

[Federal Register: December 12, 1994]

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AC85

Endangered and Threatened Wildlife and Plants; Proposed Rule to List the Cactus Ferruginous Pygmy-Owl as Endangered With Critical Habitat in Arizona and Threatened in Texas

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) announces a 12-month finding on a petition to list the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) as endangered under the authority of the Endangered Species Act of 1973, as amended (Act). The Service finds that the petitioned action is warranted and proposes to list the cactus ferruginous pygmy-owl as endangered in Arizona, and as threatened in Texas. Listing is not warranted at this time in its range in Mexico. The former breeding range of this bird extended from south-central Arizona south through western Mexico, and from southern Texas south through northeastern Mexico. Within these regions, the species occurs in riverbottom woodlands, coastal plain oak associations, thornscrub, and desertscrub associations. The cactus ferruginous pygmy-owl is threatened to varying degrees across its range by loss and modification of habitat, lack of adequate protective regulations, and other factors. This proposal, if made final, would implement Federal protection provided by the Act for the cactus ferruginous pygmy-owl in the United States. Critical habitat is being proposed in Arizona.

DATES: Comments from all interested parties must be received by April 11, 1995; Public hearing requests must be received by February 27, 1995.

ADDRESSES: Comments and materials concerning this proposal should be

sent to the State Supervisor, Arizona Ecological Services State Office, Fish and Wildlife Service, 3616 West Thomas Road, Suite 6, Phoenix, Arizona 85019. 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 M. Marshall, at the above address (Telephone 602/379-4720).

SUPPLEMENTARY INFORMATION:

Background

The cactus ferruginous pygmy-owl is a small bird, approximately 17 centimeters (6³/₄ inches) long. Males average 62 grams (g) [2.2 ounces (oz)], females average 75 g (2.6 oz). It is reddish-brown overall, with a cream-colored belly streaked with reddish-brown. Some individuals are grayish, rather than reddish-brown. The eyes are yellow, the crown is lightly streaked, and there are no ear tufts. Paired black-and-white spots on the nape suggests eyes. The tail is relatively long for an owl, colored rufous with dark bars. The call of the diurnal owl, heard chiefly near dawn and dusk, is a monotonous series of short notes.

The cactus ferruginous pygmy-owl (Order Strigiformes; Family Strigidae) is one of three subspecies of the ferruginous pygmy-owl. It occurs from lowland central Arizona south through western Mexico, to the States of Colima and Michoacan, and from southern Texas south through the Mexican States of Tamaulipas and Nuevo Leon (Figure 1.). South of these regions and through Central America, *G. b. ridgwayi* replaces *G. b. cactorum*. Throughout South America, *G. b. brasilianum* is the resident subspecies (Fisher 1893, van Rossem 1937, Friedmann et al. 1950, Schaldach 1963, Phillips et al. 1964, de Schauensee 1966, Karalus and Eckert 1974, Oberholser 1974, Johnsgard 1988).

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The cactus ferruginous pygmy-owl (hereafter "pygmy-owl," unless otherwise noted) was described by van Rossem (1937), based on specimens from Arizona and Sonora. It is distinguished from *G. b. ridgwayi* and *G. b. brasilianum* by its shorter wings and longer tail, and by generally lighter coloration (van Rossem 1937, Phillips et al. 1964). *G. b. cactorum* occurs in several color morphs, with distinct differences between regional populations (Sprunt 1955, Burton 1973, Tyler and

Phillips 1978, Johnsgard 1988). Some investigators (e.g. van Rossem 1937, Tewes 1992) have suggested that further taxonomic investigation is needed, primarily to determine whether the current *G. b. cactorum* comprises more than one subspecies. *G. b. cactorum* is widely recognized as a valid subspecies (e.g. Friedmann et al. 1950, Blake 1953, Sprunt 1955, Phillips et al. 1964, Monson and Phillips 1981, Millsap and Johnson 1988, Binford 1989). The American Ornithologists' Union (AOU) recognized *G. b. cactorum* in its 1957 Checklist of North American Birds (AOU 1957), but subsequent lists did not include subspecies (AOU 1983). Based on these authorities, the Service accepted *G. b. cactorum* as a subspecies in 1991 (56 FR 58804), and again in 1993 (58 FR 13045).

The pygmy-owl nests in a cavity in a tree or large columnar cactus. Cavities may be naturally formed (e.g. knotholes) or excavated by woodpeckers. No nest lining material is used. The pygmy-owl has also nested in fabricated nest boxes (S. Beasom, Texas Arts and Industries University, in litt.). Three, four, or sometimes five eggs are laid (Bent 1938, Heintzelman 1979) and incubated for approximately 28 days. The young fledge about 28 days after hatching. The pygmy-owl begins nesting activity in late winter to early spring. It is nonmigratory throughout its range (Bendire 1888, Griscom and Crosby 1926, Oberholser 1974, Johnson et al. 1979). The pygmy-owl's diverse diet includes birds, lizards, insects, small mammals (Bendire 1888, Sutton 1951, Sprunt 1955, Earhart and Johnson 1970, Oberholser 1974), and even frogs and earthworms (S. Beasom, in litt.).

The pygmy-owl occurs in a variety of subtropical scrub and woodland communities, including riverbottom woodlands, woody thickets ("bosques"), coastal plain oak associations, thornscrub, and desertscrub. Unifying habitat characteristics among these communities are fairly dense woody thickets or woodlands, with trees and/or cacti large enough to provide nesting cavities. Throughout its range, the pygmy-owl occurs at low elevations, generally below 1,200 meters (m) or 4,000 feet (ft) (Swarth 1914, Karalus and Eckert 1974, Monson and Phillips 1981, Johnsgard 1988, Enriquez-Rocha et al. 1993). In southern Texas, the pygmy-owl's habitat includes coastal plain oak associations, and the Tamaulipan Thornscrub of the lower Rio Grande valley region, which is comprised of mesquite (*Prosopis glandulosa*), hackberry (*Celtis* spp.), oak (*Quercus* spp.), and Texas ebony (*Pithecellobium ebano*) (Griscom and Crosby 1926, Bent 1938, Oberholser 1974, Tewes 1992, Wauer et al. 1993). In northeastern Mexico, it occurs in lowland thickets, thornscrub communities, riparian woodlands, and second-growth forest (van Rossem 1945, AOU 1983, Tewes 1992, Enriquez-Rocha et al. 1993). In central and southern Arizona, the pygmy-owl's primary habitats are riparian cottonwood (*Populus* spp.) forests and mesquite bosques. Also in central and southern Arizona, the pygmy-owl occurs in Sonoran Desertscrub associations of paloverde (*Cercidium* spp.), bursage (*Ambrosia* spp.), ironwood (*Olneya tesota*), mesquite (*Prosopis*

