Arkansas Ecological Services Field Office

Threatened, Endangered, and At-risk Species'

Geographic Ranges

&

Life History Summaries

August 2014

Table of Contents

American Burying Beetle....3
Arkansas Darter....4
Arkansas Fatmucket....5
Bald Eagle....6
Benton County Cave Crayfish....7
Curtis Pearlymussel....8
Fat Pocketbook....9
Geocarpon....10
Gray Bat....11
Harperella....12
Hell Creek Crayfish....13
Indiana Bat....14
Interior Least Tern....15
Ivory-billed Woodpecker....16
Leopard Darter....17
Louisiana Pearlshell....18
Missouri Bladderpod....19
Neosho Mucket....20
Northern Long-eared Bat....21
Ouachita Rock-pocketbook....22
Ozark Big-eared Bat....23
Ozark Cavefish....24
Ozark Hellbender....25
Pallid Sturgeon....26
Pink Mucket....27
Piping Plover....28
Pondberry....29
Rabbitsfoot....30
Rattlesnake-Master Borer Moth....31
Red-cockaded Woodpecker....32
Red Knot....33
Scaleshell....34
Snuffbox....35
Speckled Pocketbook....36
Spectaclecase....37
Sprague's Pipit....38
Winged Mapleleaf....39
Yellowcheek Darter....40

American Burying Beetle

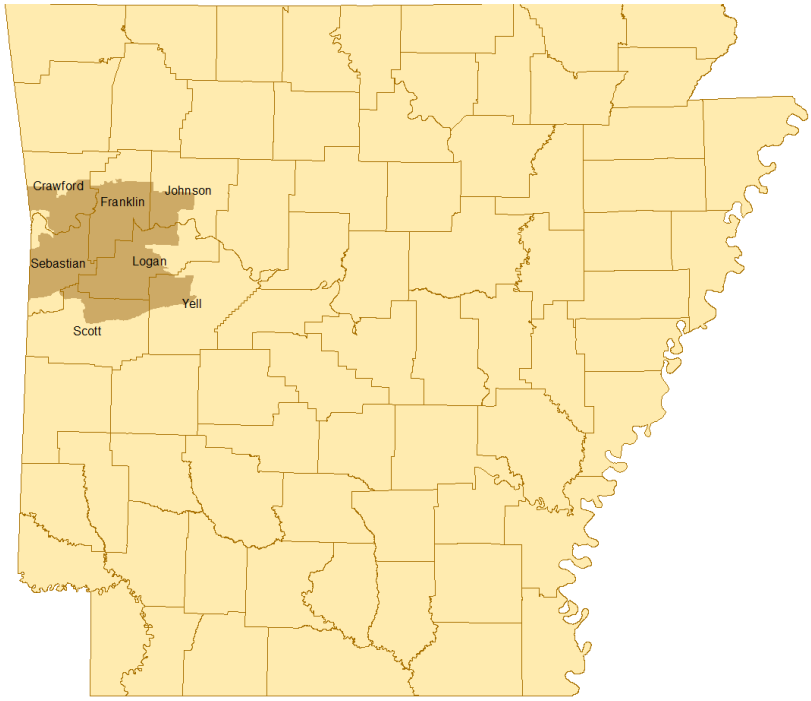
(*Nicrophorus americanus*)

Habitat Summary

American burying beetles are scavengers, dependent on carrion for food and reproduction. They bury themselves in the soil to overwinter and upon emerging in the spring they mate and bury a carcass (optimum weight between 3.5 and 7 ounces), near which the female lays eggs. The beetle is generally active from late April through September. Adults are fully nocturnal and are usually active only when nighttime temperatures exceed 60 F. They are found in open woodlands and grasslands. Suitable habitat includes well-drained clay soils, relatively level topography, and a well—formed detritus layer at the ground surface. Habitat loss and fragmentation is thought to be the main cause for their decline. Increased competition from other scavengers and decline in available carrion such as the extinction of passenger pigeon and decline in quail populations also are reasons for its decline. The largest population is located at Ft. Chaffee Maneuver Training Center near Ft. Smith, Arkansas.

