



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



In Reply Refer To:
FWS/AIA/OSA


MAY 9 2000

Dear Colleague,

I am writing to you to inform you that on May 9, 2000, the U.S. Fish and Wildlife Service published in the *Federal Register* a final rule reclassifying the koala (*Phascolarctos cinereus*) as threatened under the U.S. Endangered Species Act (copy enclosed). The rule may also be obtained electronically from our web site at <http://international.fws.gov/global/cop10frn.html>.

This final rule is the culmination of a listing process initiated by the U.S. Fish and Wildlife Service in response to a petition received in May 1994, followed by the publication of a proposed rule in the *Federal Register* on September 22, 1998 (63 FR 50547). This letter and a copy of this final rule are being provided to all organizations and agencies that submitted comments on the proposed rule.

Sincerely,


Susan Lieberman, Ph.D.
Chief, Office of Scientific Authority

Enclosure

33. In this *Second Report and Order*, the Commission defines emergency information and adopts a requirement that video programming distributors must make emergency information accessible to persons with hearing disabilities either through closed captioning or by using a method of visual presentation. Such methods include, but are not limited to, open captioning, crawls or scrolls. We concluded that a rule requiring closed captioning or a method of visual presentations achieves the goal of ensuring that the same critical information about an emergency is accessible to persons with hearing disabilities as is available to other viewers. The rule also provides significant flexibility to the video programming distributor by allowing it to determine the most feasible and affordable method for making such information accessible. Therefore, the rule will not impose an economic burden on video programming distributors, including small entities.

F. Report to Congress

34. The Commission will send a copy of this *Second Report and Order*, including this FRFA, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 801(a)(1)(A). A copy of this *Second Report and Order* and FRFA (or summary thereof) will also be published in the *Federal Register*, pursuant to 5 U.S.C.A. 604(b), and will be sent to the Chief Counsel for Advocacy of the Small Business Administration.

Ordering Clauses

35. Pursuant to the authority contained in sections 4(i), 303(r), and 713 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 303(r), and 613, the Commission's rules are amended by adding a new § 79.2 as shown in the rule changes. The amendments set forth in the rule changes shall become effective upon approval from the Office of Management and Budget.

36. The Commission's Consumer Information Bureau, Reference Information Center, shall send a copy of this *Second Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 79

Closed captioning of video programming.

Federal Communications Commission.
Magalie Roman Salas,
Secretary:

Rule Changes

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 79 as follows:

PART 79—CLOSED CAPTIONING OF VIDEO PROGRAMMING

1. The authority citation for Part 79 continues to read as follows:

Authority: 47 U.S.C. 613.

2. Add § 79.2 to read as follows:

§ 79.2 Accessibility of programming providing emergency information.

(a) *Definitions.* (1) For purposes of this section, the definitions in § 79.1 apply.

(2) *Emergency information.* Information, about a current emergency, that is intended to further the protection of life, health, safety, and property, i.e., critical details regarding the emergency and how to respond to the emergency. Examples of the types of emergencies covered include tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, civil disorders, school closings and changes in school bus schedules resulting from such conditions, and warnings and watches of impending changes in weather.

Note to paragraph (a)(2): Critical details include, but are not limited to, specific details regarding the areas that will be affected by the emergency, evacuation orders, detailed descriptions of areas to be evacuated, specific evacuation routes, approved shelters or the way to take shelter in one's home, instructions on how to secure personal property, road closures, and how to obtain relief assistance.

(b) *Requirements for accessibility of programming providing emergency information.* (1) Video programming distributors must make emergency information, as defined in paragraph (a) of this section, that is provided in the audio portion of the programming accessible to persons with hearing disabilities, either through closed captioning or by using a method of visual presentation.

(2) This rule applies to emergency information primarily intended for distribution to an audience in the geographic area in which the emergency is occurring.

(3) Emergency information provided by means other than closed captioning should not block any closed captioning

and any closed captioning provided should not block any emergency information provided by means other than closed captioning.

(c) *Complaint procedures.* A complaint alleging a violation of this section may be transmitted to the Commission by any reasonable means, such as letter, facsimile transmission, telephone (voice/TRS/TTY), Internet e-mail, audio-cassette recording, and Braille, or some other method that would best accommodate the complainant's disability. The complaint should include the name of the video programming distributor against whom the complaint is alleged, the date and time of the omission of emergency information, and the type of emergency. The Commission will notify the video programming distributor of the complaint, and the distributor will reply to the complaint within 30 days.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AE43

Endangered and Threatened Wildlife and Plants; Final Determination of Threatened Status for the Koala

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines threatened status for the Australian koala under the Endangered Species Act (16 U.S.C. 1531 *et seq.*) as amended. The eucalyptus forest and woodland ecosystems on which this arboreal marsupial depends have been greatly reduced. Despite several conservation actions by the Government of Australia and State governments, the limited koala habitat continues to deteriorate. The species also is threatened by fragmentation of the habitat that remains, disease, loss of genetic variation, and death by dogs and motor vehicles due to development. Although differences occur in the health status of local populations, we are not able to designate either the current subspecies or the koalas of particular States as distinct vertebrate population segments. Koalas are no longer exploited for their fur, and it is habitat loss and its secondary effects that now threaten the species. This rule extends the

Endangered Species Act's protection to koalas throughout Australia.

DATES: Effective June 8, 2000.

ADDRESSES: Please send correspondence concerning this rule to Chief, Office of Scientific Authority, ARLSQ 750; U.S. Fish and Wildlife Service; Washington, DC 20240; fax number 703-358-2276. Express and messenger deliveries should be addressed to Chief, Office of Scientific Authority, Room 750; U.S. Fish and Wildlife Service; 4401 North Fairfax Drive; Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Susan Lieberman, Chief, Office of Scientific Authority, phone 703-358-1708, fax 703-358-2276. E-mail: r9osa@fws.gov.

