

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

RIN 1018-AB42

**Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Louisiana Black Bear. Proposed Designation of Threatened by Similarity of Appearance of all Bears of the Species *Ursus americanus* Within the Historic Range of *U. a. luteolus*****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to list the Louisiana black bear (*Ursus americanus luteolus*) as a threatened species within its historic range and to designate other bears of the species *U. americanus* within the same range as threatened by similarity of appearance under the authority of the Endangered Species Act of 1973, as amended (Act). Its historic range includes southern Mississippi, Louisiana, and east Texas. The Louisiana black bear is vulnerable to habitat loss and illegal killing. This proposal, if made final, would implement protections of the Act. The Service requests comments and relevant data from the public on this proposal.

**DATES:** Comments from all interested parties must be received by August 20, 1990. Public hearing requests must be received by August 6, 1990.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Jackson Field Office, Jackson Mall Office Center, Suite 316, 300 Woodrow Wilson Avenue, Jackson, Mississippi 39213. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Wendell A. Neal (See **ADDRESSES** section), telephone 601/965-4900, FTS 490-4900.

**SUPPLEMENTARY INFORMATION:****Background**

The American black bear (*Ursus americanus*) was formerly widespread in North America from northern Alaska and northern Canada, including Newfoundland, south to central northern Mexico (Lowery 1981). Hall (1981) lists 16 subspecies of *U. americanus*. The black bear is a huge, bulky mammal with long black hair, with brownish or cinnamon color phases often found in

western parts of its range. The tail on the black bear is short and well haired. The facial profile is rather blunt, the eyes small and the nose pad broad with large nostrils. The muzzle is yellowish brown and a white patch is sometimes present on the lower throat and chest. There are five toes on the front and hind feet with short curved claws. Large males may weigh more than 600 pounds, but weight varies considerably throughout their range.

In 1821, Edward Griffith in his work "Carnivora" called the bear from Louisiana the "yellow bear," according to a full species rank, i.e., *U. luteolus*. The first formal citation of the Louisiana black bear as a subspecies (*U. a. luteolus*) was by Miller and Kellog (1955), cited by Lowery (1981). In 1893, C. H. Merriam described the Louisiana black bear using five skulls from a Mer Rouge locality in Morehouse Parish in northeastern Louisiana. The distinctiveness of these skulls, when contrasted with other black bears, is that they are relatively long, narrow, and flat, and have proportionately large molar teeth (Nowak 1986).

According to Hall (1981), *U. a. luteolus* once occurred throughout southern Mississippi, all of Louisiana and eastern Texas. The historic range according to Hall (1981) included all Texas counties east of and including Cass, Marion, Harrison, Upshur, Rusk, Cherokee, Anderson, Leon, Robertson, Burleson, Washington, Lavaca, Victoria, Refugio, and Aransas; all of Louisiana, and the southern Mississippi counties south of and including Washington, Humphreys, Holmes, Attala, Neshoba, and Lauderdale. While Hall (1981) included the southernmost counties in Arkansas as part of the range, there were no Arkansas specimens to support doing so. Accordingly, Arkansas is not considered as part of the historic range for purposes of this proposed rule.

The Louisiana black bear was included in category 2 in the Service's notices of review on December 30, 1982 (47 FR 58454); September 18, 1985 (50 FR 37958); and January 6, 1989 (54 FR 554). Category 2 includes taxa for which information then in possession of the Service indicates that proposing to list the species was possibly appropriate but for which available data were not judged sufficient to support a proposed rule.

The Fish and Wildlife Service was petitioned on March 6, 1987, under section 4(b)(3)(A) of the Act to list the Louisiana black bear as an endangered species. The Service has made two 12-month findings (August 19, 1988, 53 FR 31723 and August 10, 1989, 54 FR 32833) indicating that the action requested

(listing) has been determined to be warranted but precluded by other actions to amend the lists. This proposal constitutes the final finding for the petitioned action.

To clarify taxonomic questions, the Service undertook a study in cooperation with the Louisiana Department of Wildlife and Fisheries to obtain and analyze genetic materials and cranial characters to answer questions on the taxonomic issue. The results of these investigations, which included blood protein electrophoresis, mitochondrial DNA and skull measurements, were received by the Service on July 21, 1989 (Pelton 1989).