juliflora), acacia (*Acacia* spp.), and giant cacti like the saguaro (*Cereus giganteus*), and organpipe (*Cereus thurberi*) (Gilman 1909, Bent 1938, van Rossem 1945, Phillips et al. 1964, Monson and Phillips 1981, Johnson-Duncan et al. 1988, Millsap and Johnson 1988). Farther south in northwestern Mexico, the pygmy-owl occurs in Sonoran Desertscrub, Sinaloan Thornscrub, and Sinaloan Deciduous Forest as well as riverbottom woodlands, cactus forests and thornforest (Enriquez-Rocha et al. 1993, G. Monson in prep.).

The available information indicates that distinct eastern and western populations of the pygmy-owl may be defined (Figure 1.). The pygmy-owl occurs along the lower Rio Grande River and the coastal plain of southern Texas and northeastern Mexico. It also occurs in lowland areas of northwestern Mexico and southern Arizona. The pygmy-owl's elevational distribution, the distribution of habitat, and recorded locations indicate that these eastern and western ranges of the pygmy-owl are geographically isolated from one another and are ecologically distinct. In the U.S., the eastern and western portions of the pygmy-owl's range are separated by the basin-and-range mountains and intervening Chihuahuan Desert basins of southeastern Arizona, southern New Mexico, and western Texas. Although Grossman and Hamlet (1964) suggested that the pygmy-owl's range included this U.S.-Mexico border region, the pygmy-owl has never been recorded in this 500-mile (mi) wide area (Bailey 1928, Phillips et al. 1964, Oberholser 1974, S.O. Williams, New Mexico Department of Game and Fish, in litt.).

In Mexico, the eastern and western populations are separated by the highlands of the Sierra Madre Oriental and Occidental, and the Mexican Plateau. The pygmy-owl is considered rare on the Mexican Plateau and/or above elevations of 1,200 m (4,000 ft) on the west, and above 330 m (1,000 ft) on the east (Friedman et al. 1950). Some sources describe the eastern and western ranges as contiguous at the southern end of its range, near the southern end of the Mexican Plateau in central Mexico (Johnsgard 1988). Other sources (e.g., Burton 1973) describe these two ranges as being disjunct. In his description of the subspecies, van Rossem (1937) found that Texas specimens exhibited characteristics of both *G. b. cactorum* and *G. b. ridgwayi*. Ultimately, he did not assign Texas ferruginous pygmy-owls to *G. b. cactorum*, noted that Ridgway (1914, in van Rossem 1937) considered them distinct from *G. b. ridgwayi*, and left the taxonomy of Texas *G. brasilianum* open. Most authors have subsequently considered Texas pygmy-owls to be *G. b. cactorum* (e.g., Oberholser 1974, Millsap and Johnson 1988).

In addition to geographic separation, the pygmy-owl's eastern and western populations occupy different habitats. Although some broad similarities in habitat physiognomy are apparent (e.g., dense woodlands and thickets), floristically these eastern and western habitats are very dissimilar. The desertscrub and thornscrub associations in Arizona and western Mexico are unlikely any habitats occupied by the pygmy-owl

in eastern Mexico and southern Texas. Also, the oak association habitat occupied on coastal plains in southern Texas is unlike any habitat available in the western portion of the pygmy-owl's range. However, the Tamaulipan thornscrub habitat of the east and the riverbottom mesquite-cottonwood bosque habitat once found in Arizona are more similar in physiognomy and to a slight degree in floristic makeup.

The potential for genetic distinctness further supports identifying eastern and western pygmy-owl populations. The fact that the pygmy-owl is nonmigratory throughout its range suggests that genetic mixing across wide areas may be infrequent. Considerable variation in plumage between regional populations has been noted, including specific distinctions between Arizona and Texas pygmy-owls (van Rossem 1937, Burton 1973, Tyler and Phillips 1978, Johnsgard 1988).

The above information indicates that eastern and western populations of the cactus ferruginous pygmy-owl are distinct, based on geographic isolation, potential morphological and genetic distinctness, and distribution and status of habitat. These eastern and western populations of the pygmy-owl may be considered separately for listing under the Act, as ``* * * any subspecies * * * and any distinct population segment of any species of vertebrate which interbreeds when mature" [Section 3(16)]. Further, the status of the species in Mexico is currently unclear (see discussion under ``Factor A", below).

The above criteria lead the Service to consider four separate populations of *G. b. cactorum* for listing purposes: western U.S. (Arizona), eastern U.S. (Texas), western Mexico, and eastern Mexico. Because the levels of threat, habitats occupied, quality of information, and overall status differ among these four populations, the Service herein proposes separate actions for various population segments.

The Service included the pygmy-owl on its Animal Notice of Review as a category 2 candidate species throughout its range on January 6, 1989 (54 FR 554). After soliciting and reviewing additional information, the Service elevated *G. b. cactorum* to category 1 candidate status throughout its range on November 21, 1991 (56 FR 58804). A category 1 species is one for which the Service has on file substantial information to support listing, but a proposal to list has not been issued because it is precluded at present by other listing activity.

Based on an extensive review of information on the species, it is now appropriate to list the U.S. populations, while continuing to review the species in Mexico to determine whether Mexican populations should be proposed for listing. Recent information from Mexico indicates that the species may be more abundant, at least in the southern portion of its range, than originally thought.

On May 26, 1992, a coalition of conservation organizations (Galvin et al. 1992) petitioned the Service, requesting listing of the pygmy-

owl as an endangered species under the Act. The petitioners also requested designation of critical habitat. In accordance with Section 4(b)(3)(A) of the Act, on March 9, 1993, the Service published a finding that the petition presented substantial scientific or commercial information indicating that listing may be warranted, and commenced a status review on the pygmy-owl (58 FR 13045). In conducting its status review, the Service solicited additional comments and biological data on the status of the cactus ferruginous pygmy-owl, through mailings, a notice in the Federal Register (58 FR 13045), and other means.

