50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered and Threatened Status for Two Populations of the Roseate Tern

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the population of the roseate tern (*Sterna dougallii dougallii*) that nests in northeastern North America to be endangered and to determine the Caribbean populations, including these of the U.S. Virgin Islands, Puerto Rico, the Florida Keys, and Dry Tortugas, to be threatened. This action is being taken because the number of suitable nesting islands for colonies of this species has been greatly reduced by human activity, competition from expanding numbers of large gulls, and predation. The proposed rule would provide protection to nesting populations within the United States jurisdiction. Critical habitat is not being proposed. The Service seeks additional data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by January 5, 1987. Public hearing requests must be received by December 19, 1986.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, One Gateway Center, Suite 700, Newton Corner, Masssachusetts 02158. Comments and materials received will be available for public inspection, by appointment, during normal business hours, at the above address.

FOR FURTHER INFORMATION CONTACT: Roger L. Hogan at the above address (617/965–5100, extension 316, or FTS 829–9316).

SUPPLEMENTARY INFORMATION:

Background

The roseate tern is a dove-sized coastal bird, and one of several similar-appearing species of terns found in the United States and elsewhere throughout most of the world (American Ornithologists' Union [AOU] 1983). All of these terns are graceful, whitish seabirds with black caps and long forked tails. They are strong fliers that feed mainly on small fish, which they capture by plunging headfirst into the water. They nest on the ground, usually on small islands, in dense colonies of hundreds and sometimes thousands of birds. Often, two or more species share the same nesting areas. Although all of the associated species face similar problems, the roseate tern is particularly vulnerable because its nesting populations in North America and the Caribbean are very small and localized. Unlike certain other terns, it occurs only along marine coasts. Gochfeld (1983) determined a documented world population of this wide-ranging species to be between 20,000 and 30,000 pairs, but estimated that the actual population might be closer to 44,000 pairs, with the largest numbers in the Indian Ocean.

In North America this species can be distinguished from its close relatives by its pale color and mostly black bill and a slight rosy tint on its breast in summer. In winter, the black cap is largely

replaced with a white forehead. The sexes look alike, but immature birds retain a distinctive plumage for their first year and do not nest until they are two or three years old. Although five subspecies are recognized worldwide, only one, the nominate subspecies (*Sterna d. dougallii*), occurs in the Northern Hemisphere, and there are three small, but widely separated, breeding populations of that subspecies: northeastern coast of North America, several islands in the Caribbean Sea, and northwestern Europe (AOU 1983). Other former breeding areas have long been vacant, and recent surveys indicate that numbers nesting in the northeastern United States, adjacent Canada, the British Isles, and northwest France have declined sharply (Buckley and Buckley 1981, Nisbet 1980).

The size and trend of the island nesting population of roseate terns in the Caribbean Sea and occasionally the Florida Keys and Dry Tortugas, is less clear due to limited observations in many areas and some confusion between this species and the common tern (*Sterna hirundo*). This population nests primarily in Puerto Rico and the U.S. Virgin Islands, where Van Halewyn and Norton (1984) estimate about 2500 pairs. Sprunt (1984 estimates that 1000 to 2000 pairs nest in small colonies on cays and small islands in the Bahamas. In Florida, a few dozen pairs nest every year among vast numbers of other terns at the Dry Tortugas and about 40 pairs have nested on flat rooftops in Key West in recent years (Clapp and Buckley 1984).

Migrants from the northeastern United States winter primarily in the waters off Trinidad and northern South America from the Pacific Coast of Colombia to eastern Brazil (Nisbet 1984). Wintering grounds of the Caribbean population are still unknown, but may be the same general areas used by terns from the northeastern United States.

Although its nesting range in North America is often listed as extending from Nova Scotia to Virginia or North Carolina, plus the southern tip of Florida, the roseate tern was always most common in the central portion of this range (Massachusetts to Long Island) and in recent years has all but disappeared from the edges of that range (Buckley and Buckley 1981). This species has not nested for many decades in Bermuda (AOU 1983). In 1984, nesting was known to have occurred only in the states of Connecticut, Maine, Massachusetts, New York, and Florida and the provinces of Nova Scotia and Quebec.

The nesting population in the northern United States was greatly reduced by hunting for the military trade in the late 19th century. The population soon recovered when protection was provided and reached a high of about 8500 pairs in the 1930's (Nisbet 1980). Subsequently, it declined to about 4800 pairs in 1952 and reached a low of 2500 pairs in 1977–78 (Erwin and Korschgen 1979). The estimated population has fluctuated in the range of 2500 to 3300 pairs since then (Nisbet 1980, Buckley and Buckley 1981, Kress *et al.* 1983) with the most intensive, complete surveys conducted in recent years. Although numbers of pairs nesting at individual colonies are known to fluctuate from year to year, some of the reported changes in regional populations may be due to census problems. In all northeastern U.S. and Canadian colonies, this species nests among common terns (*Sterna hirundo*), which usually outnumber it. An accurate census requires a careful count of nests. The nests and eggs of the two species are similar, but roseates tend to conceal their nests under vegetation, boulders, boards, etc., making a complete nest count difficult. Also, young birds nesting for the first time tend to nest substantially later than old birds and could be missed on a single census (Spendelow 1982).

