For the sake of brevity and clear comprehension, I've summarized the content of the document in the following sections:

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

Endangered and Threatened Wildlife and Plants; Proposed Listing of 17 Species of Foreign Reptiles as Endangered and Threatened Species

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes that 17 species of foreign reptiles be listed as Endangered or Threatened species as provided for by the Endangered Species Act of 1973, as amended. The threats that are believed to be causing the declines of these species are habitat destruction, the introduction of non-native predators, exploitation as a source of human food mainly by local people, vandalism, and overcollection; these threats are briefly discussed in the text for each species. If made final, this rule would provide additional protection to wild populations of these species and allow cooperative research programs to be undertaken on their behalf.

**DATE:** Comments from the public and from the governments of the countries where these species occur must be received by March 21, 1983. Public hearing requests must be received by March 7, 1983.

**ADDRESSES:** Submit comments to Director, Office of Endangered Species, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. Comments and materials relating to this rule are available for public inspection, by appointment, during normal business hours at the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia.


**SUPPLEMENTARY INFORMATION:**

Background

On August 15, 1980, the Service published a notice of review in the Federal Register (45 FR 54685-54686) to the effect that a review of the status of 18 species of foreign reptiles would be conducted to determine whether enough
information existed to list them as Endangered or Threatened species under provisions of the Endangered Species Act of 1973, as amended. The Service received seven comments in response to the notice, most of which supported listing, especially of the land iguanas (Cyclura spp.) and Central American river turtle (Dermatemys mawii). However, there were a number of comments on the Asiatic box turtle (Cuora trifasciata) and Chinese big-headed turtle (Platysternon megacephalum) which noted that these species are more widely distributed at this time. The Service agrees; more data will be necessary to document the status of these species throughout their ranges before a determination can be made as to whether they qualify for listing under the definitions of the Act.

However, the Service will continue to review the status of these turtles, as there is at least circumstantial evidence which leads scientists to believe they might be declining.

Gray's monitor lizard, Varanus grayi, was also included in the notice of review. Based on the preliminary work of Dr. Walter Auffenberg (Auffenberg, 1976b, 1979a, b), this large lizard was believed to be threatened through habitat destruction and killing by local people for food. In 1981, the Service funded (in part) additional research and surveys on the lizard to develop a management plan. The Service has received a final report (Auffenberg, 1982b) in which Dr. Auffenberg states that while Philippine protection is necessary, listing under provisions of U.S. Federal law is not warranted at this time. Hence, this species is not included in this proposed rule.

One additional species from the notice, the Hierro giant lizard (Gallotia simonyi), is not included in this proposal, since it is now believed extinct (R. Honegger, pers. comm.). The Service has reviewed additional literature references and believes that sufficient data exist to propose the Round Island skink, Leiolopisma telfairii, as a Threatened species even though it was not originally included in the notice. Finally, the notice treated the iguana Cyclura nubila as a single species; in the proposal, the subspecies are treated individually because of different degrees of threats to them.

The species included in this proposed rule, their proposed status and their IUCN status are as follows:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Proposed status</th>
<th>IUCN</th>
</tr>
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<tr>
<td>Serpent Island gecko</td>
<td>Ctenotus levis</td>
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<td>Rare.</td>
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<td>Acklins ground iguana</td>
<td>Cyclura acaudata</td>
<td>Threatened</td>
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<td>Andros Island ground iguana</td>
<td>Cyclura nubila</td>
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<td>Vulnerable.</td>
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<td>Cyclura cychlura</td>
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<td>Cyclura sp.</td>
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<td>Grand Cayman ground iguana</td>
<td>Cyclura nubila</td>
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</tr>
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<td>Jamaican iguana</td>
<td>Cyclura colletti</td>
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<td>Vulnerable.</td>
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<td>Cyclura carinata</td>
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<tr>
<td>Turks and Caicos iguana</td>
<td>Cyclura nubila</td>
<td>Threatened</td>
<td>Rare.</td>
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<td>Watling Island ground iguana</td>
<td>Cyclura nubila</td>
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<td>White Cay ground iguana</td>
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<td>Round Island skink</td>
<td>Leiolopisma telfairii</td>
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</tr>
<tr>
<td>Central American river turtle</td>
<td>Dermatemys mawii</td>
<td>Endangered</td>
<td>Rare.</td>
</tr>
<tr>
<td>Aruba Island rattlesnake</td>
<td>Crotalus unicolor</td>
<td>Endangered</td>
<td>Rare.</td>
</tr>
<tr>
<td>Lar Valley viper</td>
<td>Vipera latissma</td>
<td>Endangered</td>
<td>Rare.</td>
</tr>
</tbody>
</table>

