Fish and Wildlife Service, and two military installations (Fort Hood and Fort Sill). Fort Hood and Fort Sill personnel have expressed an interest in protecting this species, and NPS and refuges are responsible for protecting natural resources; therefore, little adverse Federal involvement is expected. Kerr State Wildlife Management Area, Kerrville, Texas, was purchased partially with Federal Aid monies and State and Federal Aid monies are used in the management of the area. Current management plans for the area are under review. Federally supported highway improvement in the Austin, Texas area, and proposed actions by the Navarro County Electric Cooperative, Inc. have potential to affect black-

capped vireo habitat. Should it be determined that the above proposed actions "may affect" the black-capped vireo, section 7 consultation, as described above, will be required. No other Federal activities are known to be presently occurring on State and private lands containing black-capped vireos.

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, import or export, ship in interstate commerce in the course of a 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.

### 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


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Grzybowski, J.A. 1985a. Final report: Population and nesting ecology of the black-capped vireo (*Vireo atricapillus*). Part I: Population status of the black-capped vireo in Oklahoma—1985. Prepared for the U.S. Fish & Wildlife Service, Albuquerque, NM. 50 pp.

Grzybowski, J.A. 1985b. Final report: Population and nesting ecology of the black-capped vireo (*Vireo atricapillus*). Part II: Nesting ecology of the black-capped vireo. Prepared for the U.S. Fish & Wildlife Service, Albuquerque, NM. 50 pp.

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Grzybowski, J.A., R.B. Clapp, and J.T. Marshall. 1984. Interim status report on the black-capped vireo. Prepared for the U.S. Fish & Wildlife Service, Albuquerque, NM. 86 pp.

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Woodhouse, S.W. 1852. Descriptions of new species of the genus *Vireo*, Veill. and *Zonotrichia*, Swains. Proc. Acad. Natural Sciences Phil. 6:60.


### Author


The primary author of this final rule is J. Allen Ratzlaff, Endangered Species Biologist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766–3972 or FTS 474–3972).


### List of Subjects in 50 CFR Part 17

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

### Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

## PART 17—[AMENDED]

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

**Authority:** Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

2. 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 | | | | | | | |
| * | * | * | * | * | * | | |
| Vireo, black-capped | Vireo atricapillus | U.S.A. (KS, LA, NE, OK, TX), Mexico. | Entire | E | 294 | NA | NA |
| * | * | * | * | * | * | | |

Dated: September 21, 1987.

**Susan Recce,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 87–23024 Filed 10–5–87; 8:45 am]

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