At least 29 major sites used by roseate terns have been lost since 1920. Some of these colonies moved because of repeated mammal predation, but nearly half of the sites were abandoned because of competition and predation from expanding populations of gulls (Nibset 1980).

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the population of the roseate tern that nests in northeastern North America should be classified as endangered and the Caribbean nesting and wintering populations as threatened. 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 roseate terns in the Western Hemisphere are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Almost all important colonies of roseate terns are and have been on small islands, often located at ends or breaks in barrier islands. Nesting habitat for the northeastern North America population has been greatly reduced by human development of barrier islands. Some roseate terns have attempted to nest in the salt marshes but with almost no success (Buckley and Buckley 1981).

In southern New England, many traditional nesting sites were abandoned during the 1940's and 1950's when herring (*Larus argentatus*) and great black-backed (*Larus marinus*) gulls rapidly expanded their nesting ranges southward into that region. These large and aggressive gulls gradually took over most of the outer islands that were preferred by nesting terns. The gulls select nesting sites and initiate nesting in early spring, before the terns return from wintering areas. After a few years, when the nesting gulls reach a certain density, the terns are forced to seek other sites. In several instances islands close to shore, or even peninsulas, have been used, but various predators caused the terns to abandon those sites within a few years.

Many of the islands used by nesting terns in recent years were long-time sites of lighthouses with occupied residences. The presence of humans usually discouraged nesting by gulls, but not terns. However, as the lights have been automated and human occupation terminated, the gulls have gradually taken over the islands. At one such site in Massachusetts nesting gulls had displaced all terns by 1966. A gull removal program was implemented and the island now supports nearly 60% of all nesting roseate terns in North America as well as large numbers of common terns. Other islands with formerly manned lighthouses or forts now support large tern colonies, but only because nesting gulls have been kept out. In the Caribbean area, almost all of the recorded breeding sites of roseate terns have been on very small islets, usually located off small or medium-sized islands. Although these islets are too small for development, they regularly visited by "eggers" who collect large quantities of eggs for food (Van Halewyn and Norton 1984).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The roseate tern, as most other terns and many other colonial nesting waterbirds, suffered a drastic population decline in the United States in the late 19th century due to hunting for the millinery trade. However, under protective laws (Migratory Bird Treaty Act, 16 U.S.C. 703–711) and changing fashions in the early 20th century, the species staged a rapid comeback. Most

existing colonies are on publicly-owned lands and receive some protection.

Some of the larger colonies are the subject of intensive, long-term research that involves nest-trapping, banding, measurements of eggs and young, and other activities that can be disruptive. However, high productivity in those colonies suggest that regular presence by humans conducting studies may actually be beneficial by deterring predation from mammals and birds as well as possible human vandalism. The research activity also habituates the birds to human presence, resulting in less harm from casual human visitation (Nisbet 1981b).

A major cause of the recent decline may be the trapping and netting of wintering terns for human food along the northeastern coast of South Ameirca (Nisbet 1984). In the Virgin Islands, and elsewhere in the Caribbean, the harvest of eggs for food is a common although illegal, practice.

C. *Disease or predation.* Disease has not been identified as a significant problem in this species in North America, but terns of other species have succumbed to avian cholera, botulism and paralytic shellfish poisoning. An arbovirus was collected from dead roseate terns at a nesting colony in the Seychelles and probably was transmitted by ticks (Converse *et al.* 1976).

Adult terns are relatively long-lived birds and not highly vulnerable to predators other than humans. On the other hand, eggs and young are vulnerable and predation may completely wipe out production in a given colony (Nisbet 1981a).

In daylight hours roseate terns, as well as the more agressive common terns with which they nest, are fairly successful in deterring avian predators by harassment. Nocturnal predators are more of a problem because they may cause the entire colony to desert eggs and young and not return until dawn. Although the predator may destroy only a few nests, other eggs and young are exposed to chilling, resulting in delayed hatching of eggs and, under extreme weather conditions, major losses of eggs and young. In some locations, delay at the hatching stage my result in losses of young to ants (Nisbet 1981a).

The main reason terns are only successful on small islands for nesting is the absence of predatory mammals such as foxes, skunks, and brown rats. If such predators do gain access, the terns soon abandon the site. Predatory birds, such as the nocturnal great-horned owl (*Bubo virginianus*) and black-crowned night-heron (*Nycticorax nyctricorax*), pose a greater problem because they can fly to the islands and attack in darkness when the terns are at a distinct disadvantage. Sometimes individuals of these two predators specialize in preying on terns. The owls prey on adult terns or nearly-grown young; the night-herons on eggs and recently hatched young. When terns nested on remote outer islands, they had less contact with these predators. However, as gulls took over the preferred remote nesting islands, the terns were restricted to islands closer to the mainland.

In the Caribbean area, populations are declining primarily as a result of disturbance and predation by man and introduced animals, including the brown rat and mongoose (Van Halewyn and Norton 1984, Sprunt 1984).