Section 4(b)(3)(B) of the Act requires the Secretary of the Interior to reach a final decision on any petition accepted for review within 12 months of its receipt (16 U.S.C. Sec. 1531 et seq.). That decision, to be published in the Federal Register, must be one of the following findings: (1) The petitioned action is not warranted; (2) the petitioned action is warranted (a proposed regulation is published); or (3) the petitioned action is warranted, but the immediate proposal is precluded by listing actions of higher priority. This proposal constitutes a 1-year finding with respect to the petition that listing as endangered is warranted for the Arizona population, listing as threatened is warranted for the Texas population, and listing is not now warranted for the two populations in Mexico.

Since designating the pygmy-owl as a category 1 species, in the course of its continuing status review, the Service has acquired significant new information on the cactus ferruginous pygmy-owl. This finding is based on various documents, including published and unpublished studies, agency documents, and field survey records. All documents on which this finding is based are on file in the Fish and Wildlife Service Ecological Service State Office in Phoenix, Arizona. For an explanation of the relationship between petition findings and candidate category status, see 58 FR 28034 (May 12, 1993).

Summary of Factors Affecting the Species

Section 4(a)(1) of the Act 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 List of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species owing to one or more of the five factors described in Section 4(a)(1). These factors and their application to the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The cactus ferruginous pygmy-owl is threatened by past, present, and potential future destruction and modification of its habitat, throughout a significant portion of its

range in the U.S., and, to a less well-known extent, in portions of its range in Mexico (Phillips et al. 1964, Oberholser 1974, Johnson et al. 1979, Monson and Phillips 1981, Johnson and Haight 1985a, Hunter 1988, Millsap and Johnson 1988, Tewes 1992). The severity of habitat loss and threats varies across the pygmy-owl's range. It has been virtually extirpated from Arizona, which once constituted its major U.S. range (see Figure 1). In Texas, the pygmy-owl has been virtually extirpated from the lower Rio Grande valley, but persists in oak associations on the coastal plain north of the Rio Grande valley. The majority of these losses are because of destruction and modification of riparian and thornscrub habitats. Wide-scale loss and modification of up to 90 percent of riparian habitats in the southwestern U.S. have occurred (e.g. Phillips et al. 1964, Carothers 1977, Kusler 1985, General Accounting Office 1988, Jahrsdoerfer and Leslie 1988, Szaro 1989, Dahl 1990, State of Arizona 1990, Bahre 1991). These losses are attributed to urban and agricultural encroachment, woodcutting, water diversion, channelization, livestock overgrazing, groundwater pumping, and hydrological changes resulting from various land-use practices. Status information for Mexico is very limited, but some observations suggest that although habitat loss and reduced numbers are likely to have occurred in northern portions of the two populations in Mexico, the pygmy-owl persists as a locally common bird in southern portions. Habitat loss and population status are summarized below for the four populations of the pygmy-owl.

Western Populations

Several habitat types are used by the pygmy-owl in the western portion of its range. These include riparian woodlands and bosques dominated by mesquite and cottonwood, Sonoran Desertscrub (usually with relatively dense saguaro cactus forests), Sinaloan Thornscrub, and Sinaloan Deciduous Forest (van Rossem 1945, Phillips et al. 1964, Karalus and Eckert 1974, Millsap and Johnson 1988, Monson and Russell in prep.).

1. Arizona

The northernmost record for the pygmy-owl is from New River, Arizona, approximately 55 kilometers (km) (35 mi) north of Phoenix, where Fisher (1893) found it to be "quite common" in thickets of intermixed mesquite and saguaro cactus. Prior to the mid-1900's, the pygmy-owl was also described as a "common," "abundant," "not uncommon," and "fairly numerous" resident of lowland central and southern Arizona, in cottonwood forests, mesquite-cottonwood woodlands, and mesquite bosques along the Gila, Salt, Verde, San Pedro, and Santa Cruz Rivers, and various tributaries (Coues 1872, Bendire 1888,

Breninger 1898 in Bent 1938, Gilman 1909, Swarth 1914, Friedmann et al. 1950, Phillips et al. 1964, Johnson and Simpson 1971, Millsap and Johnson 1988). The pygmy-owl also occurs in Sonoran Desertscrub associations in southern and southwestern Arizona, comprised of paloverde, ironwood, mesquite, acacia, bursage, and columnar cacti like the saguaro and organpipe (Phillips et al. 1964, Davis and Russell 1984 and 1990, Monson and Phillips 1981, Johnson and Haight 1985a). the pygmy-owl's occurrence in Sonoran Desertscrub has apparently always been uncommon and unpredictable.

However, it seems to be more predictably found in xeroriparian habitats (very dense desertscrub thickets bordering dry desert washes) than more open desert uplands (Monson and Phillips 1981, Johnson and Haight 1985a, Johnson-Duncan et al. 1988, Millsap and Johnson 1988, Davis and Russell 1990). The pygmy-owl may also occur at isolated desert oases which support small pockets of riparian or xeroriparian vegetation (Howell 1916, Phillips et al. 1964).

The above habitats are likely to provide several requirements of pygmy-owl ecology. Trees and large cacti provide cavities for nesting and roosting. Also, these habitats along watercourses are known for their high density and diversity of animal species that constitute the pygmy-owl's prey base (Carothers 1977, Johnson et al. 1977, Johnson and Haight 1985b, Stromberg 1993).

The pygmy-owl has declined throughout Arizona to the degree that it is now virtually extirpated from the State [Johnson et al. 1979, Monson and Phillips 1981, Arizona Game and Fish Department (AGFD) 1988, Johnson-Duncan et al. 1988, and Millsap and Johnson 1988]. Riverbottom forests and bosques, which supported the greatest abundance of pygmy-owls, have been extensively modified and destroyed by clearing, urbanization, water management, and hydrological changes (Willard 1912, Brown et al. 1977, Rea 1983, Szaro 1989, Bahre 1991, Stromberg et al. 1992, Stromberg 1993). Cutting for domestic and industrial fuelwood was so extensive throughout southern Arizona that, by the late 19th century, riparian forests within tens of miles of towns and mines had been decimated (Bahre 1991). Mesquite was a favored species, because of its excellent fuel qualities. The famous, vast forests of "giant mesquites" along the Santa Cruz River in the Tucson area described by Swarth (1905) and Willard (1912) fell to this threat, as did the "heavy mesquite thickets" where Bendire (1888) collected pygmy-owl specimens along Rillito Creek, a Santa Cruz River tributary, also in what is now Tucson. Only remnant fragments of these bosques remain. Cottonwoods were also felled for fuelwood, fenceposts, and for the bark, which was used as cattle feed (Bahre 1991). In recent decades, the pygmy-owl's riparian habitat has continued to be modified and destroyed by agricultural development, woodcutting, urban expansion, and general watershed degradation (Brown et al. 1977, Phillips et al. 1964, State of Arizona 1990, Bahre 1991, Stromberg et al. 1992,

Stromberg 1993).