SUPPLEMENTARY INFORMATION:

Background

The koala (*Phascolarctos cinereus*) is an arboreal mammal found only in Australia. It has a compact body, large head and nose, large and furry ears, powerful limbs, and no significant tail. Mature koalas weigh from 4-15 kilograms (10-35 pounds), with larger animals in southern Australia. The koala is a marsupial, more closely related to kangaroos and possums than to true bears and other placental mammals. Koalas carry their young in a pouch for about 6 months. They occur in the forests and woodlands of central and eastern Queensland, eastern New South Wales, Victoria, and southeastern South Australia.

In a petition dated May 3, 1994, which we received on May 5, 1994, Australians for Animals (AFA) (in Australia) and the Fund for Animals (FFA) (in the United States) requested that the koala be classified as endangered in New South Wales and Victoria, and as threatened in Queensland. About 40 organizations in the United States and Australia were named as supporting the petition. The document included extensive data indicating that the koala has declined dramatically since European settlement of Australia began about 200 years ago and has lost more than half of its natural habitat because of human activity. Once numbering in the millions, the koala was intensively hunted for its fur up through the 1920s. It is totally dependent for food and shelter on certain types of trees within forests and woodlands. The destruction or degradation of this habitat would reduce the viability of populations, even if the animals were otherwise protected.

On October 4, 1994 (59 FR 50557), we announced a 90-day finding that the petition presented substantial information indicating that the

requested action may be warranted. That notice also initiated a status review of the koala. On February 15, 1995 (60 FR 8620), we reopened the comment period on the status review until April 1, 1995. We sent a telegram to the U.S. embassy in Australia, asking that appropriate authorities be notified and asked to comment. We also presented the review directly to numerous concerned organizations and authorities. Of the approximately 400 responses received, the great majority were brief messages in support of listing, but several responses were from persons or organizations providing substantive comments based on firsthand knowledge of the situation.

On September 22, 1998 (63 FR 50547), we proposed the koala as threatened throughout its range, and we sought public comments. We received over 3,000 responses: The vast majority were cards with a printed message endorsing the comments of the International Wildlife Coalition and supporting threatened status for the koala, but personal letters also expressed support for listing the species. We also received letters with substantive comments on the proposal from persons with direct knowledge of koala biology: many of those comments came from persons or groups who had offered opinions and information on earlier notices. We also sought information from scientists on a number of outstanding issues.

What Were the Comments of Those Who Opposed the Proposed Listing?

All of the Australian Federal and State authorities that commented on the proposal opposed it. They were joined by three other respondents, including two who represented zoological associations in Australia and the United States.

Dr. Colin Griffiths, Director of National Parks and Wildlife, submitted comments for Environment Australia, the agency responsible for koala policy on the national level. He stated that the Australian Government continues to object to our proposal to list the koala as a threatened species under U.S. law. Noting that, under the Endangered Species Protection Act 1992 (ESPA) no trade in koalas or koala products is permitted, Dr. Griffiths said "we have yet to see any explanation of how the listing of the koala in the United States would contribute to koala conservation." The submission also stated that the Endangered Species Scientific Subcommittee established under the ESPA has evaluated nominations of the koala both under "species that are endangered" and "species that are vulnerable." In each

instance, the subcommittee concluded that the koala did not meet the criteria for listing at a national level.

We fully understand the view of the Australian Government on the status of a species that is native only within its boundaries, particularly where only an occasional zoo acquisition leaves the country. However, our Endangered Species Act (ESA) is international in scope, and we are compelled by law to evaluate petitions of species beyond U.S. boundaries.

Dr. Griffiths made the point that the Australian Government has taken a number of steps in koala conservation since the listing proposal came to us in 1994. A scientific advisory board has reported to the Minister of Environment that the species is relatively abundant and widespread nationally and not likely to become endangered within the next 25 years. In 1998, the legislation of the Commonwealth and the States protecting koalas was integrated into the National Koala Conservation Strategy. The Strategy was developed by the Australian and New Zealand Environment and Conservation Council and was included with the comments submitted by Environment Australia.

Finally, the submission made the objection raised by several others on the listing proposal: Australians particularly object to a rule in which we classify the species as threatened throughout its range rather than assess whether the koala warrants this classification in each State. While the ESA does not allow us to differentiate vertebrate populations solely on state or provincial boundaries (whereas we can on national boundaries), it does allow us to make these distinctions when significant biological differences exist between the populations. The issue that predominates is whether the three subspecies that have been described for koalas represent distinct vertebrate population segments.

Mr. Allan Holmes, Director of National Parks and Wildlife for the Department of Environment, Heritage and Aboriginal Affairs of South Australia, also made the point that the status of the koala varies regionally, and it is not considered nationally endangered or vulnerable. Koalas in South Australia are protected under the National Parks and Wildlife Act 1972 and are listed as rare under Schedule 9. In providing a history of koala management in the State, Mr. Holmes maintained that the classification as rare is misleading as the koala population in South Australia was at the western edge of its range even prior to European settlement. By 1930, the koala was considered extinct in South Australia,

and, as a consequence, a population was established on Kangaroo Island and subsequently at other sites on the mainland. Koala habitat is patchy in South Australia, largely due to forest fragmentation caused by 150 years of agricultural development. Koalas introduced to these patches have established populations and have frequently exceeded carrying-capacity with consequent damage to food trees. The letter affirmed the commitment of the Government of South Australia to ensuring that koalas are conserved in the State and that they are managed in such a way that will sustain them and their habitat. Mr. Holmes concluded that the current situation in South Australia with local overpopulation and genetic founder effects illustrates that the threats to koalas are different across Australia and that a single classification may not best serve conservation efforts for the species.

