

FINDING OF NO SIGNIFICANT IMPACT

Proposed Addition to 50 CFR Part 16 - Injurious
Wildlife of the Raccoon Dog (Nyctereutes Procyonoides)

Based on a review and evaluation of the information contained in the attached Environmental Assessment, I have determined that the proposal to prohibit the importation of live raccoon dogs (Nyctereutes procyonoides) into the United States, for reasons not otherwise permitted, by adding it to the list of injurious wildlife in 50 CFR Part 16.11 is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an Environmental Impact Statement on this proposal is not required.

Date:

3/23/82

Acting Associate

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Director, Fish and Wildlife Service

DEPARTMENT OF THE INTERIOR
ENVIRONMENTAL ASSESSMENT

PROPOSAL
BY THE
FISH AND WILDLIFE SERVICE
TO PROHIBIT IMPORTATION OF THE
RACCOON DOG, Nyctereutes procyonoides,
INTO THE UNITED STATES

Prepared by
U.S. Department of the Interior
Fish and Wildlife Service
1982

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Environmental Assessment

RACCOON DOG

I. PROPOSAL

The Fish and Wildlife Service proposes to prohibit the importation of the raccoon dog, Nyctereutes procyonoides, a nonindigenous predatory mammal of the Family Canidae, into the United States by adding it to the list of injurious wildlife in 50 CFR Part 16.11. The basic authority for this action is the Lacey Act (18 U.S.C. 42). If added to the list, live raccoon dogs could only be imported by permit for scientific, medical, educational, or zoological purposes or without a permit by Federal agencies solely for their own use; permits would also be required for the interstate transportation of live raccoon dogs currently held in the United States for scientific, medical, educational, or zoological purposes. However, the proposal would prohibit interstate transportation of live raccoon dogs currently held in the United States for fur farm propagation or other purposes not listed above.

II. PURPOSE AND NEED FOR THIS ACTION

A. Purpose

The mission of the Fish and Wildlife Service is to "provide the Federal leadership to conserve, protect and enhance fish and wildlife and their habitats for the continuing benefit of people." In keeping with this mission, the purpose of the proposal is to provide for the protection of existing fish and wildlife

resources from potential adverse effects due to predation or interspecific competition resulting from introduction of the raccoon dog into the natural ecosystems of the United States.

B. Need

The need for the proposal is based on currently available biological evidence which strongly suggests that importation and introduction of the raccoon dog into the natural ecosystems of the United States would pose a threat to migratory waterfowl, upland game birds, and other native wild-life species. Adverse affects from raccoon dog introductions would transcend State lines and become regional or national in occurrence.

C. Background

Prompted by the presence of limited numbers of this canid on fur farms in the United States and Canada, letters constituting a cooperative arrangement were exchanged in September 1981 by the Assistant Secretary for Fish and Wildlife and Parks of the Department of the Interior and the Canadian Ministry of the Environment. The arrangement requires both Governments to use their "best efforts under existing legal authority to effect prohibition of importation of the raccoon dog."

Concern over their presence on fur farms in Wisconsin, Illinois, and Ontario, Canada occurred as a result of its demonstrated ability to adapt to a variety of vegetative and climatic conditions in Asia and Europe. The species is

indigenous to eastern Asia including Japan, Korea, parts of the eastern Soviet Union, Mongolia, mainland China, and northern Indochina. From 1929 to 1955 nearly 9,000 raccoon dogs were introduced into western and central Soviet Union and Siberia (Safanov, 1980) in efforts to establish the species for fur harvest purposes. The introductions in the western region of the Soviet Union proved successful, and from these areas the species has migrated steadily northward and westward and now is reported to be established in Finland, Sweden, Rumania, Hungary, Czechoslovakia, Poland, and East and West Germany. They have also been observed in Austria, Bulgaria, and Greece.