Status: Endangered

Range



Arkansas Darter

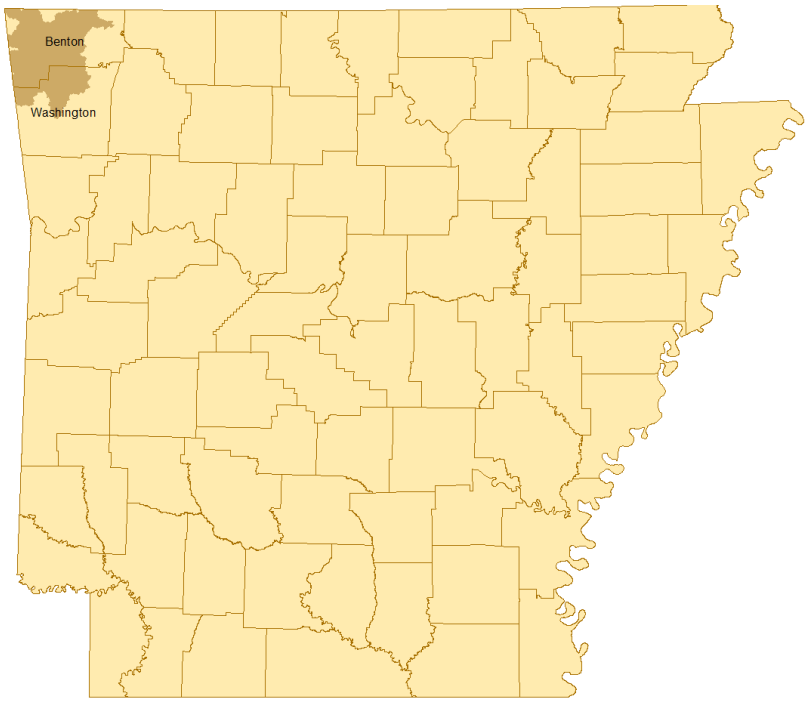
(*Etheostoma cragini*)

Habitat Summary

The Arkansas darter is found in the Illinois River drainage in northwestern Arkansas. Currently, urban development in the Fayetteville area is threatening species and its habitat. The darter prefers shallow, clear, cool water, sand or silt bottom streams with spring-fed pools and marshes and abundant broadleaved aquatic vegetation. Young darters tend to occupy more open areas, while adult darters use areas with more aquatic vegetation near undercut banks where terrestrial vegetation extends into flowing water. Arkansas darters are sexually mature in one year or less. Darters spawn throughout spring and summer, in shallow water over a bottom of coarse gravel. Eggs are usually deposited in open areas, on organic material that covers a sandy streambed. Arkansas darters feed on a variety of aquatic insects, primarily mayflies, and some plant material, including small seeds. Threats that influence the current distribution include: surface and groundwater irrigation resulting in decreased flows or stream dewatering; the dewatering of long reaches of riverine habitat necessary for species movement when surface flows do occur; conversion of prairie to cropland, which influences groundwater recharge and spring flows; water quality degradation from a variety of sources; and the construction of dams, which act as barriers preventing emigration upstream and downstream through the reservoir pool; spills, pesticides, and runoff from confined animal feeding operations, which lead to surface and groundwater contamination that are toxic to fish and other aquatic life forms.

Status: Candidate for Listing

Range



Arkansas Fatmucket

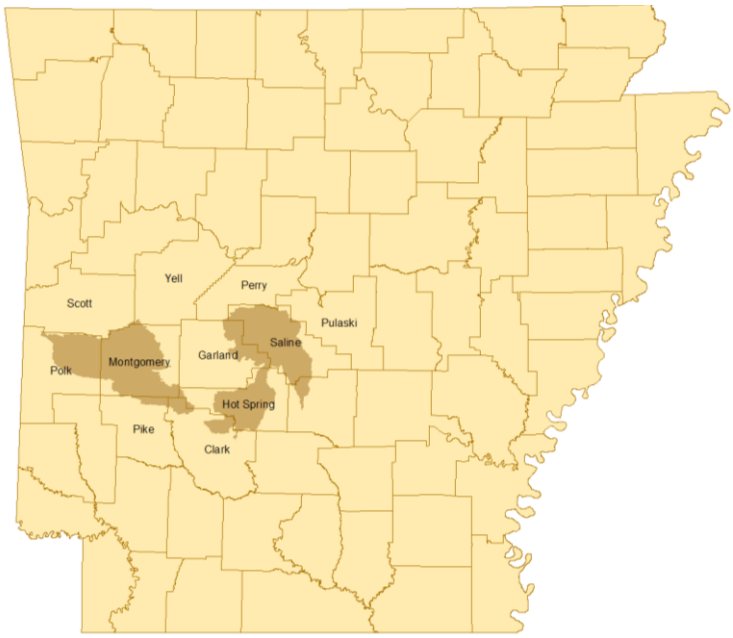
(Lampsilis powelli)

Habitat Summary

Arkansas fatmucket is a medium size mussel reaching approximately four inches in length. It occurs in the Ouachita, South Fork Ouachita, Saline (and its four forks; Alum, South, Middle, and North Forks), and Caddo Rivers in the Ouachita Mountain region of Arkansas. It prefers deep pools that possess sand, sand-gravel, sand-cobble, or sand-rock with sufficient flow to periodically remove organic detritus, leaves, and other debris. It uses largemouth, smallmouth, and spotted bass as its host fish. It is not generally found in riffles nor does it occur in impoundments.