Mr. Michael Taylor, Secretary of the Department of Natural Resources and Environment for the State of Victoria, said that the status of the species has continuously improved from the 1920s when it was probably endangered, to its current status as a widespread and common species. The koala is protected wildlife under the provisions of Victoria's Wildlife Act 1975, which protects all indigenous terrestrial vertebrates, and the Flora and Fauna Guarantee Act 1998, which seeks to insure that species not only survive but retain their evolutionary potential in the wild. Under the provisions of that law, any person or group can nominate a species for listing, and it will be assessed by an independent Scientific Advisory Committee. Victoria's submission noted that, while 359 taxa have been nominated, the koala has not been one of them. Moreover, the government of Victoria has subjected all of its native vertebrates to the World Conservation Union criteria (IUCN, 1994), and, while over 200 taxa were listed as threatened at some level, the koala did not meet the criteria.

The submission provides a history of koala management in Victoria, documenting translocations by decade, as well as an assessment of the current distribution of koalas in the State. While densities of koalas vary widely, those that exceed three to four animals per hectare frequently result in overbrowsing. The results provided for 3 sites indicate a density of 1 koala per hectare is not uncommon, and extrapolation to the "broad vegetation types utilized by koala in Victoria" gives a total population estimate of 52,000 animals in the State of Victoria alone.

Mr. Taylor presented the specific actions that Victoria has taken in recent years to protect koalas and their habitat. Victoria's Biodiversity Strategy calls for a reversal in the decline of native vegetation with a goal of no net loss by 2001. The Planning and Environment Act of 1987 includes the objective to assist the protection of biodiversity, and the Land for Wildlife Program provides mechanisms to conserve areas of environmental significance. The view of the Department of Natural Resources and Environment is that Victoria has a strong viable koala population in the wild, and thus listing would only divert attention from the species that are under threat.

Mr. Brian Gilligan, Director General of the New South Wales National Parks and Wildlife Service, wrote that the population there is intermediate in physical size between the larger southern koalas in Victoria and South Australia and the smaller northern koalas in Queensland. The population in New South Wales was decimated by hunting until it was estimated to contain only 1,000 koalas by 1920. Researchers believed the population had recovered to 5,000–10,000 koalas by the 1970s. The koala was listed as vulnerable under the New South Wales Endangered Fauna Act 1991 and more recently has the protection of threatened species and the Threatened Species Conservation (TSC) Act 1995, which replaced the earlier law. Because the koala is an ecological specialist, it is vulnerable to local extinctions. The letter details several steps that New South Wales has taken to help koala recovery in the State. Under the State Environmental Planning Policy 1995, a detailed habitat assessment is required before approving development of greater than 1 hectare in local government areas where koalas are known to exist. As required of any vulnerable species, the TSC Act requires the National Parks and Wildlife Service to prepare a recovery plan within 10 years. Also, the New South Wales government has begun creating forest reserves under the Regional Forest Agreements (RFAs). The State government has reserved 600,000 hectares so far, and, by their assessment, a large proportion of this land is koala habitat.

Mr. Greg Gordon of Queensland National Parks and Wildlife Service qualified his earlier comments in the proposed rule, that koalas could become vulnerable in the future. "I would see this as a long-term possibility only, as a result of continuing land clearing, assuming clearing is unchecked. It is difficult to put a time frame on this but I would think it would be many decades

away, e.g. 50–100 years." Gordon wrote that the main problem is that most koala sites have poor habitat protection as they occur on privately managed land, which may be at risk of partial or total clearing at some time in the future. He added that in Queensland conservation measures for private lands are being developed, and more effective habitat protection is likely to be available in the medium term.

Mr. Mark S. Canty submitted a letter opposing the proposal. He contrasted the national system of "Landcare" groups that have been forming in Australia, with the RFAs being set up by the government with the goal of preserving 15 percent of forest types that existed in Australia prior to 1750. Mr. Canty said that the result of these preservation targets has been an increase in areas being cleared by landholders to avert government decrees, and he expressed his concern that listing the koala would have the same negative impact, with landholders not reporting koala sightings for fear of being told how to manage their property. Mr. Canty expressed the view that agriculture and housing developments represent a greater threat to koalas than forestry practices. We fully understand this viewpoint, and we are aware that even the perception of imposed solutions stimulated by those living far from the effected land can have a counterproductive effect. Nothing in this listing in any way limits or directs specific measures in Australia for the benefit of koala conservation, on either the State or the Federal level.

Ms. Christine Hopkins, Executive Director of the Australian Regional Association of Zoological Parks and Aquaria (ARAZPA), provided valuable information related to the koala from the international to the state level. The summary of status and legislation was developed by the Monotreme & Marsupial Taxon Advisory Group. Convener Gary Stator said that the Taxon Advisory Group could see no basis to list the species as endangered, and Ms. Hopkins said the ARAZPA could find no evidence in support of listing the species as threatened.

Senior officials at the American Zoological Association (AZA) have modified the position stated in the previous submission of the AZA. Ms. Kristin Vehrs, Dr. Michael Hutchins, and Mr. Robert Howarth maintain that the data provided fail to meet the listing criteria under the Act, specifically that the species is threatened throughout its entire range. While acknowledging that certain koala populations in New South Wales and Queensland continue to be threatened, studies conducted in

Victoria and South Australia suggest that the koala has begun to reestablish itself there. AZA stated that while some areas may meet the habitat loss criterion for listing, none currently meet the overutilization criterion in this instance. They conclude that no commercial exploitation occurs, and the few koalas going to zoos for research and educational display do so under permits with conditions that are highly restrictive. AZA notes that while habitat loss has been extensive, the Commonwealth and each State have their own management plans to reverse that trend. We concur with the AZA comments that koalas do not face the same magnitude of threats throughout Australia. The criteria for a threatened species, however, is one that is likely to become endangered throughout all or a significant portion of its range.