The raccoon dog appears capable of adapting to a wide range of vegetational and climatic conditions. Habitat suitable for colonization by raccoon dogs includes not only the temperate deciduous forest biome in their historical and introduced ranges, but also steppe and prairie grassland, and boreal forest biomes. Climatic conditions throughout its current range include humid continental-long summer, humid continental-short summer, dry continental, humid subtropical, and Mediterranean subtropical (Miller et al., 1957 in Dickson, 1981). Migratory movements preferably follow protected waterways (Roben, 1975 in Dickson, 1981) with dispersal into, and colonization of, less desirable habitat occurring from these riparian areas. Bueller (1973 in Dickson, 1981) reported that the species readily inhabits areas occupied by humans.

The raccoon dog is a member of the canid family. They are active at night, do not move with the speed associated with other canids, and cannot climb trees. Externally, their appearance resembles that of a fox except for

proportionately shorter legs and tail, and facial markings similar to a raccoon. Their weight is reported to vary from about 10 pounds in the summer months to as much as 17 pounds in late autumn. Raccoon dogs are the only canids known to hibernate during extreme winter weather, and the increase in weight is attributed to an accumulation of fat to facilitate hibernation.

Raccoon dogs are highly omnivorous. Studies have shown their diet to include small mammals, birds and bird eggs, amphibians, reptiles, fish, insects, mollusks, carrion, garbage associated with human habitation, and vegetable matter including fruits, berries, and grains. The proportion of these foods in the total diet varies by season and local availability.

Stroganov (1969) stated that the species may be harmful to hunting by destroying young game animals. They are known to prey on waterfowl, upland game birds, and eggs. Novikov (1956) identified raccoon dogs as important enemies of geese, goslings, partridges, and other game fowl. He also stated that predation to domestic fowl has been reported. Viro and Mikkola (1981), while concluding in their dietary study of the species in Finland that it was not harmful to game species, did identify the following game birds in the stomachs of raccoon dogs: common teal (Anas crecca); red-breasted merganser (Mergus serrator); woodcock (Scolopax rusticola); and hazelhen (Tetrastes bonasia). Parts of a mallard (Anas platyrhynchos) were also identified but thought to have been consumed as carrion. Barbu in 1969 (in Dickson, 1981) stated that raccoon dogs posed

a serious threat to ground nesting birds. Dickson (1981) concluded that, in Canada, the eggs, nestlings, and brooding adults of upland game birds and waterfowl could be susceptible to raccoon dog predation including: grouse (Canachites canadensis and Bonasa umbellus); ringnecked pheasants (Phasianus colchicus); mallards; black ducks (Anas rubripes); blue-winged teal (Anas discors); and common mergansers (Mergus merganser).

Viro and Mikkola (1981) identified murine and cricetid rodents, shrews (Sorex sp.), and muskrats (Ondatra zibethica) in the stomachs of raccoon dogs in Finland. Pavlov and Kiris in 1963 (in Dickson, 1981) determined that raccoon dogs preyed upon muskrats and nutria (Myocastor coypus); they concluded that, in the absence of control efforts, raccoon dogs will adversely affect muskrat and nutria populations. Ben'kovskii in 1974 (in Dickson, 1981) found raccoon dogs to be a serious predator of Siberian weasels (Mustela sp.) and decreased the number available for trapping. Conversely, Samusenko and Golodushko in 1961 (in Dickson, 1981) stated that raccoon dogs were responsible for consuming 31 times more harmful mammals than game or useful animals. Dickson (1981) identified the following mammals in Canada likely to be consumed by raccoon dogs; meadow vole (Microtus pennsylvanicus); pine vole (Pitymys pinetorum); white-footed mouse (Peromyscus leucopus); deer mouse (Peromyscus maniculatus); southern bog lemming (Synaptomys cooperi); muskrat; meadow jumping mouse (Zapus hudsonicus); cottontail rabbit (Sylvilagus floridanus); woodchuck (Marmota monax); star-nose mole (Condylura cristata); and some weasels (Mustela frenata, M. rixosa, and M. erminea).