A peer review of this report generated a variety of comments, which allow general conclusions on genetics and morphology. Although circumstantial evidence remains that native bears have interbred with introduced Minnesota bears, a morphological distinctiveness remains. There was disagreement on the taxon *U. a. luteolus* as being validated by the multi-character morphological approach. However, it was concluded that, notwithstanding conflicting opinions about accepted mammalian taxonomic criteria, available evidence, while not overwhelming, did not invalidate the taxon. As a subspecies, *U. a. luteolus* qualifies for consideration as a listed species. This action presupposes bears within the historic range of *U. a. luteolus* possess those cranial features characterizing *U. a. luteolus*. Accordingly, threats to this population of bears threatens the taxon and thereby any unique genetic material possibly possessed by the taxon.

#### Summary of Factors Affecting the Species

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

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The habitat of *U. a. luteolus* has suffered extensive modification with suitable habitat having been reduced by more than 80 percent as of 1980. The remaining habitat has been reduced in quality by fragmentation due to intrusion of man and his structures (e.g., proximity to man's disturbing activities, multilane

highways, etc.), thereby stressing the remaining population of bears. According to Rieben (1980) as cited by Nowak (1986), the original 25,000,000 acres of bottomland forests of the lower Mississippi River Valley had been reduced to 5,000,000 acres, and another 165,000 acres are being cleared each year. Some of the Mississippi River Delta counties in the lower Yazoo River Basin may have as little as 5 percent of the original bottomland hardwood.

Presently occupied bear habitat in Louisiana consists of two core areas, the Tensas and Atchafalaya River Basins. Within the basins, only wooded areas (bottomland hardwoods) are considered as bear habitat, although marshes along the lower rim of the Atchafalaya Basin and agricultural lands (sugarcane, soybeans) in other areas are also used. The once extensive bottomland forests of the Tensas Basin no longer exist, with only 15 percent (about 100,000 acres) of the original stands remaining (Gosselink, Louisiana State University, *in litt.* 1988). Of this, only about 15 percent is in public ownership or under plans for public acquisition.

The entire Atchafalaya Basin contained 718,500 acres of bottomland hardwoods as of 1975 (O'Neil et al. 1975). In the lower Atchafalaya River Basin (south of U.S. Highway 190), there are presently approximately 518,000 acres of bottomland hardwoods, with a projected amount of 537,000 by the year 2030 due to accretion (LeBlanc et al. 1981). In the lower Basin, there is a recently established Atchafalaya National Wildlife Refuge of about 15,000 acres and a State owned area (Sheburne Wildlife Management Area) of about 12,000 acres that is to be increased by 23,000 acres. The purchase of 387,000 acres of habitat protection easements are planned. Dow Chemical has donated 30,000 acres to the State and there are 61,000 acres of accreted State lands with land use controls.

Much of the northern portion of the Basin (considered as north of U.S. Highway 190 and which contains the better drained areas) has been cleared for agriculture. As of the 1975 O'Neil report, there were about 200,000 acres of forestland north of U.S. Highway 190. Today there are 100,000 to 128,000 acres of forested lands remaining (Simmering, U.S. Department of Agriculture, *in litt.* 1989). The privately owned lands of the Atchafalaya River Basin may remain exposed to threat from clearing. Privately owned woodlands for both river basins were estimated to be in the range of 115,000 to 143,000 acres of occupied bear habitat out of a total woodland base of 633,000 to 651,000

acres. This means approximately one fifth of the occupied bear habitat is privately owned, and under no plans for protection through conservation easements or acquisition. Clearing forested wetlands for accommodating crop use may forgo USDA farm program benefits for the landowner. This, in the short term, should protect these lands. In the long term, a substantial upturn in commodity prices may make it economically feasible to clear forested wetlands and farm without USDA program benefits. Since the 1985 Food Security Act is re-written every 5 years, there is no guarantee of continued protection of privately owned forested wetlands. In addition, catfish farming, now about a 13,000-acre industry in Louisiana, is rapidly expanding. This, along with crayfish farming and pastureland are other possible uses that would not be limited by the Food Security Act.

Past losses of habitat quantity and quality have been severe (ranging from 95 percent in some lower Mississippi Delta counties to 63 percent in the Atchafalaya River Basin). Protection of privately owned woodlands in the north Atchafalaya and the Tensas River Basins is not assured. Long-term protection of these bear habitats may depend upon factors the Service neither controls nor can adequately predict. The Louisiana bear has exhibited a past vulnerability to habitat loss. Further loss of privately owned occupied habitats as an increment to past losses would represent a threat to this subspecies in a significant portion of its range. Such loss could theoretically breach the minimum population size necessary to ensure continued survival of the Louisiana bear.

