



ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240



Fish and Wildlife Service Photo by Hans Stuart

Spiny River Snail is proposed as Endangered, Critical Habitat listed

41 Taxa of Snails, Fish Crustaceans Proposed

The importance of preserving river ecosystems is emphasized in a proposed rulemaking aimed at listing 41 taxa of snails, fish, and crustaceans as either Endangered or Threatened (F.R. 1/12/77). Comments are due by April 12, 1977.

Freshwater Snails

Four species of freshwater snails would be jeopardized by the construction of dams on the Little Tennessee and Duck rivers in Tennessee.

Anthony's river snail (*Athearnia anthonyi*), discovered in 1854 but long since thought to be extinct, has been found surviving in the Nolichucky, Little Tennessee, and Tellico rivers.

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Section 7

Formal Consultation Steps Are Set Forth

A recently proposed rulemaking would establish a formal biological consultation process to help Federal agencies comply with section 7 of the Endangered Species Act of 1973 (F.R. 1/26/77).

The proposal includes four major sets of recommendations:

1. Time frames for the rendering of

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Appellate Court Prohibits Tellico Dam Closing; ES Legal Protections Defined

The U.S. Court of Appeals for the Sixth District has permanently enjoined the Tennessee Valley Authority (TVA) from closing the Tellico Dam and creating a reservoir that would destroy the Critical Habitat of the Endangered snail darter (*Percina tanasi*).

Unless the U.S. Supreme Court overturns this decision or Congress specifically exempts the project from the Endangered Species Act's coverage, the appellate court's ruling will have the effect of preserving the Little Tennessee river valley ecosystem, which also includes other Endangered species (see accompanying story).

Other Federal dams now underway also could be affected, because the court held that the law can be applied to protect Endangered species regardless of when a project was started or how near to completion it may be.

TVA in Violation

The unanimous decision handed down January 31 by the three-judge court found that the TVA was in violation

of the law in having proceeded to complete the Tellico Dam after the snail darter had been listed as Endangered in 1975 and a 17-mile-long stretch of the river above the dam had been designated as Critical Habitat on April 1, 1976.

In ordering that a permanent injunction be issued to halt closure of the nearly completed dam, the court of appeals said the U.S. District Court for Eastern Tennessee "abused its discretion when it refused to enjoin a clear violation of law." This was in reference to the district court's decision in May 1976 to allow construction to proceed after concluding that "it is highly probable that closure of the Tellico Dam and the consequent impoundment of the river behind it will jeopardize the continued existence of the snail darter." The TVA had argued that completion of the dam was outside the jurisdiction of the law in that the project had been started six years before the snail darter had been discovered in the river. The agency contended that, in continuing to fund the project, Congress had sanctioned its

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Photo by Sam Venable

Snail Darter Critical Habitat at Coytee Springs on the Little Tennessee

Tellico (continued from page 1)

completion, and that, if halted, the project would mean a loss to the taxpayers of more than \$100 million in construction costs.

Conduct of Secretary Upheld

The court of appeals dismissed these arguments and upheld the conduct of the Secretary of the Interior in the case as "both reasonable and consistent" with the law. The court noted that the Secretary, who acts through the Fish and Wildlife Service, occupies a pivotal role in trying to achieve voluntary compliance with the law by other Federal agencies through consultation and issuance of biological standards for preserving species.

Noting further that the Secretary lacks the veto power to force compliance with his standards, the court said, "We see positive benefit to be gained by impressing [the Secretary's] criteria with a judicial imprimatur. This will expedite the adjudication of future cases as well as assist the Secretary in achieving a uniform Federal conservation posture with minimal reliance upon the courts."

On the issue of the law's applicability throughout the life of a project, the court said that detrimental ecological effects may not be clearly perceived before construction is well underway. The court declared: "Were we to deem the extent of

project completion relevant in determining the coverage of the Act, we would effectively defeat responsible review in those cases in which the alternatives are most sharply drawn and the required analysis most complex."

What Is A Unique Life Form Worth?