Available evidence suggests that interspecific competition for food and/or den sites is likely to occur between raccoon dogs and fox (Vulpes fulva and Urocyon cinereoargenteus), raccoons (Procyon lotor), badgers (Taxidea taxus), muskrats, and possibly skunks (Mephitis mephitis) and opossums (Didelphis marsupialis). The extent to which raccoon dogs would or could supplant these species is not known. There is no evidence to date to suggest that the raccoon dog is responsible for exterminating any bird or mammal because of predation or interspecific competition. However, the possibility exists that at least some native wildlife would be adversely affected by their introduction into the United States.

The life expectancy of female raccoon dogs in the wild is believed to be 7 to 8 years with the highest fertility demonstrated by 4 year old animals. The average litter size is probably 5 to 7, although litter sizes up to 19 have been reported. Sexual maturity is reached 9 to 11 months after birth, and breeding is possible during the first year.

Certain biotic and abiotic factors have been identified as limitors of raccoon dog populations. In addition to habitat modifications, severe winter conditions probably results in increased mortality to those animals unable to hibernate due to insufficient fat accumulation. Additionally, because of their preference for habitat in proximity to water, spring floods are suspected of drowning mortalities especially among the young. Barbu in 1972 (in Dickson, 1981) stated that avian and mammalian predators caused significant mortality to raccoon dogs. Based on her review of current

literature, Dickson (1981) determined that Canadian mammals likely to prey on raccoon dogs would include: lynx (Lynx canadensis); bobcat (Lynx rufus); wolves (Canis lupus); coyotes (Canis latrans); red fox; and free roaming dogs. Several large owl species, including great horned owls (Bubo virginianus) and barred owls (Strix varia), were also identified as predators of raccoon dogs. In the United States, only bobcats, coyotes, free roaming dogs, and large owls could be expected to have any possible limiting affect on raccoon dog populations.

A number of parasites and diseases, are known to infect the species. These include, but are not limited to, mange, rabies, and at least 25 species of helminthic worms including Trichinella pseudospiralis, which has a life cycle identical to Trichinella spiralis, but can apparently infect primates under experimental conditions and birds as-well-as humans, rodents, and swine (Dick, 1981).

Primary control efforts currently available that could be used to control the raccoon dog are likely to be limited to trapping, denning, and snaring. While shooting has been suggested, this method would appear to have limited applicability due to the nocturnal behavior of the species.

During 1979, three pairs of raccoon dogs were legally imported to a mink ranch in Wisconsin Rapids, Wisconsin. Six additional animals were also imported to a mink ranch in Freeport, Illinois. The most recent information available indicates that these animals have increased through breeding to 35--13 in Wisconsin and 22 in Illinois. No other raccoon dogs are known to exist on fur farms in the United States, and none are believed to exist in the wild.

A November 1981 Division of Law Enforcement review of filed import/export declarations (Form 3-177) revealed no importations of live raccoon dogs into the United States during Fiscal Year 1980 and the first quarter of FY 1981.

One-hundred-forty raccoon dogs were legally imported into Ontario, Canada during 1980 for propagation purposes. A representative of the Canadian Wildlife Service indicated that this breeding stock has increased to about 450 animals. As a result of the cooperative arrangement between the United States and Canada, the raccoon dog in late 1981 was added to the Canadian Import Control List. Additional importations of the species into Canada are prohibited as is transport between provinces of those animals already present.

The pelt of raccoon dogs is marketed under the name "Ussurian raccoon." Novikov (1956) states that the species has become an important fur producing animal in some areas of the Soviet Union. The fur, according to Stroganov (1953 and 1969), is used for necklets, collars, some fur coats, and is especially suitable for pilots' clothing. A small market for raccoon dog pelts apparently exists in the United States. Annual demand for their fur is estimated to be 20,000 to 25,000 pelts with a raw value of about \$2 million.

III. ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

A. Amend 50 CFR Part 16.11 to Include the Raccoon Dog as an Injurious Species - Preferred Alternative.

This alternative would amend 50 CFR Part 16.11 through the addition of the raccoon dog, Nyctereutes procyonoides, to the list of injurious wildlife.