*B. Overutilization for commercial, recreational, scientific, or educational purposes.* Black bear populations range in density from one to two bears per square mile. The Great Smoky Mountain National Park carries 500 to 600 bears on 512,000 acres (Pelton pers. comm. 1989). The White River National Wildlife Refuge in Arkansas carries 130 bears on 113,000 acres (Smith 1983). Through trapping and extrapolation of untrapped bears and known family groups of bears, Weaver (pers. comm. 1989) is able to account for 49 bears in about 70,000 acres of timberland of the Tensas River Basin, which contains about 100,000 acres of woods. What fraction 49 is of the total bears in the Tensas Basin is unknown.

In the Atchafalaya River Basin, there are approximately 718,500 acres of timberland, about 518,000 of which are below U.S. Highway 190. For this vast

tract, there is essentially no population data. The population estimates that are available for *U. a. luteolus* range in accuracy from crude to little more than intuition, as the estimates quoted by Nowak (1986). All that is known for certain is that bears exist in the Atchafalaya River Basin, and that due to bear movements it would be difficult to separate bears from the lower, middle, or upper basin.

There are rumors of individuals killing bears for depredating sugar cane and for robbing trap lines. Bears are also killed incidentally to other forms of hunting. It may well be that bear numbers in the Atchafalaya are far greater than most believe, and that illegal kill is not a threat. The White River National Wildlife Refuge in Arkansas has sustained heavy hunting pressure and has maintained a mid-range bear density. A rule of thumb the Virginia Department of Natural Resources uses is that their bear population can withstand a 20 percent annual loss to hunting without affecting the population's ability to sustain itself. As a population of bears approaches the minimum viable number threshold, the more significant is any loss to that population. While illegal killing of bears occurs (Weaver 1988), and that illegal kill can be a threat are both true, the effects of that illegal kill remain speculative.

The appearance of an abnormally low density of *U. a. luteolus* in the Atchafalaya Basin may be an artifact of the poor quality of population data or it may indicate considerable illegal kill is occurring on private and public lands. Should the latter be the case, and at this time it cannot be ruled out, illegal kill of that magnitude would unequivocally be a threat to the continued existence of a viable population of Louisiana black bears.

*C. Disease or predation.* While *U. a. luteolus*, like all other forms of vertebrate wildlife, suffers from disease, or possible predation (young bears being killed by older males), this is not considered limiting or threatening to the population.

*D. The inadequacy of existing regulatory mechanisms.* The dramatic losses of bottomland hardwood forests, including the loss of forested wetlands, as discussed in factor A, portray the inadequacy of existing regulatory mechanisms for protection of such habitats. If illegal killing is a threat, the possibility of prosecution under the Act as opposed to State laws or regulations, may serve as a deterrent in some instances.

*E. Other natural or manmade factors affecting its continued existence.* The

introduction of 161-163 bears of the subspecies *U. a. americanus* from Minnesota into the Atchafalaya and Tensas River Basins in the mid-60's is considered by some (Nowak 1986) to represent a manmade threat to the native subspecies, *U. a. luteolus*. This threat was considered as one of "hybridization," in this instance cross breeding between the introduced subspecies and the native subspecies. Other researchers contended that little genetic difference would be found. In gathering data on this question, the Fish and Wildlife Service, in close consultation with the Louisiana Department of Wildlife and Fisheries, instituted a plan in July 1988 to obtain genetic samples from bears in Louisiana for comparison with bears from the original Minnesota trapping locale and other bear populations, including the Florida subspecies, *U. a. floridanus*. Skull measurements from various bear populations, including Louisiana bears taken before and after the introduction of Minnesota bears, were also compared.

The genetic analyses did not show significant differences between the various subspecies (Pelton 1989). Some interbreeding between subspecies is a normal and expected occurrence simply based on opportunity. The mobile nature of bears, plus the fact there was a more or less continuous distribution in relatively recent times (in an evolutionary sense), was the basis for the assertions by some that little genetic difference would be found. It appears that in a biological sense, hybridization as a threat at this taxonomic level may not be a significant cause for concern, unless there are real genetic differences that were undetected. Hybridization as a threat has neither been discounted or proven and remains unsettled. Since the genetic profile of a known *U. a. luteolus* is unavailable, the issue is unlikely to be settled. The greatest likelihood is that the population of bears inhabiting the Atchafalaya and Tensas River Basins is a mixture; that in a definitional sense, the population is probably intraspecifically hybridized. In a biological sense, *U. a. luteolus* is likely pretty much unchanged (genetically) because of the low probability of reproductive isolation that would be necessary for an extended period in order for the evolutionary process of genetic differentiation to operate.