What Were the Substantive Comments of Those Who Favored Listing the Koala as Threatened?

Ms. Valerie Thompson, North American Koala Population Manager for the AZA, expressed support for listing the koala as threatened. She based her view on field expeditions mapping koala habitat in conjunction with the Australia Koala Foundation. She also submitted letters from other AZA member institutions, responses to a packet of information on the listing that she had sent out as an Executive Committee member of the Marsupial and Monotreme Taxon Advisory Group. She concluded the AZA did not have a consensus on the koala listing and included letters from institutions and scientists in which nine favored listing, four opposed, and two abstained. The letters included with Ms. Thompson's submission reflected divergent views of the status of koala within the zoo community in the United States, as was evident from the submissions of the scientists in Australia. To list a species, we must determine it meets the criteria based on information from scientists surveying koalas and their habitat.

Mr. Michael Kennedy, Director of Humane Society International (HSI), reiterated support for the listing of the koala as threatened. He stated that habitat clearance, particularly in the States of New South Wales and Queensland, is the greatest threat to koala survival. HSI reviewed the legislative actions taken since the previous comment period. Nominations were submitted under the national ESA 1992 to list the koala as "vulnerable" and "endangered" by different conservation groups; both of these nominations were denied, though some of the scientists evaluating the

proposals favored them. In New South Wales, where four koala populations were nominated as "endangered" under the New South Wales TSC Act, 1995, HSI noted that only one of the nominations was successful. In 1996, the Australian Government published the first National State of the Environment Australia. The document concluded that the "greatest pressures on biodiversity come from demands on natural resources by increasing populations of humans, their affluence and their technology." * * * Habitat modification, has been and remains, the most significant cause of loss of biodiversity." The HSI letter stated that the Endangered Species Scientific Subcommittee (ESSS) recommended that vegetation clearance be recognized as a key threatening process as nominated by HSI. The Federal Minister for the Environment rejected the ESSS recommendation on legal but not biological grounds.

Ms. Deborah Tarbart, Executive Director of the Australia Koala Foundation (AKF), provided additional information on behalf of the foundation supporting the listing of the koala. The AKF has been actively adding areas to the Koala Habitat Atlas, and three of those areas were included as appendices with the submission. They demonstrate that a small percentage of primary koala habitat remains in particular areas that are associated with koalas. The AKF believes that overpopulation of koalas in some areas of Victoria and South Australia misdirects the debate, as they are atypical populations in isolated habitats.

The AKF submission also included papers on population trends and genetics of koalas presented at the Society for Conservation Biology meeting in Sydney, Australia, in 1998, and submitted for publication in the journal of that society. "Population trends and the conservation debate—issues affecting the conservation of koalas (*Phascolarctos cinereus*) in Australia" (Phillips 1998) provides demographic trends over several decades in three koala populations. Studies use different assessment methods; a covariance analysis shows that any differences in the slope of decline in the three areas are statistically not significantly different. The paper concludes that, because of the uncertainty inherent in population estimates and demographic trends, precautionary principles should be applied in conferring conservation status to species such as the koala.

The AKF appendixes also include an abstract and an unpublished review of koala genetics that have particular

pertinence in determining whether State populations can be considered valid subspecies. They suggest that the view of koala subspecies is changing with new molecular data, and that information was important in the later discussion of subspecies as significant vertebrate population segments. The genetics review also provided a better understanding of the chlamydia that affects most koala populations. DNA analysis showed that the chlamydia species infecting koalas most commonly is *Chlamydia pecorum*, which also causes infections in domestic livestock (Glassick et al. 1966).

Ms. Julie Zyzniewski, President of the Koala Council in Queensland, wrote that, while the State and local governments have adopted some measures to stabilize the population in southeast Queensland, habitat destruction in the rest of the State and elsewhere in Australia had worsened. The Koala Council therefore strongly supports listing in the belief that it will provide moral support for community-based organizations such as the Koala Council.

Ms. Donna Hart and Dr. Ron Orenstein of the International Wildlife Coalition, based in the United States and Canada, reiterated their support of the listing. They maintained that the decline in eucalyptus-dominated woodland in southeastern Australia continues, and the policies of the many Australian jurisdictions appear to be aimed at accelerating this decline rather than halting it. As this is not true of all areas, IWC would favor a State-by-State listing.

Dr. Frank N. Carrick of the University of Queensland makes several points in support of the listing proposal. Queensland is the only State where the koala can be "considered to approach a natural condition in terms of number, distributional range and genetic and demographic integrity." The State also has one of the world's highest rates of clearing of native vegetation. Moreover, the riparian or coastal and lower altitude forests favored by koalas are the forests most extensively destroyed and fragmented for agriculture, grazing, intensive forestry, and residential development. The high-density koala population in southeastern Queensland—which Dr. Carrick sees as having a vital role in the survival of the species over evolutionary time—is the area of fastest human population growth in Australia. As for the ability of government regulation to reverse these trends, Dr. Carrick expressed the view that the Queensland Nature Conservation Act has inherent deficiencies that have resulted in the

downgrading of the classification of the koala from "permanently protected" to the "common fauna" category.

We concur that the State with the most robust koala population in Australia also has the population at most serious risk. While we recognize that the Queensland government has enacted a State Planning Policy (SPP1/95) to control land allocation processes that are threatening koala populations, it will take years of monitoring to determine whether the Policy has been effective and the trend has been reversed in Queensland.