Moreover, the court of appeals said it was the responsibility of the executive and legislative branches—not the courts—to "grapple with the alternatives." As the court noted, "Whether a dam is 50% or 90% completed is irrelevant in calculating the social and scientific costs attributable to the disappearance of a unique form of life. Courts are ill-equipped to calculate how many dollars must be invested before the value of a dam exceeds that of the endangered species."

In discussing the TVA's obligation to comply with the act, the appellate court said the actions of two Congressional appropriations subcommittees in funding Tellico Dam did not constitute "legislative acquiescence in or express ratification of the TVA's *laissez faire* interpretation of the Act." The court then cited House Rule XXI, which says "no appropriation shall be reported in any general appropriation bill. . . . Nor shall any provision in any such bill or amendment thereto changing existing law be in order. . . ."

In response to the TVA's effort to transplant snail darters to the Hiwassee River, the court said it could not alter its decision to stop the closure of Tellico Dam even if it had evidence the transplanted population was thriving and reproducing. The reason: "It is not the courts but the Secretary of the Interior who bears the responsibility for maintaining the endangered species list and the designating of critical habitat of listed species. . . . Nowhere in the Act are courts authorized to override the Secretary by arbitrarily 'reading' species out of the endangered list or by redefining the boundaries of existing critical habitats on a case-by-case basis."

Call For Public Hearings

The injunction is to remain in effect until Congress exempts the Tellico Dam from compliance with the law, or the snail darter is deleted from the Endangered list or its Critical Habitat is materially redefined, the court said.

Shortly after the decision was rendered, the question of an exemption for Tellico Dam was taken up by the staff of the U.S. Senate Committee on Public Works.

Meanwhile, Zygmunt Plater, a Wayne State University law professor and one of five plaintiffs who initially brought suit against the TVA, has urged Congress to hold fact-finding hearings on any exemption legislation.

Plater and other conservationists point out that the snail darter lives in the only remaining free-flowing section of the Little Tennessee—a section offering unique recreational opportunities for residents of the area. The rest of the river system in eastern Tennessee is ponded by 27 other dams. "Like the fish," Plater says, "This stretch of river valley is the last of its kind."

U.S. Fish and Wildlife Service Washington, D.C. 20240

Lynn A. Greenwalt, *Director*
(202-343-4717)

Keith M. Schreiner,
*Associate Director and Endangered
Species Program Manager*
(343-4646)

Harold J. O'Connor,
*Endangered Species Category
Coordinator*
(343-4646)

John Spinks, *Chief, Office of
Endangered Species* (343-5687)
Richard Parsons, *Chief, Federal
Wildlife Permit Office* (634-1496)

Editor, TECHNICAL BULLETIN:
Marshall P. Jones
Office of Endangered Species
U.S. Fish and Wildlife Service
(343-7814)

Regional Offices

Region 1, P.O. Box 3737, Portland OR 97208 (503-234-3361); R. Kahler Martinson, *Regional Director*; Edward B. Chamberlain, *Asst. Regional Director*; Philip A. Lehenbauer, *Endangered Species Specialist*.

Region 2, P.O. Box 1306, Albuquerque, NM 87103 (505-766-2321); W. O. Nelson, *Regional Director*; Robert F. Stephen, *Asst. Regional Director*; Jack B. Woody, *Endangered Species Specialist*.

Region 3, Federal Bldg. Fort Snelling, Twin Cities, MN 55111 (612-725-3500); Jack Hemphill, *Regional Director*; Delbert H. Rasmussen, *Asst. Regional Director*; James M. Engel, *Endangered Species Specialist*.

Region 4, 17 Executive Park Drive, NE, Atlanta, GA 30323 (404-526-4671); Kenneth E. Black, *Regional Director*; Harold W. Benson, *Asst. Regional Director*; Alex B. Montgomery, *Endangered Species Specialist*.

Region 5, McCormack P.O. and Courthouse, Boston MA 01209 (617-223-2961); Howard Larsen, *Regional Director*; James Shaw, *Asst. Regional Director*; Paul Nickerson, *Endangered Species Specialist*.