The trend of Sonoran Desertscrub habitats and pygmy-owl occupancy is not as clear. Historical records from this habitat in Arizona are few. This may be due to disproportionate collecting along rivers where humans were concentrated, while the upland deserts were less intensively surveyed. Johnson and Haight (1985a) suggested that the pygmy-owl adapted to upland cactus associations and xeroriparian habitats in response to the demise of Arizona's riverbottom woodlands. However, conclusive evidence to support this hypothesis is not available. It may be that desertscrub habitats simply are of lesser quality, and have always been occupied by pygmy-owls at lower frequency and density (Johnson and Haight 1985b, Taylor 1986). The few pygmy-owls located in recent years have been fairly evenly distributed between remaining riverbottom woodlands, desertscrub, and xeroriparian habitats. Sonoran Desertscrub has been affected to varying degrees by urban and agricultural development, woodcutting, and livestock grazing (Bahre 1991).

Hunter (1988) found fewer than 20 verified records of pygmy-owls in Arizona for the period of 1971 to 1988. In 1992, surveys located three single pygmy-owls in Arizona (Fish and Wildlife Service and National Park Service, unpubl. data, SWCA, Inc. 1993). In 1993, more extensive surveys again located three single pygmy-owls in Arizona (Felley and Corman 1993, AGFD and Service, unpubl. data). Although *G. b. cactorum* is diurnal and frequently vocalizes in the morning, the species was not recorded or reported in breeding bird survey data (Robbins et al. 1986).

In addition to clearing woodlands, the diversion and channelization of natural watercourses, and pumping groundwater, are also likely to have reduced *G. b. cactorum* habitat. Diversion and pumping result in diminished surface flows, and consequent reductions in riparian vegetation are likely (Brown et. al. 1977, Strombery et al. 1992, Stromberg 1993). Channelization often alters stream banks and fluvial dynamics necessary to maintain native riparian vegetation. The series of dams along most major southwestern rivers (e.g., the Colorado, Gila, Salt, Verde) have altered riparian habitat downstream of dams through hydrological and vegetational changes, and have inundated habitat upstream.

Overuse by livestock has been a major factor in the degradation and modification of riparian habitat in the western U.S. These effects include changes in plant community structure and species composition and relative abundance of species and plant density. These changes are often linked to more widespread changes in watershed hydrology (Brown et al. 1977, Rea 1983, GAP 1988). These changes are likely to affect the habitat characteristics critical to *G. b. cactorum*. Livestock grazing in riparian habitats is one of the most common causes of riparian degradation (e.g., Ames 1977, Carothers 1977, Behnke and

Raleigh 1978, General Accounting Office 1988, Forest Service 1979).

Potential future threats to pygmy-owl habitat also exist. Expanding human populations in the border region are expected to continue to increase impacts and threats discussed above. Further, extensive industrial, municipal, and agricultural developments facilitated by the Northern American Free Trade Agreement are anticipated along the U.S.-Mexico border. These developments may result in accelerated habitat loss and demands on groundwater.

2. Western Mexico

The pygmy-owl occurs in the more arid lower elevations (below 1,200 m (4,000 ft) elevation) in western Mexico, in riparian woodlands and communities of thornscrub and large cacti. The pygmy-owl is absent or rare in the highlands of Mexico's central plateau (Friedmann et al. 1950), where the least (*G. minustissima*) and northern (*G. qnoma*) pygmy-owls occur.

In the mid-20th century, the pygmy-owl was generally described as having been common in western Mexico (van Rossem 1945, Friedmann et al. 1950, Blake 1953). Schaldach (1963) considered the pygmy-owl abundant in Colima, at the southern extreme of its range, 30 years ago. Fifty years ago, the pygmy-owl was considered "fairly common" in the lower elevations of western Sonora (van Rossem 1945). Current information on the status of the pygmy-owl and its habitat in western Mexico is incomplete, but suggests that trends vary within different geographic areas. The pygmy-owl can still be located fairly easily in southern Sonora (Babbitt 1985, T. Corman, AGFD, pers. comm.), but its distribution is somewhat erratic. Christmas Bird Count data from 1972 through 1991 from Alamos, Sonora, and San Blas, Nayarit, indicate that the pygmy-owl was not uncommon, but detections varied widely from year to year (National Audubon Society 1972-1992). In recent years it has been found in abundance in some areas but is absent in others, in apparently similar habitat. Abundance also varies between habitat types, being more abundant in thorn forest than cactus forest (Taylor 1986). The pygmy-owl is now rare or absent in northern Sonora, within 150 miles of the U.S.-Mexico border (Hunter 1988, Monson and Russell in prep., AGFD in litt.). Extensive conversion of desertscrub and thornscrub to the exotic bufflegass (*Cenchrus ciliaris*) for livestock forage is known to be taking place, but quantification is not currently available. It is possible that the factors causing declines in Arizona are also having effects in western Mexico (Deloya 1985, Hunter 1988). However, further information is needed before determining whether it should be listed in western Mexico.

Eastern Populations

Several habitat types are also used by the pygmy-owl in the eastern portion of its range. These include coastal plain oak associations in south Texas (Tewes 1992, Wauer et al. 1993), Tamaulipan Thornscrub in the lower Rio Grande valley and other lowland areas, and thick forest and second-growth forest in Nuevo Leon and Tamaulipas.

1. Texas

The pygmy-owl's historical range in Texas included the lower Rio Grande valley, where it was considered a common resident of dense mesquite-cottonwood-ebony woodlands and Tamaulipan brushland (Griscom and Crosby 1926, Bent 1938, Friedmann et al. 1950, Stillwell and Stillwell 1954, Oberholser 1974, Millsap and Johnson 1988). The pygmy-owl also occurs in coastal plain oak associations between Brownsville and Corpus Christi (Oberholser 1974), where it has recently been found in significant numbers (Wauer et al. 1993, S. Beasom in litt., P. Palmer in litt.).