Dr. Tony Norton, Royal Melbourne Institute of Technology, commented primarily on the forestry assessments that have been undertaken since the proposed listing. These assessments will serve as a basis for setting new guidelines for land allocation, forest management, and forestry sawlog and woodchip quotas over the next 20 years. Dr. Norton found that none of the assessments that have been completed so far have delivered their intended goals of a world class forest conservation reserve system or world class forest management practices and concludes that the habitat of the koala in the wild is endangered. He therefore reasserted his support for the listing to force Australian governments to meet both national and international commitments from the preservation of the country's biodiversity.

Mr. Robert Bertram of the South East Forests Conservation Council provided thorough documentation of the demise of the koala population in one part of New South Wales. At present 39 percent of the high-quality koala habitat in the area is reserved in National Parks, and resource agreements prevent reducing the intensity of current logging operations in the remainder of the quality habitat. Claiming that the government has demonstrated disregard for the known science and the precautionary principle in making land-use decisions, the Council gave its view that the situation of the koala in the region and across New South Wales on public land is uncertain at best.

Mr. D.J. Schubert writing on behalf of the original petitioners (AFA and FFA) expressed frustration with the delay in publishing the proposed rule from the petition submitted in May 1994. The AFA and FFA contend that conditions have only declined further since their earlier comments and that the koala now merits endangered status throughout its range. They concur with other comments that most of the habitat destruction is the result of timber, agriculture, mining, and development. Most of the clearing of eucalypt forests

is for the export woodchip markets. The submission also points out that the Australian Government has redefined the forest to include woodlands, plantations, and other areas not regarded as native forest. The effect has been to increase the amount of land considered forest in Australia from 41 to 157 million hectares (Dovers *et al.* 1996). The AFA-FFA submission documents the development of the RFAs in Victoria, where the process has proceeded faster than in other States, and maintains that the new assessment provides "virtually no benefit" for the koala and its habitat. Given the specificity of the food and habitat requirements of the koala, inclusion of additional areas as RFAs may give an artificially high estimate of the land area that constitutes potential koala habitat.

Why Should We Consider the Koala, a Species That Is Not Native to the United States and That Is Only Rarely Imported To Be Displayed in Zoos, for Listing Under the ESA?

This question is one that people asked in letters from the Government of Australia as well as the States within the country. As the koala does not naturally cross national boundaries and is not in legal international commercial trade, why should we take the considerable time to consider the species as threatened?

The ESA is not restricted to species native to the United States, or those subject to international trade. The Act considers national boundaries, but makes that consideration secondary to the concern for the survival of species. The Act obligates us to make a determination in response to a petition.

As for the priority of such foreign species, with so many other important priorities in international wildlife conservation, we have proceeded deliberately with the listing process, sometimes to the dismay of the petitioners. We have found that, during listing consideration, with its requirements for public comment and consideration of those comments in developing a final decision, sometimes important strides have been made by the countries in the conservation measures that have been developed or enforced. In such cases, the ESA provides an important conservation benefit.

Given That Koalas Occur Over Most of Their Historic Range and Are Overpopulated in Some Areas, How Can the Species Be Considered Threatened?

While no agreement exists on an estimate of the number of koalas in Australia, most scientists concur that

the species is still widespread. Neither the petitioners nor the Australian Nature Conservation Agency (Phillips 1990) attempted to provide a total estimate of current koala numbers in Australia. Other parties have suggested overall numbers ranging from about 40,000 to 400,000, with the Australian Koala Foundation supporting the lower figure. In their comments on the petition, Drs. Martin and Handasyde indicated that there probably are tens of thousands of koalas at each of several study sites in Victoria alone.

As we pointed out in the proposed rule, the actual number of koalas that were present at various times in the past and that may still exist is of much interest and helps to give some perspective but, as for many species, may not be the critical factor in determining whether the species is threatened. A low figure may reflect natural rarity of a population in marginal habitats. A high figure may be misleading if the entire habitat of the involved population faces imminent destruction.

In this instance, a significant amount of the remaining koala habitat will be lost in the near future if the current trend of land clearance is not reversed. As koalas still exist in many of these areas, if land use measures are carried out to preserve the habitat that supports koalas and many other species, robust populations can be maintained. Such land use policies have been proposed in some States.

Given the Different Laws Under Which They Are Managed, Why Don't We Consider the Koala for Listing on a State-by-State Basis?

We recognize the objections of the Australian Government, Australian State governments, and others to a blanket listing of the koala throughout its range. In the proposed rule, we stated that, if we received strong biological arguments, we would consider giving separate consideration to particular populations. It should be recognized, however, that koalas cannot be considered separate populations solely because they reside in different State jurisdictions.

Our February 7, 1996, Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act (61 FR 4722) establishes that, while international government boundaries with differences in management do qualify as discrete populations, political boundaries within countries do not. We do not specify significant populations solely by State in the United States, and we cannot do this in Australia.

However, three subspecies of koalas are currently recognized based on morphological differences in skins and skulls. The koala in northern Queensland (*Phascolarctos cinereus adustus*) is described as smaller and having a more reddish fur than the animals from New South Wales (*P.c. cinereus*), while the subspecies native to Victoria and South Australia (*P.c. victor*) is larger than the koalas of New South Wales, with a more uniformly brown coat color. The subspecies boundaries have been equated with the State borders, although there are no major geographical barriers separating the States of Queensland, New South Wales and Victoria. Scientists suggest that these differences represent variation along a cline and reflect adaptation to climate differences over the extensive range of the species. (Lee and Martin, 1988). What was necessary in this case was to determine whether these subspecies represent evolutionarily significant units—a geographically discrete set of historical populations (Ryder, 1986) that coincided with state borders.