Region 6, P.O. Box 25486, Denver Federal Center, Denver CO 80225 (303-234-2209); Harvey Willoughby, *Regional Director*; Charles E. Lane, *Asst. Regional Director*; John R. Davis, *Endangered Species Specialist*.

Alaska Area, 813 D Street, Anchorage, AK 99501 (907-265-4864); Gordon W. Watson, *Area Director*; Henry A. Hansen, *Endangered Species Specialist*.

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Spinks Named New Chief of ES Office

John Spinks, 34, has been appointed chief of the Office of Endangered Species, assuming administrative responsibilities under Program Manager Keith M. Schreiner.

Since 1974, Spinks has been special assistant to the assistant secretary of the Interior for Fish and Wildlife and Parks. Previously, he was field director for the Wildlife Society in Washington, D.C. Spinks also has worked for the National Audubon Society in Austin, Texas, and for the South Carolina Wildlife Resources Department. He holds a degree in wildlife sciences from Texas A&M.

Spinks succeeds Ronald O. Skoog, who left the Service last year to become chief of the Division of Habitat Preservation in the Alaska Department of Fish and Game.

Rulemaking Actions January 1977

Most Alligators Reclassified to Threatened Status

In a final rulemaking, the Service has determined that populations of the American alligator (*Alligator mississippiensis*) throughout Florida and in coastal areas of South Carolina, Georgia, Louisiana, and Texas have recovered sufficiently through conservation efforts over the past decade to warrant reclassification from Endangered to Threatened status (F.R. 1/10/77).

The action, effective as of February 7, 1977, affects at least 570,000 alligators, or approximately 75 percent of the Nation's total number of alligators, conservatively estimated at 734,384.

Alligators that make up the remaining 25 percent remain classed as Endangered. These smaller populations inhabit Alabama, Mississippi, North Carolina, and Oklahoma, and inland portions of South Carolina, Georgia, Louisiana, and Texas.

Comments Received

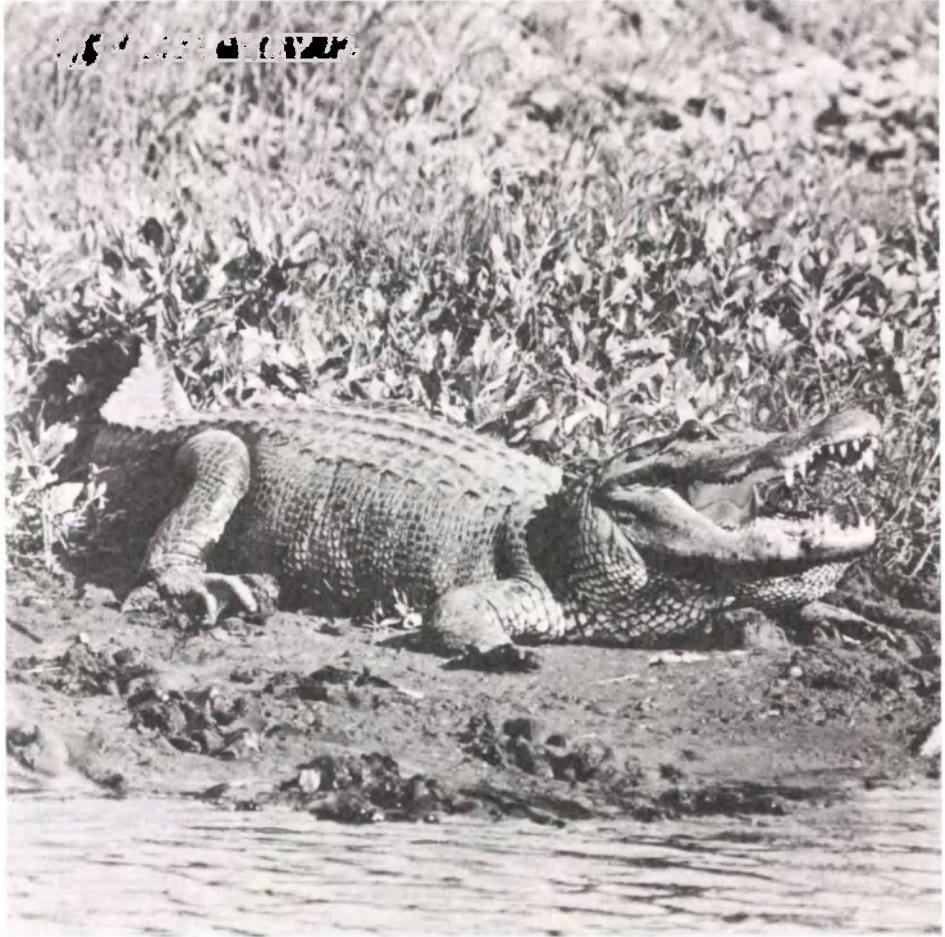
A total of 32 comments were received by the Service following publication of the proposed rulemaking (F.R. 4/8/76) on reclassification of the alligator. Comments from the States of North Carolina, South Carolina, Florida, Louisiana, Arkansas, and Oklahoma, and the U.S. Forest Service, endorsed the proposal. Six conservation organizations, among them the Defenders of Wildlife and the Fund For Animals, opposed any reclassification. The Florida Audubon Society and three other commenters supported reclassification in some parts of the species' range, but opposed the "wholesale" change in status in Florida.