Under the Lacey Act (18 U.S.C. 42), this action would prohibit its live importation into or transportation between the continental United States, the District of Columbia, Hawaii, the commonwealth of Puerto Rico, or any territory or possession of the United States by any means whatsoever, except by permit for zoological, educational, medical, or scientific purposes. Federal agencies could import raccoon dogs without a permit solely for their own use. The interstate transportation of live raccoon dogs currently held in the United States for fur farm propagation, or for any purpose not otherwise permitted, would be prohibited.

This alternative would avert potential adverse impacts to indigenous wildlife resulting from predation, interspecific competition, or transmission of diseases and parasites resulting from the accidental release of raccoon dogs or purposeful introduction by any State. Possible adverse economic impacts to the fur industry as a result of predation or interspecific competition would also be averted under this alternative. Permit and enforcement requirements would be the Service's responsibility; however, little additional expenditure of Service funds or manpower would be required.

B. No Action.

With no action, importation and transportation of raccoon dogs between the continental United States, the District of Columbia, Hawaii, the commonwealth of Puerto Rico, or any territory or possession of the United States could continue without Federal restriction for scientific, medical,

educational, zoological, or propagating purposes. The Lacey Act reserves to each State wildlife conservation agency the authority to release exotic, noninjurious wildlife into their natural ecosystems. If any State wildlife conservation agency determined that purposeful introduction of raccoon dogs into the environment was desirable for fur harvest, sport hunting, or other reason, it could do so. The probability of such an action appears slight. More likely, however, is the accidental release from fur farms of substantial enough numbers of raccoon dogs to result in the establishment of a wild population.

Habitat and climatic conditions similar to the historic and introduced ranges of the raccoon dog occur throughout most of the eastern United States west to the Rocky Mountains; it is probable that the species would gradually expand into at least the most optimum areas, and especially into the northeast, mid-Atlantic, and midwest regions.

Interspecific competition for den sites and food would probably be most serious between raccoon dogs, fox, and raccoons, but could also include competition with badgers, muskrats, opossums, and skunks. While it is impossible to determine the full, long-range impact of interspecific competition on indigenous North American predatory animals, the potential for significant harm exists. The decline of either fox and/or raccoon alone would have serious implications for the fur industry.

Prey species affected could include muskrat, nutria, small mustelids, woodchuck, cricetid and murine rodents, waterfowl, and upland game birds as well as a variety of reptiles and amphibians. While predation on certain rodents could prove beneficial, it is doubtful that such benefits would outweigh the probable serious effects on desirable prey species. Dickson (1981, p. 28) concluded from her review of available evidence that "... in Southern Ontario, raccoon dog predation would have deleterious effects on waterfowl, game birds, and furbearer populations, as well as on populations of species having little or no economic value."

The occurrence of raccoon dogs in the natural ecosystem could pose a potential threat to domestic livestock (e.g., poultry) due to predation and disease with resulting financial losses to producers and increased costs to consumers. The magnitude of the potential loss is unknown.

In this alternative, no immediate Fish and Wildlife Service involvement would be required. However, costs would increase if management programs became necessary in the long term to alleviate damages caused by the species.

C. Do Not Amend the List of Injurious Wildlife but Encourage the Fur Farming Industry to Refrain from Propagating Raccoon Dogs.

Under this alternative the list of injurious wildlife would remain unchanged.

Importation of raccoon dogs into the United States for fur propagation purposes could continue. The Service, however, would undertake to

establish a cooperative public education program with the State wildlife conservation agencies. Through industry trade journals, professional organizations, and other appropriate media forms, the program would inform and educate the fur farming industry of the raccoon dog's performance in its introduced range and of the potential negative impacts resulting from their accidental release and introduction into the natural ecosystems of the United States. This alternative would rely on the fur producing industry to safeguard indigenous wild populations of fur bearing mammals, and other wildlife and domestic species. There would be no assurances that raccoon dogs would not escape into natural ecosystems. The potential long-term affect of the release into natural ecosystems of the United States, even in limited areas, of substantial enough numbers of raccoon dogs to establish viable wild populations would be the same as in the "No Action" alternative. The expenditure of Service funds and manpower would be necessary to establish and conduct the cooperative education program.