Do the Three Koala Subspecies Qualify as Distinct Vertebrate Population Segments?

Our Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act (61 FR 4722) requires that a population meet the dual criteria of discreteness and significance. In evaluating whether the koala subspecies meet the discreteness criterion, we reviewed a recently published study in which Australian scientists addressed this question (Houlden *et al.* 1999). A recent study of koala mitochondrial DNA from 200 koalas in 16 populations across their range showed that, while there are significant differences between local populations, those differences are not reflected in further differentiation consistent with the current subspecies designations. The authors conclude: "There was no support for a delineation between the *P.c. cinereus* and the *P.c. victor* subspecies. In addition, there is evidence to the contrary for the delineation between the *P.c. adustus* and *P.c. cinereus* at the Queensland/New South Wales border."

This conclusion is supported by recent genetic analyses of captive koalas as well (Takami, 1998). The current subspecies, dividing populations at State borders, do not constitute evolutionarily significant units nor do they meet the criteria for discrete vertebrate population segments.

While using the subspecies taxonomy may have been expedient, given the

difference in management between States, we agree with views expressed by the scientists in Australia that "clearly the existing subspecific taxonomic classification of koalas may not adequately reflect actual levels of genetic diversity, and conservation priorities set on the basis of the currently recognized subspecies may be deficient" (Sherwin *et al.* 1998). Therefore, we cannot separate koala subspecies into distinct vertebrate population segments for purposes of listing under the Act.

What Is the Status of the Koala in Regard to the Five ESA Listing Factors?

Section 4(a)(1) of the ESA 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 following factors described in section 4(a)(1). These factors and their application to the koala (*Phascolarctos cinereus*) are as follows.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The known historical range of the koala covered an extensive band of forest and woodland in eastern and central Queensland, eastern New South Wales, most of Victoria, and extreme southeastern South Australia. The government, the petitioners, and independent scientific authorities agree that the primary cause of the decline of the koala is destruction of its habitat. This situation is exacerbated by the species' high degree of specialization. Koalas favor particular species of eucalyptus, and populations tend to be concentrated at certain favorable sites. The reproductive rate is relatively low, the maturity rate is slow, and many of the young must disperse.

With human disruption of suitable eucalyptus forests and woodlands, the koala has disappeared from much of its original range. In designating the koala as "potentially vulnerable," the IUCN/SSC Australasian Marsupial and Monotreme Specialist Group noted that the geographic range of the species had declined by 50 to 90 percent (Kennedy 1992).

A publication of the Australian Nature Conservation Agency (Phillips 1990) contains the following statement: "The expansive forests where koalas once lived * * * have largely gone and those which remain are rapidly disappearing to make way for the needs of human society." The publication

cited a 1984 report by the Australian Commonwealth Scientific and Industrial Research Organization (CSIRO) indicating that the total area of medium-to-tall trees in the four States inhabited by the koala is estimated to originally have been just over 1,230,000 square kilometers (km²) [475,000 square miles (mi²)], but that just over half of those forests, 670,000 km² (259,000 mi²), had been removed or severely modified.

The petitioners and several of those who commented provided details on the continued habitat loss and modification. This problem is caused mainly by commercial logging, clearing for agriculture and urbanization, as well as disease and extensive dieback of the trees on which the koala depends. The problem is not only removal of the large eucalyptus trees used for food and shelter, but also elimination of vegetated dispersal routes, erosion, siltation of water sources, fragmentation through development of road networks, and other factors detrimental to maintenance of viable koala populations. Based on data compiled in the same 1984 CSIRO report cited above, the petitioners calculated the loss of forest during the past 200 years at 43–52 percent in Queensland, 60–80 percent in New South Wales, 59–75 percent in Victoria, and 79–100 percent in South Australia. An additional government report in 1992 estimated that 60 percent of the remaining forests in Australia are composed of eucalyptus, but that only 18 percent of these areas are unmodified by logging.

Subsequent to receipt of the petition, the Australian Department of the Environment, Sport and Territories issued two new pertinent reports (Glanz 1995; Graetz *et al.* 1995). These documents indicate that the primary habitat utilized by the koala originally covered as much as 1,400,000 km² (540,000 mi²), but that about 890,000 km² (340,000 mi²), or approximately 63 percent, now has been cleared or thinned. Those figures may well be excessive, as the koala was not uniformly distributed throughout the involved region and tended to concentrate in certain favorable areas.

In any case, the new reports support the percentages of forest loss cited above for each of the States involved. Perhaps most significantly, such land clearance is not a phenomenon of the past but is continuing and even intensifying. The estimated annual average amount of land cleared in Queensland, New South Wales, and Victoria from 1983 to 1993 was approximately 4,600 km² (1,800 mi²). Estimates for some recent years are approximately twice as great. Glanz 1995

(1995) pointed out that the amount of native vegetation cleared in Australia in 1990 was more than half that cleared in Brazilian Amazonia.

Not all of the clearing in Queensland, New South Wales, and Victoria is in koala habitat, and some of the clearing involves reclearing of secondary growth; nonetheless, a 1993 estimate cited by the petitioners indicates that, if the current rate of deforestation continues, Australia's forests would be eliminated in less than 250 years. Much of the forest loss is associated with the production of woodchips, mainly for exportation to paper mills in Japan. Therefore, we find that the koala is threatened in a significant portion of its range due to the present and threatened destruction, modification, and curtailment of its habitat.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Koala populations were devastated by the commercial fur trade. Populations may have fluctuated considerably through the 19th century in association with such factors as disease and the intensity of aboriginal hunting. It does seem evident, however, that in the early 20th century, the number of koalas in Australia was well into the millions. Such a figure is based on the number of koalas killed for the commercial fur market during that period. In some years, the number of koalas taken may have exceeded 2,000,000, and, as late as 1927, 600,000 to 1,000,000 were killed in Queensland alone. This destruction, possibly along with a *Chlamydia* epidemic (Phillips 1990), may have reduced koala numbers to just a few thousand. Subsequent conservation efforts, termination of the fur trade, and reintroduction apparently led to a partial recovery by the mid-20th century.

