

Frequently Asked Questions
Proposed Listing Rule for Eight Gulf Coast Mussels and Proposed Designation of
Critical Habitat
September 2011

Q1: Which freshwater mussels are being proposed for listing under the Endangered Species Act)?

A1: The Alabama pearlshell (*Margaritifera marrianae*) round ebonyshell (*Fusconaia rotulata*), southern sandshell (*Hamiota australis*), southern kidneyshell (*Ptychobranchus jonesi*), Choctaw bean (*Villosa choctawensis*) are proposed for listing as endangered. The tapered pigtoe (*Fusconaia burkei*), narrow pigtoe (*Fusconaia escambia*), and fuzzy pigtoe (*Pleurobema strodeanum*) are proposed for listing as threatened.

Q2: What is a freshwater mussel?

A2: Mussels are freshwater animals that belong in the mollusk family which includes clams, oysters, scallops, snails, slugs, and squid, as well as, freshwater mussels.

Mussels generally live embedded in the bottom of rivers, streams, and other bodies of water. They siphon water into their shells and across four gills that are specialized for respiration and food collection. They primarily feed on detritus (disintegrated organic debris), algae, diatoms, and bacteria. Adults are filter feeders, and generally orient themselves on or near the substrate surface to take in food and oxygen from the water above them. Juveniles typically burrow completely beneath the substrate surface and are pedal (foot) feeders (bringing food particles inside the shell for ingestion that adhere to the foot while it is extended outside the shell) until the structures for filter feeding are more fully developed.

Q3: Where are they found?

A3: These mussels only are found in portions of three eastern Gulf Coast rivers that drain south-central and southeast Alabama, and northwest Florida: the Escambia-Conecuh (same river, however the name changes at the state boundary), the Yellow, and the Choctawhatchee. The Alabama pearlshell also is known from a localized population in the Mobile River basin. All of these rivers originate in Alabama and flow across the Florida panhandle before emptying into the Gulf of Mexico, except for the Mobile River which empties into Mobile Bay before entering the Gulf of Mexico.

Q4: Why do they need protection under the Endangered Species Act?

A4: All eight species have experienced a decline in range and population size. Recent targeted surveys for the Alabama pearlshell and southern kidneyshell show a dramatic decline in historical range, as well, population size. The round ebonyshell has a very restricted distribution and also is extremely rare. The southern sandshell, Choctaw bean, narrow pigtoe, fuzzy pigtoe and tapered pigtoe still occur in much of their historical

range; however, their current range is fragmented and their numbers appear to be declining. All of these mussels have disappeared from portions of their ranges primarily due to habitat deterioration and poor water quality as a result of excessive sedimentation and contaminants.

Q5: What is critical habitat?

A5: Critical habitat is defined in the Endangered Species Act. It refers to specific geographic areas that are essential for the conservation of a threatened or endangered species and that may require special management consideration or protection. These areas are generally, but not necessarily, occupied by the species at the time of designation. Federal agencies are charged with ensuring their actions do not result in the destruction or adverse modification of designated critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not grant government or public access to private lands.

Critical habitat is based on Primary Constituent Elements, or PCEs. PCEs are the physical and/or biological habitat features needed for life and successful reproduction of the species. These include, but are not limited to:

- space for individual and population growth and for normal behavior;
- cover or shelter;
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- sites for spawning and rearing offspring; and
- habitats that are protected from disturbances or are representative of the historic geographical and ecological distributions of a species.

Critical habitat does not necessarily have to be occupied by the species when it is designated; however, it does have to be within the historic range of the species.

Q6: What physical and biological habitat features do these mussels require?

A6:

- (1) Stable stream and river channels and banks.
- (2) Stable substrate (stream bottom material) with low to moderate amounts of fine sediment and attached algae.
- (2) Stable stream and river flow sufficient to keep their habitat inundated and maintain connectivity of rivers with the floodplain.
- (4) Good water quality, with temperatures, dissolved oxygen and pH levels, and other chemical characteristics necessary for normal behavior, growth, and viability of all life stages.

- (5) Presence of the fish hosts needed by the mussels for reproduction.

Q7: Why is the Service proposing critical habitat in addition to the listing the mussels?