Final Rulemaking

The final rulemaking was identical to the proposal, except for a slight revision in the boundary between Threatened and Endangered alligators in the western part of Louisiana, as requested by the State.

(Under a 1975 ruling, alligators in the Louisiana parishes of Vermillion, Cameron, and Calcasieu were accorded a unique status. The populations are neither Endangered nor Threatened, but are treated as Threatened because of their similarity of appearance to other Endangered alligators. This allows the State to conduct strictly regulated commercial hunting in the three parishes. Hides must be properly tagged as to their origin before they can be sold.)

No commercial hunting is permitted, however, of the alligators newly classed as Threatened. Nevertheless, special rules do allow anyone to take an alligator



Fish and Wildlife Service Photo by Luther Goldman

An American alligator at the Arkansas National Wildlife Refuge in Texas

without a permit in defense of human life. Designated State or Federal agents may kill sick, orphaned, or problem animals if live capture is not possible. States operating under cooperative State agreements with the Service may take alligators for scientific research or conservation programs.

The Service, in the rulemaking, agreed to a one-year comparative study for controlling nuisance alligators in Florida. The Florida Fish and Game Commission will compare three different methods of control in limited areas: (1) licensed agents using lethal control, (2) regular State employees using lethal control, and (3) State reservists using transplantation only without legal control. The Service hopes that results of this experiment will be of value to wildlife managers throughout the Southeast.

Southern Sea Otter

The population of 1,000 to 2,000 southern sea otters (*Enhydra lutris neris*) along the northern California

coast has been listed as Threatened (F.R. 1/14/77).

Originally, the otter was proposed for Endangered status, along with 215 other taxa, in a request submitted by the Fund for Animals (F.R. 9/26/75). But this species was omitted from the final rulemaking (F.R. 6/14/76) to permit more time for the Service to analyze data filed by the State of California and conservation groups.

The otter was hunted for its thick pelt to near extinction in California waters 60 years ago. Only about 50 remained in 1914. But the species has made a substantial comeback near Big Sur, Calif., and has been protected from hunting under the Marine Mammal Protection Act since 1972.

Although the otter is vulnerable to oil spills (there are major oil terminals at the northern and southern edges of its range), the Service has determined that there is no known immediate problem that could wipe out the entire population. Therefore, an Endangered classification is not warranted at this time.

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Consul¹ (continued from page 1)

biological opinions by the Fish and Wildlife Service and the National Marine Fisheries Service (NMFS) of the U.S. Department of Commerce.

2. Procedures to be followed in the consultation process.

3. Guidelines for ascertaining when projects are exempt from the consultation process.

4. Definitions of key terms used in section 7 of the act.

Comments are invited from the public and Federal agencies. They should be submitted to the Service by March 28, 1977.