The pygmy-owl has declined throughout a significant portion of its Texas range (Oberholser 1974, Johnson et al. 1979, Johnson and Haight 1985a, Millsap and Johnson 1988, Tewes 1992). It appears to persist in relatively high numbers in coastal plain oak associations north of the lower Rio Grande valley (Wauer et al. 1993). The pygmy-owl was described as a common breeding bird in the lower Rio Grande valley near Brownsville in the early 1900's (Griscom and Crosby 1926, Friedmann et al. 1950), but was considered to have become rare in that region by mid-century (Wolfe 1956, Oberholser 1974). Pygmy-owls have been seen less frequently in recent years and in fewer numbers (Oberholser 1974, Hunter 1988, Wauer et al. 1993). Tewes (1992) found no pygmy-owls in a 1991 survey of the lower Rio Grande valley, but sporadic reports of single birds continue.

Habitat has been, and continues to be, lost and modified along the lower Rio Grande valley, chiefly through agricultural development and urban expansion. Since the early 1900's, approximately 95 percent of native Tamaulipan Brushland in the lower Rio Grande valley has been cleared for agriculture, urban development, and recreation (Jahrsdoerfer and Leslie 1988). By reducing river flow, water development has further altered or destroyed brushland in riparian areas.

Impacts on coastal oak associations are less well known, but appear to be lesser. Limited oak clearing has taken place, but extensive habitat remains. Little net quantitative change in this habitat appears to have occurred in the last 100 years, and the habitat may have increased in the late 1600's and early 1700's (Wauer et al. 1993, P. Palmer in litt.). Pygmy-owls are currently found in this habitat in their greatest numbers in the U.S.

Other causes of habitat decline in Texas include alteration of

water regimes and overuse by livestock, both of which have degraded the riparian ecosystems of the lower Rio Grande (see discussion of these factors under "Arizona", above). However, in a nonriparian grassland/woodland mosaic in Texas, Wauer et al. (1993) believed livestock grazing may have increased pygmy-owl habitat by suppressing grasslands and allowing encroachment by oak associations.

Potential future threats to pygmy-owl habitat also exist. In coastal Texas, placement of spoil from offshore dredging operations may impact coastal oak associations. Expanding human populations in the border region are expected to continue to increase impacts and threats discussed above. Further, extensive industrial, municipal, and agricultural developments facilitated by the North American Free Trade Agreement are anticipated along the U.S.-Mexico border. These developments may result in accelerated habitat loss and demands on groundwater.

2. Eastern Mexico

The pygmy-owl occurs in lowland regions [below 330 m (1,000 ft)] along the Gulf Coast of northeastern Mexico (Friedmann et al. 1950), in the States of Tamaulipas and Nuevo Leon. Its primary habitat in this region is Tamaulipan thornscrub, forest edge, riparian woodlands, thickets, and lowland tropical deciduous forest (Webster 1974, Tewes 1992, Enriquez-Rocha et al. 1993). The pygmy-owl is absent or rare in the highlands of Mexico's central plateau (Friedmann et al. 1950), where the least and northern pygmy-owls occur.

In the mid-20th century, the pygmy-owl was generally described as having been common in eastern Mexico (Friedmann et al. 1950, Blake 1953). Current information on the status of the pygmy-owl and its habitat in eastern Mexico is incomplete. In 1976, the pygmy-owl was reported to be "fairly common" in the Sierra Picachos of Nuevo Leon (Arvin 1976). In 1991, Texas (1992) located pygmy-owls at 13 of 27 survey sites in northeastern Mexico. Tewes (1992) believed expansion of the human population could reduce available habitat in the region surveyed, but also noted that pygmy-owls were found within larger towns in the region. Wauer et al. (1993) believed no populations in northeastern Mexico appeared to be sizable enough to provide recruitment for other areas. Christmas Bird Count data from 1972 through 1992 from Rio Corona and Gomez Farias, both in Tamaulipas, indicate the pygmy-owl was not uncommon, but detections varied widely from year to year (National Audubon Society 1972-1992). Christmas Bird Count data indicated the same for ferruginous pygmy-owls at El Naranjo in San Louis Potosi, at the zone of probably intergradation between *G.b. cactorum* and *G.b. ridgwayi*. It is possible that the factors causing declines in Texas are also having effects in Mexico (Deloya 1985, Hunter 1988). However, further information on the subspecies is

needed before determining whether it should be listed in eastern Mexico.

B. Overutilization for commercial, recreational, scientific, or educational purposes. The pygmy-owl is highly sought by bird watchers, who concentrate at several of the remaining known locations of pygmy-owls in the U.S. While limited, careful bird watching is probably not harmful, excess attention by bird watchers may at times constitute harassment, affecting the occurrence and behavior of the pygmy-owl (Oberholser 1974, Tewes 1992). For example, in early 1993, one of the few areas in Texas known to support the pygmy-owl continued to be widely publicized (American Birding Association 1993). The resident pygmy-owls were not detected at this highly-visited area after early in the breeding season. The Service is unaware of any other overuse, for any purpose, which constitutes a threat to the pygmy-owl.

c. Disease or predation. The Service is unaware of any disease or predation which constitutes a significant threat to *G. b. cactorum*.

D. The inadequacy of existing regulatory mechanisms. The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) is the only direct, current Federal protection provided for the cactus ferruginous pygmy-owl. The MBTA prohibits "take" of any migratory bird. "Take" is defined as " * * * to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect." However, unlike the Endangered Species Act, there are no provisions in the MBTA preventing habitat destruction unless direct mortality or destruction of active nests occurs.

The Federal Clean Water Act contains provisions for regulating impacts to river systems and their tributaries. These mechanisms have been insufficient to prevent major losses of riparian habitat, including habitats occupied by the pygmy-owl.

The State of Arizona lists the ferruginous pygmy-owl (subspecies not defined) as endangered (AGFD 1988). However, this designation does not provide special regulatory protection. Arizona regulates the capture, handling, transportation, and take of most wildlife, including *G. b. cactorum*, through game laws, special licenses, and permits for scientific investigation. However, habitat is not protected under Arizona endangered species law.