A7: The Endangered Species Act requires the Service to identify critical habitat at the time it determines a species should be protected under the Act.

Q8: What geographic areas are being proposed as critical habitat?

A8: The Service proposes nine critical habitat units totaling 2,406 kilometers (1,495 miles) of stream channel, in Alabama and Florida, for these eight mussel species.

Q9: How did the Service determine which areas to designate as critical habitat?

A9: The Service reviewed the best scientific information available concerning the species' present and historic range, habitat, biology, and potential threats, and determined that critical habitat is both prudent and determinable. Through this review we identified those areas that contained the physical and biological features needed by these species, and that were necessary for their conservation.

Q10: Is the Service proposing to designate unoccupied habitat for these species?

A10: While some streams in the proposal serve as unoccupied habitat for one or more of the species, all streams in the proposal are occupied by at least one of the species. For instance, the Lower Escambia River Drainage Unit (Unit GCM 1) is proposed unoccupied habitat for the southern kidneyshell, but occupied habitat for the round ebonyshell, southern sandshell, Choctaw bean, narrow pigtoe, and fuzzy pigtoe. We recognized that the Lower Escambia River is within the historic range of the southern kidneyshell, and that it is necessary for its eventual recovery.

Q11: Can areas be excluded from a critical habitat designation?

A11: Yes. The Act allows for exclusions, provided that the benefits of the exclusion outweigh the benefits of inclusion, and that the exclusion will not result in the extinction of the species. Exclusions are possible for public and private lands that have secure, long-term conservation plans in place that benefit the mussels, and for economic reasons. For example, the Service is proposing to exclude approximately 16 miles of streams within the Fort Rucker Army Aviation Center in Daleville, Alabama, because of the Center's Integrated Natural Resource Management Plan. The Service is currently preparing an economic analysis of the proposed designation that will quantify any economic benefits of exclusion that will be used in preparing a final rule designating critical habitat.

Q12: What is the impact of designating critical habitat on private lands and private landowners?

A12: The designation of critical habitat on private land has no impact on private landowner activities that do not require federal funding or permits. The designation of critical habitat is only applicable to federal activities.

Q13: What is the impact of designating critical habitat on federal agencies?

A13: Even when there is no critical habitat designation, federal agencies must consult with the Service on actions that may affect listed species, in order to ensure that any action they carry out, fund or authorize is not likely to jeopardize a listed species' continued existence. Where critical habitat is designated, a consultation also ensures that the critical habitat is not destroyed or adversely modified.

Q14: What is destruction or adverse modification of critical habitat?

A14: "Destruction or adverse modification of designated critical habitat" is defined in the Service's regulations as a "direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species" (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features that were the basis for determining the habitat to be critical.

Q15: Will the critical habitat designation delay federal decisions on permits or funding?

A15: Under the Endangered Species Act, the Service has specific time frames in which to complete the consultation process with federal agencies. These time frames remain the same with or without designated critical habitat.

Q16: Does the Endangered Species Act consider economic consequences as a part of designating critical habitat?

A16: Yes. The Endangered Species Act requires the Service to consider potential economic impacts of a critical habitat designation when determining whether or not to designate critical habitat. If the benefits of excluding an area outweigh the benefits of including it, the Service may exclude an area from critical habitat, unless the exclusion would result in the extinction of the species. An economic analysis for this designation is being prepared.

Q17: When will the economic analysis be ready for this proposed rule?

A17: The economic analysis is underway but not yet complete. We will publish a notice announcing the availability of the economic analysis in the *Federal Register* within a few

months. At this time, we will also establish a 30-day public comment period to allow all interested parties to comment on the analysis.

Q18: Who can I contact for more information regarding the proposed critical habitat designation for the eight mussels?

A18: Sandra Pursifull, U.S. Fish and Wildlife Service, Panama City Field Office, 1601 Balboa Avenue, Panama City, Florida 32405, telephone 850-769-0552; or Jeff Powell, U.S. Fish and Wildlife Service, 1208-B Main Street, Daphne, Alabama 36526, telephone 251-441-5858. Also, please visit <http://www.fws.gov/panamacity/>.