D. Do Not Amend the List of Injurious Wildlife But Encourage the Individual States to Prohibit Importation for Stocking and Fur Farming Purposes.

In this alternative the Service would encourage the individual States to prohibit importations except for zoological, educational, medical, or scientific purposes.

Historically, the responsibility for the management of resident furbearing mammals has been reserved to the States and would continue in this alternative. Existing State laws and regulations, and their enforcement, concerning the importation of nonindigenous wildlife vary considerably by State. Assuming that every State

recognized the need to prohibit importations, additional legislation or regulatory powers would probably be necessary.

~~Under this alternative, there would be no assurance that raccoon dog importations would be prohibited in every State. Should any State chose to allow importation of the species for stocking or fur farming purposes, then the probability exists that raccoon dogs would, in the long-term, expand into suitable habitat in adjacent States. In this situation, the potential long-term affect of their release into natural ecosystems of the United States would be the same as in the "No Action" alternative. Additional Service funds and manpower would not be required.~~

IV. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The following generalized vegetative biomes have been identified as currently supporting raccoon dog populations: temperate deciduous forest; steppe and prairie grassland; and boreal forest. Raccoon dogs are also adaptable to at least five climatic zones: humid continental-short summer; humid continental-long summer; Mediterranean subtropical; humid subtropical; and dry continental.

From the above, it can be reasonably stated that the proposed amendment could affect most areas of the United States from the Atlantic seacoast to the Rocky Mountains. Mountain ranges are suspected of serving as natural barriers to their movements. However, Novikov (1956) stated that the species was rather widespread in Japan. That country has extensive mountain ranges with elevations fairly common up to 5,000 feet. Riddle (1979 in Dickson, 1981) stated that raccoon dogs in Japan live in the summer at high mountain altitudes, and overwinter in lower areas. It is conceivable, therefore, that the Rocky

Mountains could act only as a temporary barrier to its dispersal into favorable west coast habitat.

~~A number of threatened and endangered ground nesting birds and mammals~~ indigenous to the United States occur within the broad geographic areas that could be affected by listing the raccoon dog as injurious.

V. ENVIRONMENTAL CONSEQUENCES

The proposed action is intended to prevent adverse impacts to a wide variety of wildlife indigenous to the United States. It would avert the occurrence of interspecific competition for food and den sites with native predatory and nonpredatory mammals. It would also preclude the possibility of predation on ground nesting waterfowl and upland game birds and their eggs, as well as predation on a wide variety of mammals which may or may not currently be of important economic value.

The proposed action will not have any direct effect on the natural environment. The goal of the proposed action is to protect and maintain indigenous wildlife from probable long-term negative effects resulting from introduction of the raccoon dog into the natural ecosystems of the United States. Since the proposed action would avoid adverse negative effects on native wildlife, potential mitigating measures are unnecessary.

VI. CONSULTATION AND COORDINATION WITH OTHERS

A Federal Register Notice was published on December 1, 1981, informing the public of the Service's intention to review available information on the raccoon dog. The Notice contained brief background material and solicited

biological, economic, or other information concerning the species. Copies of the Notice were sent to all State clearinghouses and approximately 60 individuals and organizations considered either to have knowledge of ~~raccoon dogs or a vested interest in the outcome of the Service's~~ review process. The mailing included USDA (APHIS, USFS, SEA, SCS, ESCS), HHS, USDI (FWS, BLM, BIA, NPS), zoos currently maintaining raccoon dogs, fur industry associations, professional wildlife management associations, universities, and other professional organizations.

VII. LITERATURE CITED

The following references were utilized in the preparation of this Environmental Assessment.

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