The State of Texas lists the ferruginous pygmy-owl (subspecies not defined) as threatened (Texas Parks and Wildlife Department 1978 and 1984). This designation requires permits for take for propagation, zoological gardens, aquariums, rehabilitation purposes, and scientific purposes (State of Texas 1991). Again, however, there are no provisions for habitat protection. The pygmy-owl is also on the Texas Organization for Endangered Species' (TOES) "watch list" (TOES 1984).

Most Federal agencies have policies to protect species listed by States as threatened or endangered, and some also protect species that are candidates for Federal listing. For example, the National Park

Service protects all wildlife within most National Parks and Monuments. However, until agencies develop specific protection guidelines, evaluate their effectiveness, and institutionalize their implementation, it is uncertain whether any general agency policies adequately protect the pygmy-owl and its habitat.

No conservation plans or habitat restoration projects specific to the cactus ferruginous pygmy-owl exist for lands managed by the U.S. Government, Indian Nations, State agencies, or private parties. The Forest Service, Bureau of Land Management, and Bureau of Reclamation have focussed some attention on modifying livestock grazing practices in recent years, particularly as they affect riparian ecosystems. Several of those projects are in the former range of *G. b. cactorum*, including some historical nesting locations. In addition, some private landowners in Southern Texas are accommodating research and have expressed interest in carrying out conservation measures to benefit the pygmy-owl.

E. Other natural or manmade factors affecting its continued existence. The riparian woodland habitat of *G. b. cactorum* was always rare and has become even more so. Its habitat rarity, and small, isolated populations make the remaining *G. b. cactorum* increasingly susceptible to local extirpation through land development, predation, and stochastic events such as catastrophic floods and fires.

The disjunct nature of habitats, small breeding populations, and nonmigratory status may also impede the flow of genetic material between populations and reduce the chance of demographic and genetic rescue from immigration for adjacent populations. The resulting constraints on the gene pool intensify the external threats to the pygmy-owl.

The pygmy-owl's occurrence in floodplain areas that are now largely agricultural may indicate a potential threat from pesticides. Where populations remain, they are sometimes in proximity to agricultural areas, with associated pesticides and herbicides. Without appropriate precautions, these agents may potentially affect *G. b. cactorum* through direct toxicity or effects on their food base. No quantitative data on this potential threat are known at this time.

This pygmy-owl nests in cavities excavated by woodpeckers in trees or large cacti. Some sources (AGFD 1988) believe that increasing competition with the exotic European starling for nest cavities may be a threat to cavity nesters like the pygmy-owl.

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 cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) as endangered in Arizona, where it is nearly extirpated and is in imminent danger of imminent danger of disappearing, and as threatened in Texas,

where it has undergone significant decline but is not in danger of extinction. The Service will continue to review the status of the species in Mexico.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act, means:

(i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and

(ii) Specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being proposed for the cactus ferruginous pygmy-owl to include riparian thickets, forests, and woodlands along streams, rivers, and ephemeral drainages in Arizona. The following areas proposed as critical habitat (all legal descriptions are from the Gila and Salt River Meridian):

1. Arizona, Maricopa County: approximately 21 km (13 mi) along the Salt River, from Stewart Mountain Dam to Granite Reef Dam.

2. Arizona, Maricopa County: approximately 39 km (24 mi) along the Verde River, from Bartlett Dam to the confluence of the Verde and Salt Rivers.

3. Arizona, Cochise, Pima, and Pinal Counties: approximately 97 km (60 mi) along the San Pedro River, from the confluence of Soza Canyon to the confluence of the San Pedro and Gila Rivers, including Cook's Lake.

4. Arizona, Pima County: approximately 42 km (26 mi) along the Santa Cruz River, from the Interstate 19 bridge downstream to the Avra Valley Road bridge.

5. Arizona, Pima County: approximately 54 km (34 mi) along the Rillito Creek system, from the confluence of Rillito Creek and the Santa Cruz River upstream, along Tanque Verde Creek to the boundary between sections 2 and 3, Township 14 south, Range 16 east, and upstream along Agua Caliente Creek to the Soldier Trail crossing.

6. Arizona, Pima County: approximately 23 km (14 mi) along Canada del Oro, from its confluence with Sutherland Wash downstream to its confluence with the Santa Cruz River.

7. Arizona, Pima County: approximately 45 km (28 mi) along Alamo Wash and Growler Wash, from the well in Alamo Canyon (T16S, R4W, unsurveyed Section 6) downstream to the point where Growler Wash

intersects the Bates Well Road.

8. Arizona, Pima County: approximately 13 km (8 mi) along Arivaca Creek, from the road crossing in the town of Arivaca downstream to the confluence with San Luis Wash.

9. Arizona, Greenlee and Graham Counties: approximately 27 km (17 mi) along the Gila River, from the confluence with the San Francisco River downstream to the gaging station in Section 31, Township 6 South, Range 28 East Meridian.

10. Arizona, Pinal and Graham Counties: approximately 69 km (43 mi) along the Gila River, from the confluence with the San Pedro River downstream to the Ashurst-Hayden Dam.

11. Arizona, Graham County: approximately 10 km (6 mi) along Bonita Creek, from the boundary between Section 36, Township 5 South, Range 27 East, and Section 31, Township 5 South, Range 28 East, downstream to the confluence of Bonita Creek and the Gila River.

12. Arizona, Maricopa County: approximately 27 km (17 mi) along the New River, from the boundary between Sections 3 and 4, Township 7 North, Range 3 East, downstream to the boundary between Sections 19 and 20, Township 6 North, Range 2 East.

A total of approximately 467 km (290 mi) of stream and river, including the 100-year floodplain and 100 meters laterally adjacent to the 100-year floodplain, is being proposed as critical habitat. The areas described were chosen for critical habitat designation because they contain historical and/or current locations for the cactus ferruginous pygmy-owl, and/or have the potential to support nesting cactus ferruginous pygmy-owls. All areas contains, or with recovery will contain, suitable nesting habitat. All areas contain some unoccupied habitat or former (degraded) habitat, which is needed to recover ecosystem integrity and support larger numbers of the owl during its recovery.

The areas proposed for critical habitat are on lands owned and managed by the Service, the National Park Service, the Bureau of Land Management, the U.S. Forest Service, the Fort McDowell Indian Reservation, the Salt River Indian Reservation, the State of Arizona, and private parties. The majority of proposed critical habitat is on lands owned or managed by the Bureau of Land Management, the State of Arizona, and private parties.