A brief description of these species and applicable threats is as follows:

**Serpent Island gecko**—This lizard is restricted to Round Island (151 hectares) where it is rare and Serpent Island (20 hectares) where it is considered very rare; both islands are near Mauritius. Predation from feral animals and habitat destruction are the chief causes of its decline (Honegger, 1979). There are estimated to be between 3,800 and 4,500 lizards remaining. The overall problems of the Round Island ecosystem and its resident herpetofauna have been presented in detail (Bullock, 1977). Round Island is presently a nature reserve and endemic lizards cannot, by law, be captured or exported from Mauritius. The lizards have also been discussed by Vinson and Vinson (1969) and Temple (1977).

**Bahame species of Cyclura**—All these species are listed in the International Union for the Conservation of Nature and Natural Resources (IUCN) Red Data Book as being of concern (Honegger, 1979). The main threats to their continued survival include habitat destruction for resort development and the introduction of feral animals, particularly mongooses, cats, and dogs which prey upon the iguanas, especially the young and juveniles, and destroy nests (Iverson, 1978). Introduced goats may compete for food (these species are vegetarian) and humans kill them for food or malicious "sport." Nearly all these iguanas have very small ranges; many are limited to a single island. Discussions of the threats to these species are contained in Honegger (1979), Carey (1966, 1975), Iverson and Auffenberg (1979), Iverson (1976), Auffenberg (1975, 1976a, 1982), and Gicca (1980). While legal protection is afforded these iguanas in the Bahamas, the law is not enforced (Honegger, 1979). The Service has funded research on C. r. rileyi to study a potentially serious fungal disease.

**Cuban and Cayman Islands iguanas**—There are three subspecies of Cyclura nubila inhabiting Cuba (mainland and Isla de Pinos) and the Cayman Islands. These are: C. n. cychlura (one colony on Cayman Brac), C. m. lewisi (no less than 50 individuals on Grand Cayman Island, and C. n. nubila (Cuba and adjacent islands and cays). The threats to these iguanas are similar to those of the Bahamas Cyclura (Honegger, 1979) and Townsend (1981) has noted additional potential threats from habitat destruction. C. n. nubila is protected in Cuba.

**Turks and Caicos iguana**—The same threats which apply to the Bahama Cyclura also apparently apply to this species (Honegger, 1979). It is found on most of the islands in the Turks and Caicos group. No specific protection laws have been enacted and although several cays where this species occurs are supposed to be reserves, protection is nil (Honegger, 1979).

**Jamaican iguana**—The following is taken from Woodley (1980) who has reviewed the history and status of this species:

"For a hundred years, they were only known to survive on the Coast Islands but, after the introduction of the mongoose and the interference consequent to the Second World War, that population became extinct in about 1948. But iguanas had, after all, survived on the mainland; in the Hellshire Hills.
Hog-hunters have been catching occasional specimens up to 1978 and one of these, killed in 1986, was obtained by the author and positively identified. It is unlikely that the Jamaican iguana, already very rare, will survive the proposed development of the Hellshire Hills.

**Round Island skink**—This species is presently confined to Round Island off the coast of Mauritius. It was once found on Flat Island and Gunner's Quoin until exterminated by rats. In 1974, the population was thought to be between 4,000–5,000 but declining. Those factors contributing to the decline of other species on Round Island (Bullock, 1977) are also thought to be contributing to the decline of this species (Honegger, 1979; also, see Temple, 1977, and Vinson and Vinson, 1989).