Allocation of Responsibility

One of the key aspects of the proposed rulemaking is the allocation of agency responsibility. The proposal takes a position affirming that it is "the ultimate responsibility of each agency to decide whether or not it is in compliance" with the law.

Under section 7, Federal agencies sponsoring or undertaking projects that may affect Endangered or Threatened species must "insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence" of such species or "result in the destruction or adverse modification" of their Critical Habitat. The section requires Federal agencies to proceed "in consultation with, and with the assistance of" the Service and NMFS.

Initiation of Consultation

The proposed regulations specify that it would be the responsibility of Federal agencies to initiate the consultation

process after they have reviewed and identified any of their actions that may affect listed species. If the review indicates no such effect, consultation would not be required unless requested by the Service or NMFS. If potential effects are indicated, then the Federal Agency should make a written request for a consultation. Consultation also could be requested by the Services or NMFS if they become aware of Federal actions that may affect listed species.

Threshold Examination

Once a consultation has been requested, the Service or NMFS would conduct a "threshold examination," or preliminary assessment of potential effects. Agencies would receive notification of the resultant findings within 60 days. In cases where adverse effects are found, a final biological opinion would be rendered in another 60 days, unless more time is needed to gather the necessary data. The amount of extra time needed would be negotiated with the Federal agency. All biological opinions and recommendations would be accompanied by supporting documentation.

When the final biological opinion of the Service or NMFS is in hand, the affected agency has the responsibility of determining "whether and how to proceed in light of its section 7 obligations."

Application of Section 7

The proposed rulemaking recommends as policy that the Service and NMFS do not intend section 7 to bring about the waste that can occur if a project is halted at an advanced stage. Accordingly, application of section 7 would be limited to cases "where Federal

involvement or control remains and in itself could jeopardize the continued existence of a listed species." Projects that have had Federal involvement terminated would be exempt.

The Service and NMFS state their belief that their role under section 7 "is limited to providing biological advice and assistance, not in determining if a project may continue." Continuation is the decision of the affected Federal agency.

The proposed rule adopts the position that Critical Habitat may not be determined in foreign countries by the United States. Federal agencies still must abide by the requirement that their actions not jeopardize the continued existence of listed species "wherever occurring."

In defining the terminology of section 7, the proposal includes the following recommendations: "Critical habitat" means any air, land or water area . . . or any constituent thereof, the loss of which would *appreciably* decrease the likelihood of the survival and recovery of a listed species or a distinct segment of its population. . . .

"Destruction or adverse modification" means a direct or indirect alteration of critical habitat which appreciably diminishes the value of that habitat for survival and recovery of a listed species."

Comments Invited

The Service seeks written comments from interested parties on all Notices and Proposed Rulemakings. They should be addressed to: Director (FWS/LE), U.S. Fish and Wildlife Service, P.O. Box 19183, Washington, D.C. 20240.

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Rulemakings

(continued from page 3)

St. Croix Ground Lizard

The Service has proposed listing the St. Croix ground lizard (*Ameiva polops*) as Endangered and establishing Critical Habitat on two small cays in the U.S. Virgin Islands (F.R. 1/10/77). Comments are due by April 8, 1977.

Once prevalent on the island of St. Croix, the lizard apparently was extirpated by the Indian mongoose, which was introduced there in 1884. The last individuals were reported from Frederiksted in 1968. Small populations of the lizard remain on Green and Protestant cays, which have been proposed as Critical Habitat.

Giant Anole

Endangered status and Critical Habitat designation have been proposed for the giant anole (*Anolis roosevelti*), a rarely seen 10-inch lizard endemic to Culebra Island, a part of the Commonwealth of Puerto Rico lying about 20 miles east of the island of Puerto Rico (F.R. 1/10/77). Comments are due by April 7, 1977.

The lizard, first described in 1931, is believed to survive in the dense forest on the slopes of Mt. Resaca. This habitat is now threatened with destruction by the removal of fan-leaved palms, which provide a canopy for the lizard. The proposed Critical Habitat would include a circular area of land 1.4 kilometers in radius, with the summit of the mountain at the center.