However, to the extent the genetic investigations did not identify real differences, or to the extent a pure genetic heritage is a realistic concept when applied to subspecies not likely to be reproductively isolated, the threat

may (have) exist(ed). Since *U. a. luteolus* and *U. a. americanus* are so similar as to be difficult to distinguish even by experts, the only practical means available for protecting any possibly remaining unique genetic material originally belonging to the native *U. a. luteolus* would be through listing and protecting the taxon now distinguished by cranial features as *U. a. luteolus*.

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 Louisiana black bear as threatened, defined under the Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The preferred action is chosen because of the continued exposure of privately owned occupied bear habitats to clearing, the Louisiana black bear's demonstrated past vulnerability to such loss, and the significance of these unprotected habitats to the overall well-being and health of the subject bear populations. Endangered status is not chosen because the threats are not believed to place the Louisiana black bear in imminent danger of extinction. For law enforcement purposes, the Service proposes to list all bears of the species *U. americanus* within the historic range of *U. a. luteolus* as threatened by similarity of appearance. Critical habitat is not being proposed as discussed below.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. All Federal and State agencies likely to be involved have been notified of the location and importance of protecting this species' habitat. No additional benefits would accrue from a critical habitat designation that would not accrue from the listing. Locality data are available to appropriate agencies through the Service office described in the ADDRESSES section. Protection of this species' habitat will be addressed through the recovery process and through Section 7 of the Act. Therefore, it would not now be prudent to determine critical habitat for the Louisiana black bear.

#### Available Conservation Measures

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

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Possible Federal actions may include Corps of Engineers wetland permits, Soil Conservation Service watershed projects or the Service's activities or National Wildlife Refuges within the species' occupied habitat. Formal consultation and the resulting biological opinion issued by the Service may preclude or modify Federal actions depending on the nature and extent of the impact on listed species.

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 threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell

or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving 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.

#### Similarity of Appearance

Section 4(e) of the Act authorizes the treatment of a species (or subspecies or group of wildlife in common spatial arrangement) as an endangered or threatened species even though it is not otherwise listed as endangered or threatened if: (a) The species so closely resembles in appearances an endangered or threatened species that enforcement personnel would have substantial difficulty in differentiating between listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to the endangered or threatened species; and (c) that such treatment will substantially facilitate the enforcement and further the policy of the Act.

Introductions of bears from Minnesota in the mid-60's of the subspecies *U. a. americanus* gives rise to the possibility (however remote) that bears remain somewhere with the historic range of *U. a. luteolus* which are of *U. a. americanus* ancestry. Evidence of *U. a. americanus* in southern Arkansas just north of the Louisiana line has been recently documented. This theoretically could present an enforcement and taxonomic problem because both subspecies may now or later inhabit the same range, and they cannot always be differentiated from each other by enforcement personnel or expert. For these reasons, the Service intends to treat bears of the species *U. americanus* other than *U. a. luteolus* as threatened by similarity of appearance within the historic range of *U. a. luteolus*.

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will

be accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

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

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

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to Field Supervisor (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, 1983 (48 FR 49244).

**References Cited**

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**Author**

The primary author of this proposed rule is Wendell A. Neal (see ADDRESSES section).

**List of Subjects in 50 CFR Part 17**

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

**Proposed Regulation Promulgation**

**PART 17—[AMENDED]**

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

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

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

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

**§ 17.11 Endangered and threatened wildlife.**

- \* . . . . .
- (h) \* \* \*

Species			Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name	Historic range					
<b>MAMMALS</b>							
Bear, Louisiana black	<i>Ursus americanus</i>	USA (LA, MS, TX)	Entire	T		NA	NA
Bear, American black	<i>Ursus americanus</i>	North America	USA (LA, MS, TX)	T(S/A)		NA	NA

Dated: May 31, 1990.  
 Richard N. Smith,  
 Acting Director, Fish and Wildlife Services.  
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