**Aruba Island rattlesnake**—According to Honegger (1979), the habitat of this rattlesnake is shrinking as a result of increasing human activity. Collection may also be contributing to its decline.

**Lar Valley viper**—Andren and Nilson (1979) have reviewed the biology of this species and state: "*Vipera latifii* Mertens, Darevsky and Klemmer, a recently described viper from northern Iran, is in severe need of conservation. Its range is restricted to unique, alpine Lar Valley, which in a few years will be used as a huge water reservoir. Observations on the biology of *Vipera latifii* are given. Sympatric amphibians and reptiles show ecotypic adaptations."

**Central American river turtle**—This large river turtle is found only in the coastal lowlands of southern Mexico, northern Guatemala, and Belize. It is hunted extensively for its meat and has been seriously depleted throughout much of its range. According to Alvarez del Toro et al. (1979), this exploitation could lead to its extinction. Additional information on its biology is contained in Smith and Smith (1979) and Iverson and Mittermeier (1980). The service will follow Iverson and Mittermeier (1980) in the spelling of the specific epithet (i.e., *mowii*).

**Summary of Factors Affecting the Species**

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 et seq.) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 amendments) states that the Secretary of the Interior shall determine whether any species is an Endangered species or a Threatened species due to one or more of the factors described in Section 4(a)(1) of the Act. This authority has been delegated to the Assistant Secretary for Fish and Wildlife and Parks. These factors are as follows:

- **(A)** The present or threatened destruction, modification, or curtailment of its habitat or range;
- **(B)** Overutilization for commercial, recreational, scientific, or educational purposes;
- **(C)** Disease or predation;
- **(D)** The inadequacy of existing regulatory mechanisms; or
- **(E)** Other natural or manmade factors affecting its continued existence."

The reptiles proposed for listing as Endangered and Threatened species relate to these factors as follows (numbers refer to factors above):

- **(A) Rabbits and goats were introduced onto Round Island in 1840 and these animals have destroyed the island's vegetation so that severe erosion has resulted. The loss of this vegetative cover is thought to have resulted in the loss of available habitat for this species. (C) Since there are no palms on Serpent Island, the scarcity of this species on Round Island has also been attributed to predation.**

- **(B) Honegger (1979) states that commercial trade is a threat to this subspecies. (C) Hunting of the iguanas for food and shooting them for "sport" by tourists is threats to this iguana. (D) While this iguana is protected by Bahamian law, the law is not enforced.**

**Grand Cayman ground iguana**—(C) This iguana is known only for Grand Cayman; there is believed to be a population of not less than 50 individuals remaining. Threats to the population are mainly thought to be predation from feral pigs, cats, and dogs. Humans also hunt the ground iguanas in the Cayman Islands.

**Jamaican iguana**—(A) Until recently, this species was thought extinct. However, it survives in only very low numbers in the Hellshire Hills. This area is proposed to be developed. If this occurs, the remaining small population will become extinct. (C) Dogs and people are known to kill these iguanas. Any such loss to the population is a threat to its continued existence.

**Mayaguana iguana**—(A) This subspecies is known only from Bobby Cay east of Mayaguana. According to Honegger (1979), there has been some loss of habitat due to human activities. (C) This species is hunted by local people for food. (D) While legally protected by Bahamian law, the law is not enforced.

**Turks and Caicos ground iguana**—(A) This iguana is found throughout the Turks and Caicos group. According to Honegger (1979), it is declining because of the loss of suitable habitat through housing development and agriculture. (C) Like other ground iguanas, this species is subject to predation from humans and feral dogs and cats. (D) While some of the islands on which this...
species occurs have been designated as reserves, enforcement is nil. Watling Island (San Salvador) ground iguana—(C) This species is known only from Green Key, Man Head Key, Pigeon Key, Low Key, and Goulding Key. Though previously reported from White Key and a number of adjacent keys, Gicca (1980) and Auffenberg (1982) note that none were found on these keys during surveys in 1974 and 1981, respectively. There may be a small remnant on San Salvador in the interior respectively. There may be a small White Key and a number of adjacent Key. Though previously reported from Green Key, Man Head Key, iguana—(C) reserves, enforcement is nil.