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	36	227	263	2	17	19
Birds	66	144	210	1		1
Reptiles	8	46	54	1		1
Amphibians	4	9	13	1		1
Fishes	30	10	40	4		4
Snails		1	1			
Clams	22	2	24			
Crustaceans						
Insects	6		6	2		2
Plants						
Total	172	439	611	11	17	28

Number of species currently proposed: 90 animals
1850 plants (approx.)

Number of Critical Habitats proposed: 30

Number of Critical Habitats listed: 6

Number of Recovery Teams appointed: 57

Number of Recovery Plans approved: 8

Number of Cooperative Agreements signed with States: 17

January 31, 1977

Reference Note

All Service notices and proposed and final rulemakings are published in the *Federal Register* in full detail. The parenthetical references—i.e., (F.R. 2/14/77)—given in the BULLETIN list the month, day, and year the rulemaking appeared in the *Federal Register*.

We Need Your Help

To make this *your* BULLETIN, as well as ours, we need your help. Please send the Editor your suggestions for improving the format; ideas for articles; photographs; and reports on your latest research and management activities.



Fish and Wildlife Service Photo by Karl Kenyon

The Southern Sea Otter has made a sufficient comeback from near extinction to be listed as Threatened

Taxa (continued from page 1)

It is threatened by construction of the Tellico Dam, on the Little Tennessee River, as is the previously listed Endangered snail darter (*Percina tanasi*). Closure of the nearly finished dam has been prohibited by court order (see accompanying story). Anthony's river snail also is proposed for Threatened status because of pollution in the Nolichucky River.

Columbia Dam, being built on the Duck River, would eliminate half of the total population of Dutton's river snail (*Io armigera duttoniana*), the small-stream form of *Io armigera*. Recent completion of Normandy Dam, upstream on the Duck River, has rendered the uppermost population effectively extinct. Downstream effects of these two Tennessee Valley Authority projects may eliminate the remaining populations of this subspecies, which is restricted to the Duck River. Consequently, this snail is proposed as Threatened.

Two more snail species restricted to the Duck River also would be adversely affected by the dams. The geniculate river snail (*Io geniculata geniculata*), proposed as Threatened, could suffer a 66 percent decline in population, including a 33 percent loss because of water pollution. The habitat of the rugged river snail (*Io salebrosa*), proposed as Endangered, would be inundated by the Columbia Dam's reservoir. Ten other species already listed or in the process of being proposed are also threatened by this project.

Florida Tree Snail

Endangered status is proposed for the Florida tree snail (*Liguus fasciatus*) populations on the Florida Keys and on Cape Sable. The remaining populations, occurring in greater numbers over the rest of Florida, are proposed as Threatened.

A total of 8 of the 52 known forms of *Liguus fasciatus* are considered extinct and 31 additional forms are jeopardized. Tree snails have been victimized by land clearing, hurricanes, fogging for mosquito control, jetport construction, predation, and over-collecting. Shells bring high prices, with rare specimens commanding \$50 or more; one family is known to have collected over 10,000 shells.

First Brackish-Water Snails

The proposal includes the first listings of brackish-water snails. The California brackish water snail (*Tryonia imitator*), formerly found along the coast from Bodega Bay to San Diego, is in danger of becoming extinct because of the elimination of true brackish-water habitat by road construction and other factors. It is proposed as Endangered.

Half-burned sawdust from saw mills is blanketing the brackish-water habitat in Humboldt Bay, Calif., of Newcomb's