Status: Threatened

Range



Bald Eagle

(Haliaeetus leucocephalus)

Credit: Katherine Whitmore, USFWS

Habitat Summary

Bald Eagles live near rivers, lakes, and marshes where they can find fish, their staple food. Bald Eagles also will feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. Bald Eagles require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts. In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering. Eagles mate for life, choosing the tops of large trees to build nests, which they typically use and enlarge each year. Nests may reach 10 feet across and weigh a half ton. They may also have one or more alternate nests within their breeding territory. The birds travel great distances but usually return to breeding grounds within 100 miles of the place where they were raised. Bald Eagles may live 15 to 25 years in the wild. Breeding Bald Eagles typically lay one to three eggs once a year and eggs hatch after about 35 days. The young eagles are fledge the nest in approximately three months and are capable of surviving on their own about a month later.

Status: Protected under the Bald and Golden Eagle Protection Act (BGEPA) and Migratory Bird Treaty Act (MBTA)

Range

Note: The consultation range includes the entire state. Please complete the form at the following website: http://www.fws.gov/southeast/es/baldeagle/

Benton County Cave Crayfish

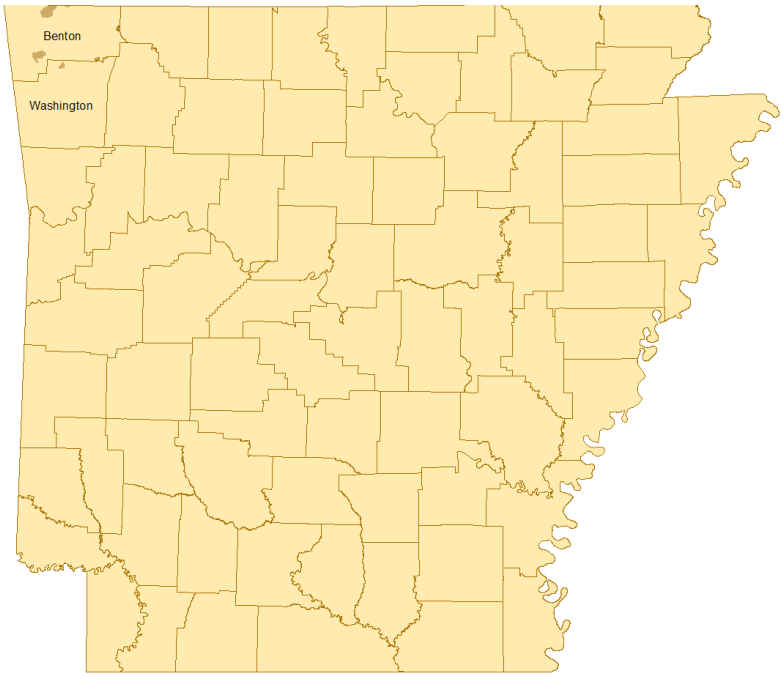
(*Cambarus aculabrum*)

Habitat Summary

The Benton cave crayfish is a rare aquatic organism adapted to living in clean cave springs, and is found in only 4 caves in Arkansas and nowhere else in the world. It is found on silt, gravel, rubble and bedrock in cave stream systems. They rely on outside sources of organic matter for food such as leaf litter, dead animals, or bat guano. Water contamination by sewage, animal waste, landfills, petroleum products, ammonia fertilizer, heavy metals, organic chemicals, and pesticides can be lethal to crayfish. Using liquid animal wastes to fertilize pasture lands in recharge areas can also cause water contamination when the fertilizer is improperly applied or if heavy precipitation follows application.