Dermatemys of their diet. Turtle meat labeled as from inhabitants will lose an important part coast for food. A number of suitable nesting sites exist, but could be having an adverse effect on this species. (B) According to Honegger (1979), the live animal trade could be having an adverse effect on this species. (C) Humans are predators on this species for food.

Round Island skink—(A) This species is now restricted to Round Island. Rabbits and goats were introduced onto Round Island in 1840 and these animals have destroyed the island's vegetation so that severe erosion has resulted. The loss of this cover is thought to have resulted in the loss of available habitat for this species. (C) Rats are known predators and are thought to have eliminated this species on Flat Island and Gunner's Quoin.

Central American River turtle: (B) This large river turtle is found only in the coastal lowlands of southern Mexico, northern Guatemala, and Belize. It is hunted extensively for food and has been seriously depleted throughout its range. If this intensive exploitation continues, not only will the turtle disappear, but the local inhabitants will lose an important part of their diet. Turtle meat labeled as from Dermatemys has occasionally been imported into the United States. However, as shown in a recent law enforcement case, this meat was actually from sea turtles. The extent of possible international commercial trade in meat from this turtle is impossible to gauge, but could be significant as there have been numerous inquiries from soup companies as to its legality for trade.

Aruba Island rattlesnake—(A) According to Honegger (1979), the habitat of this rattlesnake is shrinking as a result of increasing human activity.

(B) The extent of this problem is unknown, although overcollecting may be a problem for this species. However, captive propagation, such as undertaken at the Houston Zoo [Carl et al., in press] should be able to provide needed specimens for education and zoological display.

Lar Valley vipers—(A) This species is confined to the alpine Lar Valley in Iran. According to Andrew and Nilson (1979), there is the threat of construction of a dam for a water reservoir which would eliminate its habitat.

Effects of the Proposal if Published as Final Rule

Endangered species regulations already published in Title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered and Threatened species. The regulations referred to above, which pertain to Endangered and Threatened species, are found at § 17.21 and 17.31 of Title 50, and are summarized below. With respect to the 17 species of reptiles in this proposed rule, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.21 and 17.31 would apply. These prohibitions, in part, would 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 a commercial activity, or sell or offer for sale these species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the United State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving Endangered and Threatened species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 and 17.23, and 17.32. Such permits are available for scientific purposes, the enhancement or propagation or survival of the species, and economic hardship.

Literature Cited


Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and effective as possible in the conservation of these Endangered and Threatened species. Therefore, any comments or suggestions from the public, other
concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

1. Biological and other relevant data concerning any threat (or lack thereof) to these species, and

2. Additional information concerning the range and distribution of the species.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing to the Director, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

Final promulgation of the regulations on these foreign reptiles will take into consideration the comments and any additional information received by the Service, and such communications may lead it to adopt a final rule that differs from this proposal.

National Environmental Policy Act

A draft Environmental Assessment has been prepared in conjunction with this proposal. It is on file in the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia, and may be examined by appointment during regular business hours (7:45–4:15pm). A determination will be made at the time of a final rule as to whether this is 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 (implemented at 40 CFR Parts 1500–1508).

Author


List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is proposed that Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations be amended as follows:

1. The authority citation for Part 17 reads as follows:


2. It is proposed to amend §17.11 by adding, in alphabetical order, the following to the list under reptiles:

§17.11 Endangered and threatened wildlife.

* * * *

<table>
<thead>
<tr>
<th>Species</th>
<th>Common name</th>
<th>Scientific name</th>
<th>Historic range</th>
<th>Population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
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Dated: December 18, 1982.

G. Ray Arnett,
Assistant Secretary for Fish and Wildlife and Parks.