PROPOSED TAXA OF SNAILS, FISH, CRUSTACEANS

Common Name	Scientific Name	Distribution	Listed Status
Snails			
Armigerous river snail	<i>Io armigera armigera</i>	Kentucky	E, C.H.
Crass river snail	<i>Athearnia crassa</i>	Georgia, Tennessee	T
Rugged river snail	<i>Io salebrosa</i>	Tennessee	E, C.H.
Dutton's river snail	<i>Io armigera duttoniana</i>	Tennessee	T, C.H.
Elk River file snail	<i>Io verrucosa lima</i>	Tennessee, Alabama	T, C.H.
Geniculate river snail	<i>Io geniculata geniculata</i>	Tennessee	T, C.H.
Indiana river snail	<i>Goniobasis semicarinata indianensis</i>	Indiana	T, C.H.
Jay's river snail	<i>Io armigera jayana</i>	Tennessee	E, C.H.
Mainstream river snail	<i>Leptoxis praerosa</i>	Tennessee	E, C.H.
Small geniculate river snail	<i>Io geniculata penguis</i>	Tennessee	T, C.H.
Spiny river snail	<i>Io fluvialis</i>	Tennessee, Virginia	E, C.H.
Anthony's river snail	<i>Athearnia anthonyi</i>	Tennessee	T
Umbilicate river snail	<i>Leptoxis subglobosa umbilicata</i>	Tennessee	T, C.H.
Verucose river snail	<i>Io verrucosa verrucosa</i>	Tennessee	E, C.H.
California brackish water snail	<i>Tryonia imitator</i>	California	E
Cape Mendocino snail	<i>Helminthoglypia arrosa mattolensis</i>	California	T
Concentrated snail	<i>Micrarionta facta</i>	California	E
Florida tree snail	<i>Liguus fasciatus</i>	Florida	E, T
Newcomb's littorine snail	<i>Algamorda newcombiana</i>	Calif., Ore., Wash.	T
Prickly pear snail	<i>Micrarionta opuntia</i>	California	T
Fish			
Alabama cave fish	<i>Speoplatyrhinus poulsoni</i>	Alabama	T, C.H.
Slender chub	<i>Hybopsis cahni</i>	Tennessee	T, C.H.
Spotfin chub	<i>Hybopsis monacha</i>	Va., Tenn., N.C.	T, C.H.
Slackwater darter	<i>Etheostoma boschungii</i>	Ala., Tenn.	T, C.H.
Yellowfin Madtom	<i>Noturus flavipinnis</i>	Tenn., Va.	T, C.H.
Crustaceans			
Big South Fork crayfish	<i>Cambarus bouchardi</i>	Tennessee, Kentucky	T
Chickamauga crayfish	<i>Cambarus extraneus</i>	Georgia, Tennessee	T
Couchas crayfish	<i>Orconectes deanae</i>	New Mexico	T
Louisville crayfish	<i>Orconectes jeffersoni</i>	Kentucky	E
Nashville crayfish	<i>Orconectes showpi</i>	Tennessee	E
Obey crayfish	<i>Cambarus obevensis</i>	Tennessee	T
Palm Springs cave crayfish	<i>Procambarus acherontis</i>	Florida	T
Placid crayfish	<i>Pacifastacus fortis</i>	California	T
Madison Cave Isopod	<i>Antrolana lira</i>	Virginia	E
Florida cave scud	<i>Crangonyx grandimanus</i>	Florida	T
Hay's Spring scud	<i>Stygonectes layi</i>	District of Columbia	E
Alabama cave shrimp	<i>Palaemonias alabamae</i>	Alabama	T
California freshwater shrimp	<i>Syncaris pacifica</i>	California	T, C.H.
Kentucky cave shrimp	<i>Palaemonias ganteri</i>	Kentucky	T
Squirrel chimney cave shrimp	<i>Palaemonetes cummingsi</i>	Florida	T

littorine snail (*Algamorda newcombiana*). Small colonies of this snail, proposed as Threatened, also survive in Coos Bay, Ore., and Grays Harbor, Wash.

First Crustaceans

The proposed rulemaking lists crustaceans for the first time. Among the four proposed as Endangered is the Madison Cave isopod (*Antrolana lira*), in Augusta County, Va. A marine-like relic of the Paleozoic era and the only species in its

genus, this important species is endangered by heavy human visitation to the historic cave.

A single spring at the National Zoological Park, Washington, D.C., contains the only known remaining population of Hay's Spring scud (*Stygonectes hayi*), a blind white crustacean. It is proposed as Endangered because of ground water pollution.

Critical Habitat was proposed for 18 of the taxa. The remaining species in the proposed rulemaking are included in the accompanying table.