Today overutilization is not a problem. Although some animals reportedly are illegally hunted, and a few koalas are exported to zoos for educational purposes, we conclude that overutilization is not a factor threatening the survival of the species.

C. Disease or Predation

Experts have been concerned about the effects of the bacterium *Chlamydia*, which is known to occur in most koala populations. This disease-causing organism manifests itself in several ways, but especially through infections of the eyes and urinary tract. It apparently has long been associated with the koala and may have been responsible for devastating epidemics in the late 19th and early 20th centuries

(Phillips 1990). Genetics research has shown that at least two species of *Chlamydia* infect koalas (Glassick et al. 1996). *Chlamydia pecorum* causes most of the reproductive tract disease in koalas, and this species also causes infections in domestic livestock (Jackson et al. 1997). The adverse effects of the disease are intensified through the stress caused by habitat loss and fragmentation. *Chlamydia* is widespread in mainland koala populations and evidently was responsible for recent declines at some localities, but it is not claimed to be an immediate threat to the overall survival of the species. In some areas, introduced koala populations that are *Chlamydia*-free show a higher reproductive rate requiring management to avoid overbrowsing of critical tree species. The koala is also subject to various other diseases and, particularly in areas of rapid development, is subject to predation and harassment by domestic dogs and other introduced animals. While disease and predation are exacerbating factors, they would not, in the absence of other factors, cause any koala population to be threatened.

D. The Inadequacy of Existing Regulatory Mechanisms

Although State laws generally protect the koala from direct taking and commercial utilization, much of the petitioners' argument is based on a lack of regulatory mechanisms that adequately protect the habitat of the species. Although a significant portion of the koala's remaining habitat is on government land, such ownership does not preclude logging and other modification. Researchers have particular concern that deforestation for the woodchip market is proceeding without proper assessment of environmental impacts. Even if such impacts were taken into account, the petitioners argue the welfare of the koala would not be given adequate attention because the species is not listed pursuant to Australia's ESPA. We can look at the situation of the koala in each State to determine the adequacy of the current regulations.

Though the koalas of Queensland are the smallest in size, the State has the largest koala population, and the most remaining koala habitat of the States. Queensland also has one of the highest rates of clearing of native vegetation. Under the National Forestry Policy, the rate of clearfelling continues to be high on private lands. According to the 1996 assessment of the Australian and New Zealand Environment and Conservation Research Council, the koala population is stable in some areas, thinly scattered in many others, and in steep decline in

some coastal areas. A consensus exists that the population overall is declining at different rates depending largely on the degree of development. The situation is particularly critical in southeast Queensland, where urbanization threatens the still substantial koala population. Despite legislation that includes the Nature Conservation Act 1992 and the State Planning Policy 1995, the major threat is poor habitat protection for most of the koala population.

In New South Wales, koalas were once abundant throughout the eastern half of the State and driven to near extirpation by the 1920s. The State government estimates that the population recovered to 5,000–10,000 by the 1970s, with the largest and most secure population in the northwest part of the State. The State government also is concerned that continued habitat fragmentation could lead to local extinctions. For that reason, the koala was listed as a vulnerable species under the NSW Endangered Fauna (Interim Protection) Act, 1991. When that law was replaced by the Threatened Species Conservation Act, 1995, the koala continued to be designated as vulnerable by the independent Scientific Committee created with the new legislation. The New South Wales Scientific Committee recently decided that the Hawks Nest and Tea Gardens koalas meet the criteria of an endangered population.

Koalas are native to the Australia Capital Territory, although they were very rare by 1901. Currently the population is small and likely the descendants of several introductions from Victoria. Almost all of the koalas in Victoria represent the success of reintroduction efforts, as the species was extirpated in the State by the early 1900s, with the exception of three remnant populations (Lewis, 1934). Koalas were introduced to Phillip and French Islands by the 1890s, and it is from translocations of these populations, which began to overcrowd their island habitats, that the present population largely descends.

As reported in the review of previous comments, substantial disagreement exists on the actual numbers of koalas and their densities in some sites where they are abundant. In their submission, the Department of Natural Resources and Environment reports that population censuses indicate that densities of 0.5–1 animal per ha are not uncommon, and they supported that contention with recent data from three sites where over-browsing is occurring. The Department has recently conducted statewide vegetation mapping and

concluded that although 60 percent of koala habitat has been lost since European settlement, 5.2 million ha remain. If there is 1 koala per 100 ha in these habitats, the Department estimates a total population of at least 52,000 koalas.

There has been criticism of this extrapolation approach to koala population estimation, particularly as they assume habitat homogeneity over broad geographic areas. (Phillips, 1998). The AKF submission specifically cites the Strathbogie Ranges in Victoria to illustrate the high degree of uncertainty associated with the koala population estimation. Using an alternative estimation method of modeling population growth, Phillips (1998) gives an estimate of 5,000 for the area, an order magnitude lower than earlier estimates (Martin submitted to USFWS 1995).