The Service is required to base critical habitat proposals on the best available scientific information (50 CFR Sec. 424.12). In determining what areas to propose as critical habitat, the Service considers those physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection (primary constituent elements). Species requirements include, but are not limited to, the following: (1) Space for individual and population growth; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover

or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and, generally, (5) habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species. Primary constituent elements of critical habitat may include, but are not limited to, the following: Roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinators, geological formation, vegetation type, tide, and specific soil types.

The Service is proposing to designate as critical habitat areas which provide, or with rehabilitation will provide, the above physical and biological features and primary constituent elements. In determining biologically appropriate areas to propose for designation as critical habitat, the Service focuses on the primary constituent elements that are essential to the conservation of the species, without consideration of land or water ownership or management.

The Service is required to list the primary constituent elements for any critical habitat that is proposed. For all areas of critical habitat proposed here, the above features and elements are provided or will be provided by thickets, forests, woodlands, thornscrub, and desertscrub that are inhabited or potentially habitable for the primary biological needs of foraging, nesting, rearing of young, roosting, and sheltering. Constituent elements include riparian forests, riverbottom woodlands, and xeriparian thickets within or bordering the designated drainages. Woodlands, thickets, and desertscrub associations adjacent to these floodplain areas also provide primary constituent elements. Specific plant associations include those dominated by cottonwood, mesquite, and Sonoran Desertscrub/Thornscrub. These plant associations are characterized by, but are not limited to, the following plant species, in any combination: cottonwood, willow (*Salix* spp.), ash, mesquite, paloverde, ironwood, saguaro cactus, organpipe cactus, creosotebush (*Larrea* spp.), acacia, and hackberry, and areas where such vegetation may become established. These associations attain their greatest development, and support the highest numbers of pygmy-owls, in the approximate 100-year floodplain zone of river drainages.

The presence of surface or subsurface water is critical in maintaining the majority of pygmy-owl habitat. The thicket, woodland, and forest communities described above are largely dependent on availability of groundwater at or near the soil surface. Surface or subsurface moisture may also be important in maintaining various species comprising the pygmy-owl's prey base.

The above primary constituent elements are interrelated in the life history of the cactus ferruginous pygmy-owl. These relationships were major considerations in selection of proposed critical habitat. In addition to the above primary constituent elements, several other selection criteria were used to determine areas necessary for the

survival and recovery of the pygmy-owl. These were: (1) Areas where pygmy-owls were historically recorded as occurring; (2) areas adjacent to or near those where pygmy-owls were historically recorded as occurring that provide or provided the same constituent elements; and (3) areas pygmy-owls are currently known to occur.

Not all areas likely to have been occupied historically, or likely to be occupied now, have been proposed for designation as critical habitat. The critical habitat areas proposed are those that the Service believes are necessary for the survival and recovery of the pygmy-owl and in need of special management or protection. For example, in Sonoran Desertscrub habitat of upland areas in southern Arizona, the pygmy-owl apparently has always been uncommon to rare and unpredictable in occurrence. The Service believes this desert habitat has always been of peripheral or marginal importance to pygmy-owls in Arizona, and that the habitats necessary for the survival and recovery of the pygmy-owl are those along major riverbottoms, where the species was historically common. Therefore, sections of major rivers have been proposed as critical habitat, but Sonoran Desert habitats, in general, have not. However, pygmy-owls will still receive protection under Sections 7 and 9 of the Act, regardless of whether they occur in critical habitat.

Designation of critical habitat is not prudent when the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat, or when designation of critical habitat would not be beneficial to the species [50 CFR 424.12(a)(1)].

Because the Service is currently working cooperatively with private landowners in Texas to reach agreements with them concerning maintenance of important habitat, the Service has determined that designation of critical habitat in Texas is unnecessary and would not be beneficial to the pygmy-owl. Furthermore, a probable outcome of such a designation in Texas would be an increase in disturbance to pygmy-owls by bird watchers. An increase in bird watchers trespassing on private land is a concern expressed by private landowners, and such events could damage a currently harmonious working relationship with the Service and researchers.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) that may adversely modify such habitat or may be affected by such designation. Such activities may include:

(1) Removing, thinning or destroying vegetation. Activities that remove, thin, or destroy vegetation, by mechanical (woodcutting or bulldozing), chemical (herbicides or burning), or biological (grazing) means;

(2) Water diversion or impoundment, groundwater pumping, or any other activity that may significantly alter the quantity or quality of

surface or subsurface water flow;

(3) Overstocking or other mismanagement of livestock; and

(4) Development of recreational facilities and off-road vehicle operation.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service will consider the critical habitat designation in light of all additional relevant information obtained before making a decision on whether to issue a final rule.

Special Rule

The Service recognizes that the major portion of the population in Texas exists because present land management by private landowners is generally compatible with the well-being of the owl. The Service intends to work with landowners in developing management plans and agreements with the objective of recovery and eventual delisting of the Texas population. The Service is also proposing a special rule under section 4(d) of the Act that offers additional management flexibility for this species. The special rule would remove the prohibition against incidental taking of this species in any area subject to a conservation agreement between the Service and the landowner when the taking is caused by routine ranching activities and does not involve any destruction of nest trees. In order for a conservation agreement to be accepted by the Service, it would have to describe the activities to be undertaken in the area that may affect the species; estimate the amount, extent, and type of incidental taking likely to result from these activities; and prescribe adequate mitigation measures.

The Service believes that a special rule of this nature will benefit the cactus ferruginous pygmy-owl in Texas, and that the rule would satisfy the requirement under section 4(d) that regulations applied to threatened species embody those measures deemed necessary and advisable to provide for the conservation of the species in question.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the 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 authorizes recovery plans for all listed species. The protection required for 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.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all endangered and threatened wildlife, respectively. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the U.S. 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 and threatened wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22, 17.23, and 17.32. 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. For threatened species, there are also permits for zoological exhibition, educational purposes, or special purposes consistent with the purpose of the Act.

Section 4(d) of the Act provides authority for the Service to promulgate special rules for threatened species. The Service is proposing a special rule for the cactus ferruginous pygmy-owl in Texas that would relax the prohibition against incidental taking where the Service and a landowner have entered into a conservation agreement.

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;
- (4) Current or planned activities in the subject area and their possible impacts on this species; and
- (5) Any foreseeable economic and other impacts resulting from the proposed designation of critical habitat.

Final promulgation of a 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 this proposal; such requests must be made in writing and addressed to the Service's Arizona State Office (see ADDRESSES section).