D. *The inadequacy of existing regulatory mechanisms.* The Migratory Bird Treaty Act protects the roseate tern and its parts, nests, and eggs from taking and trade while it is under United States jurisdiction, but not when in the Caribbean or South American wintering grounds. The roseate tern is a state-listed species in Florida and Massachusetts (threatened) and in New York and Connecticut (endangered), which provides some protection from take and transport, but these States' laws provide no protection of the habitat itself. Although its current major nesting islands in the Northeast are somewhat protected, pressure from human encroachment and nesting gulls limits any opportunity for expansion or shift to new or former sites. The current protection of colonies is almost entirely by volunteer private interests that are self-funded and without long-term institutional commitment. The Endangered Species Act offers additional possibilities for increased protection and management of the nesting habitat for the bird.

E. *Other natural or manmade factors effecting its continued existence.* As previously noted, the displacement of roseate terns from their traditional colonies by gulls has been the major factor in reducing the number of nesting colonies in northeastern North America, if not in reducing the population as well. The increase of gulls is primarily attributed to an increased food base provided by human garbage at landfills. Survival of young gulls in the critical first winter is greatly enhanced by the abundant food source. In order to make more nesting habitat available for the terns, it may be necessary to reduce or eliminate gull populations at some locations.

The roseate tern is a specialist feeder on small schooling marine fish that it captures by diving into the water. In New England, American sandlance *(Ammodytes americanus)* have comprised 80–100% of the fish eaten by adults or fed to young (Nisbet 1981a). This fish has become extremely plentiful in recent years and may account for relatively high reproductive success among the terns. In other places the terns feed on other small fish. They may fly up to 10 kilometers (6 miles) from nesting areas to favored feeding areas *(ibid).* However, if conditions that now sustain the high number of sandlances in the major tern area change and fish populations dwindle, the roseate terns may become subject to considerable stress.

The Service has carefully assessed the best scientific 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 population of roseate terns that nest in northeastern North America as endangered. The small, reduced population that nests within a constricted range, at only a few sites, and with nearly 60% of the population confined to one small island off southeastern Massachusetts, warrants endangered rather than threatened status. If gulls are allowed to take over the few major nesting islands, this tern will be in danger of becoming extirpated from the contiguous United States.

An additional preferred action is to list as threatened the nesting population of the Caribbean (including the Virgin Islands, Puerto Rico [Culebra], and Florida [Dry Tortugas and Florida Keys]) and all wintering birds in the Western Hemisphere. On the wintering grounds in this Hemisphere, the Northeastern and Caribbean nesting populations are very probably uniformly mixed. Protection can be extended to these terns while wintering to prevent their being imported into the U.S., although imports are not now taking place, and none are expected. Threatened status would, therefore, cover all roseate terns in the Caribbean, regardless of their origins.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. This determination has been made since it is felt that such a designation would not be beneficial to the species (50 CFR 424.12). Terns can be disturbed on nesting islands by unknowing members of the

public who might be attracted to the colony location by the publication of maps and other information. Most existing nesting colonies of the roseate tern in U.S. jurisdiction are on lands that are owned and protected by Federal, State or local government agencies, who have already been notified of the terns' locations. No other notification benefits would accrue.

Available Conservation Measures

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

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and (see revision at 51 FR 19926, June 3, 1986). 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 subsquently, 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. No Federal involvement is expected or known that is likely to adversely affect this species and no critical habitat is proposed to be designated.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general trade prohibitions and exceptions that apply to all endangered or threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdictions of the United States to take, 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 or 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 purposes of the Act. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered, if such relief were not otherwise available. Because the roseate tern already is protected from trade under the Migratory Bird Treaty Act, hardship permits are not expected.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered or threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to the roseate tern (*Sterna dougallii dougallii*) in the Western Hemisphere;

(2) The location of any additional colonies of the roseate tern in the Western Hemisphere and the reasons why any habitat should or could not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range and distribution of this species;

(4) Current or planned activities in the subject area and their possible impacts on the roseate tern.

Final promulgation of the regulation on *Sterna dougallii dougallii* will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of 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 filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, One Gateway Center, Suite 700, Newton Corner, Massachusetts 02158.

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).

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Van Halewyn, R., and R.L. Norton. 1984. The Status and Conservation of Seabirds in the Caribbean. *In:* J.P. Croxall, P.G.H. Evans, and R.W. Schreiber, Eds., Status and Conservation of the World's Seabirds. ICBP Technical Publication No. 2.

Authors

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List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

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

Authority: 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.*).

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

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Birds:							
Tern, roseate	*Sterna dougallii dougalli*	Tropical and temperate oceans in Atlantic Basin.	U.S.A. (Atlantic coast south to NC), Canada (NS, QU), Bermuda.	E		NA	NA
Do	do	do	Western Hemisphere and adjacent oceans and seas (incl. USA [PR, VI, FL] where not listed as endangered.	T		NA	NA

Dated: October 17, 1986.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86–24896 Filed 11–3–86; 8:45 am]

BILLING CODE 4310–55 M