We cannot resolve the wide discrepancy in estimates of the koalas in Victoria, and the underlying assumption of the carrying capacity of certain habitat type in the State. We do recognize that a continuous translocation program, while necessary to avoid ecological degradation of some plant communities, is not the best solution. The government of Victoria recognizes this as well and is taking further steps in its Biodiversity Strategy to reverse the decline of native vegetation by 2001. Victoria has managed its koala population to relative stability, albeit through intensive management.

At the time of European settlement, koalas occurred only in southeast South Australia, and by the 1930s they were considered extinct in the State. South Australia's present koala population is primarily in five localities and is the result of introductions from other States in Australia. Because these introductions come from disparate provenances and are relatively recent, the population in South Australia should not be considered a single subspecies. The population in the southeast of the State, the area where there were koalas at the time of European settlement, is the least stable, and additional reintroductions are planned. In contrast, on Kangaroo Island high koala density has led to the sustained overbrowsing on preferred food species. In 1998, 2,500 koalas on Kangaroo Island were sterilized and 850 were relocated to the southeast part of the State.

Land use practices vary enormously in different States, and they are currently undergoing evaluation and change in many jurisdictions. We conclude that the inadequacy of present

regulations over a significant portion of the species' range is a factor in designating the koala as threatened.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

The petition and other sources indicate a number of additional problems confronting the koala. Perhaps most important from a long-term perspective is a loss of genetic variation resulting from fragmentation of habitat. Koalas show low levels of variation as measured at the protein and DNA levels. The genetic differentiation of isolated koala populations is becoming apparent, and in combination with high site philopatry and the species response to translocation, greatly increases the likelihood of inbreeding. This problem is further extenuated in populations that were founded from koalas that were maintained in a semi-natural environment on offshore islands. Lack of genetic variability could increase susceptibility to disease and other problems, particularly those resulting from rapidly changing Australian environments. Additional factors such as the increase in wildfires, attacks by domestic dogs, and automobile accidents all pose secondary threats that are the outcome of koala habitat decline.

What Are the Available Conservation Measures as a Result of This Listing?

Although habitat loss was a crucial factor in the determination that the koala is threatened, specific critical habitat is not being proposed, as its designation is not applicable to foreign species.

Conservation measures provided to species listed as endangered or threatened under the ESA include recognition, international cooperation, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages conservation measures by Federal, international, and private agencies, groups, and individuals.

Section 7(a) of the Act, as amended, and as implemented by regulations at 50 CFR part 402, requires Federal agencies to evaluate their actions that are to be conducted within the United States or on the high seas with respect to any species that is proposed or listed as endangered or threatened and with respect to its proposed or designated critical habitat (if any). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a proposed Federal

action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service. We are not aware of such actions with respect to the species covered by this proposal, except as may apply to importation permit procedures.

Section 8(a) of the Act authorizes the provision of limited financial assistance for the development and management of programs that the Secretary of the Interior determines to be necessary or useful for the conservation of endangered and threatened species in foreign countries. Sections 8(b) and 8(c) of the Act authorize the Secretary to encourage conservation programs for foreign endangered and threatened species and to provide assistance for such programs in the form of personnel and the training of personnel.

Section 9 of 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, 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 threatened wildlife. It also is illegal to possess, sell, deliver, transport, or ship any such wildlife that has been taken in violation of the Act. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered and threatened wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22, 17.23, and 17.32. Permits are available for scientific purposes, to enhance propagation or survival, or for incidental take in connection with otherwise lawful activities. These permits must also be consistent with the purposes and policy of the Act as required by Section 10(d). For threatened species, we may also issue permits for zoological exhibition, educational purposes, or special purposes consistent with the purposes of the Act.

Our policy, published in the Federal Register on July 1, 1994 (59 FR 34272), is to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effects of this listing on proposed or ongoing activities involving the species. Importations into and exportations from the United States, and interstate and

foreign commerce, of koalas (including tissues, parts, and products) from New South Wales and Queensland without a threatened species permit would be prohibited. Koalas removed from the wild or born in captivity prior to the date the species is listed under the Act would be considered "pre-Act" and would not require permits unless they enter commerce. When a specimen is sold or offered for sale, it loses its pre-Act status. Currently, 10 zoological institutions in the United States hold koalas. You can direct questions regarding permit requirements for U.S. activities to the Office of Management Authority, 4401 N. Fairfax Drive, Room 700, Arlington, Virginia 22203 (1-800-358-2104).

Listing Priority Guidance

The processing of this final rule conforms with our Listing Priority Guidance published in the Federal Register on October 22, 1999 (64 FR 57114). The guidance clarifies the order in which we will process rulemakings. Highest priority is processing emergency listing rules for any species determined to face a significant and imminent risk to its well-being (Priority 1). Second priority (Priority 2) is processing final determinations on proposed additions to the lists of endangered and threatened wildlife and plants. Third priority is processing new proposals to add species to the lists. The processing of administrative petition findings (Petitions filed under section 4 of the Act) is the fourth priority. This final rule is a Priority 2 action and is being completed in accordance with the current Listing Priority Guidance.

National Environmental Policy Act

We have determined that we do not need to prepare an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. We published a notice outlining our reasons for this determination in the Federal Register on October 25, 1983 (48 FR 49244).

Required Determinations

This rule does not require collection of information that requires approval by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* An information collection related to the rule pertaining to permits for

endangered and threatened species has OMB approval and is assigned clearance number 1018-0094. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. This rule does not alter that information collection requirement.

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List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

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, 100 Stat. 3500; unless otherwise noted.

2. 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		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
Koala	<i>Phascolarctos cinereus</i> .	Australia	Australia	T	698	NA	NA

Dated: April 25, 2000.
 Jamie Rappaport Clark,
 Director.
 [FR Doc. 00-11507 Filed 5-8-00; 8:45 am]
 BILLING CODE 4310-55-U