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, 1993 (48 FR 49244).

References Cited

A complete list of all references cited herein is available from the Service's Arizona State Office (see ADDRESSES).

Author

The primary author of this proposed rule is Robert M. Marshall, Arizona Ecological Services State Office (see ADDRESSES) above.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulation Promulgation

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

PART 17--[AMENDED]

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

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, Stat. 3500; unless otherwise noted.

2. Section 17.11(h) is amended by adding the following, in alphabetical order under Birds, to the list of Endangered and Threatened Wildlife, to read as follows:

Sec. 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Vertebrate			
		population			
Special	Historic range	where	Status	Critical	
habitat rules	endangered	or	When listed		
Common name	Scientific name	threatened			

* * * * *

Birds

* * * * *

Pygmy-owl, cactus Glaucidium brasilianum U.S.A. (AZ, TX), Mexico.... AZ
E 17.95(b) NA
ferruginous. cactorum.

* * * * *

Do..... do..... do..... TX T NA
17.41(c)

* * * * *

3. Section 17.41 is amended by adding paragraph (c) to read as follows:

Sec. 17.41 Special rules--birds.

* * * * *

(c) Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*).

(1) Except as noted in paragraph (c)(2) of this section, all prohibitions of Sec. 17.31 (a) and (b) shall apply to the cactus ferruginous pygmy-owl in Texas.

(2) Incidental take of the cactus ferruginous pygmy-owl will not be a violation of section 9 of the Endangered Species Act of 1973, as amended, if it results from routine ranching operations, such as fencing and road building or maintenance, provided that:

(i) No nest trees are destroyed.

(ii) The owner of the land upon which the incidental take occurs and the Service have signed a conservation agreement that provides for the persistence of essential habitat features for the cactus ferruginous pygmy-owl. The conservation agreement must include, at minimum:

(A) A description of activities that may affect the cactus ferruginous pygmy-owl.

(B) An estimate of the amount, extent, and type of incidental taking that may result from these activities.

(C) A description of any mitigation measures, such as seasonal

restrictions or protection of nests groves, that will be carried out to minimize impact to and taking of cactus ferruginous pygmy-owls.

(iii) The operations that may affect the cactus ferruginous pygmy-owl are in compliance with all other Federal and State laws that provide protection for the cactus ferruginous pygmy-owl.

4. Section 17.95(b) is amended by adding critical habitat of the cactus ferruginous pygmy-owl, in the same alphabetical order as the species occurs in Sec. 17.11(h), to read as follows:

Sec. 17.95 Critical habitat--Fish and wildlife.

* * * * *

(b) * * *

* * * * *

Cactus Ferruginous Pygmy-Owl (*Glaucidium brasilianum cactorum*)

Arizona. Areas of land and water as follows (all legal descriptions are from the Gila and Salt River Meridian):

1. Maricopa County: Salt River, from Stewart Mountain Dam (T3N, R8E, Section 33) downstream to Granite Reef Dam (T2N, R7E, Section 5). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

2. Maricopa County: Verde River, from Bartlett Dam (T4N, R7E, Section 33) downstream to the confluence of the Verde and Salt Rivers (T2N, R7E, Section 5). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100 year-floodplain.

3. Cochise, Pima, and Pinal Counties: San Pedro River, from the confluence of Soza Canyon (T12S, R19E, Section 30) downstream to the confluence of the San Pedro and Gila Rivers (T5S, R15E, Section 23), including Cook's Lake. The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 meters (328 feet) laterally adjacent to the 100-year floodplain.

4. Pima County: Santa Cruz River, from the Interstate 19 bridge (T15S, R13E, Section 26) downstream to the Avra Valley Road bridge (T12S, R12E, Section 8). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 meters (328 ft) laterally adjacent to the 100-year floodplain.

5. Pima County: Rillito Creek system, from the confluence of Rillito Creek and the Santa Cruz River (T13S, R13E, Section 7) upstream, along Tanque Verde Creek to the boundary between Sections 2

and 3, T14S, R16E, and upstream along Agua Caliente Creek to the Soldier Trail crossing (T13S, R16E, Section 19). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

6. Pima County: Canada del Oro, from its confluence with Sutherland Wash (T11S, R14E, Section 4) downstream to its confluence with the Santa Cruz River (T13S, R12E, Section 1). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 meters (328 feet) laterally adjacent to the 100-year floodplain.

7. Pima County: Alamo/Growler Wash system, from the well in Alamo Canyon (T16S, R4W, unsurveyed Section 6) downstream to the point where Growler Wash intersects the Bates Well road (T15S, R7W, Section 6). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

8. Pima County: Arivaca Creek, from the road crossing in the town of Arivaca (T21S, R10E, Section 28) downstream to the confluence with San Luis Wash (T21S, R9E, Section 4). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

9. Greenlee and Graham Counties: Gila River, from the confluence with the San Francisco River (T5S, R29E, Section 28) downstream to the gaging station in Section 31, T6S, R28E. The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

10. Pinal and Graham Counties: Gila River, from the confluence with the San Pedro River (T5S, R15E, Section 23) downstream to the Ashurst-Hayden Dam (T4S, R11E, Section 8). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

11. Graham County: Bonita Creek, from the boundary between Section 36 (T5S, R27E) and Section 31 (T5S, R28E) downstream to the confluence of Bonita Creek and the Gila River (T6S, R28E, Section 21). The boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

12. Maricopa County: New River, from the boundary between Sections 3 and 4, Township 7 North, Range 3 East, downstream to the boundary between Sections 19 and 20, Township 6 North, Range 2 East. The

boundaries include the current active channel(s), and all secondary, side, and overflow channels, up to and including the 100-year floodplain, and areas within 100 m (328 ft) laterally adjacent to the 100-year floodplain.

The primary constituent elements of cactus ferruginous pygmy owl critical habitat include: Sonoran Desertscrub, xeroriparian thickets, riparian thickets, forests, and woodlands, and areas where such vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

Note: Map follows:

BILLING CODE 4310-55-M

<GRAPHIC><TIF1>TP12DE94.002

BILLING CODE 4310-55-C

Dated: December 6, 1994.
George T. Frampton, Jr.,
Assistant Secretary for Fish and Wildlife and Parks.
[FR Doc. 94-30468 Filed 12-7-94; 1:27 pm]
BILLING CODE 4310-55-M