Status: Endangered

Range



Curtis Pearlymussel

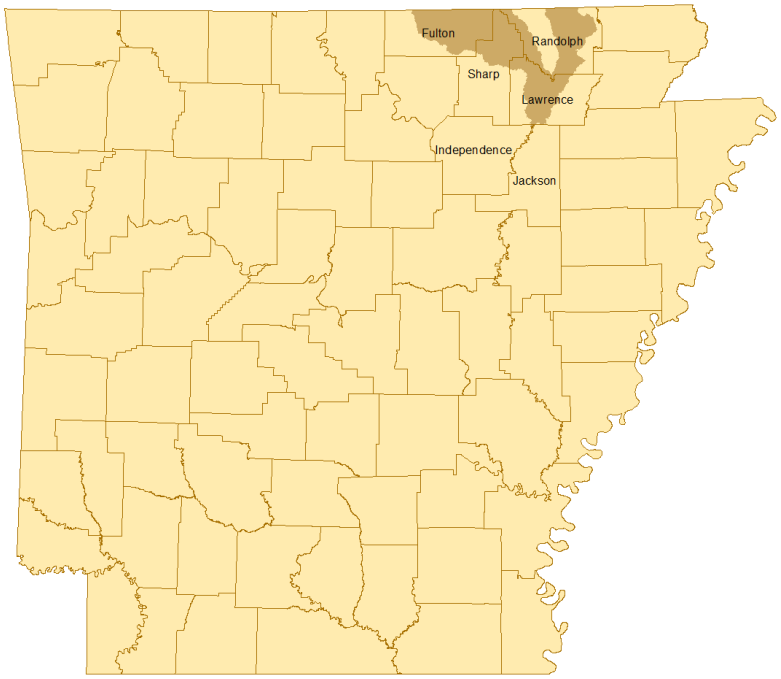
(Epioblasma florentina curtisi)

Habitat Summary

This very small mussel can be found in large creeks to medium rivers with good water quality. It is only found in Arkansas and Missouri. This mussel prefers riffles within transitional zones of clean streams and rivers. It buries itself in sand or gravel in shallow water. The fish host is unknown. In Arkansas, this species once occurred in the Spring and South Spring Rivers, but has not been collected live or dead in over 20 years.

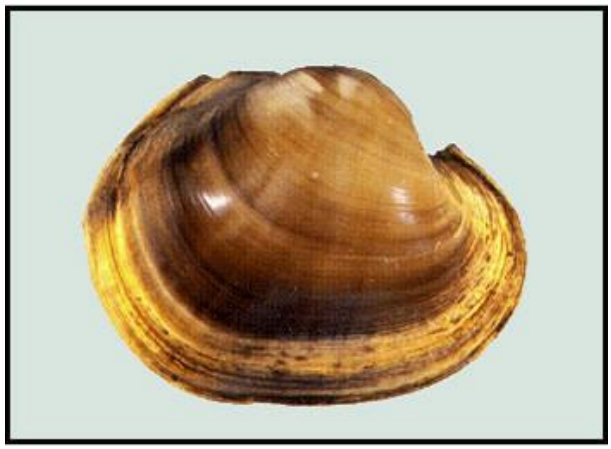
Status: Endangered

Range



Fat Pocketbook

(Potamilus capax)

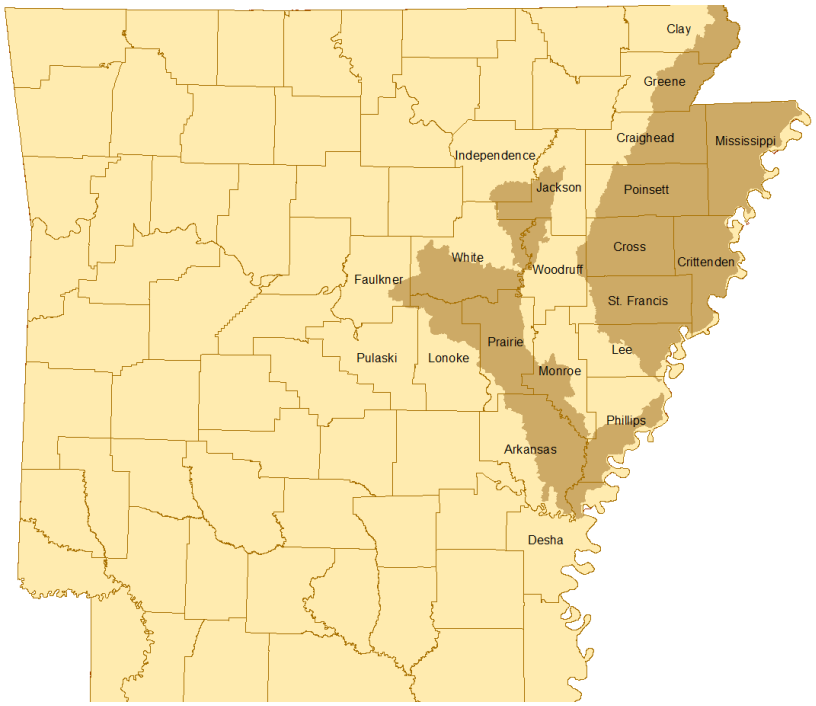


Habitat Summary

The fat pocketbook prefers sand, mud, and fine gravel bottoms of large rivers and ditches. It can grow up to 5 inches in length. This species occurs in the Mississippi, Ohio, Wabash, and St. Francis Rivers throughout its historic range. It is most abundant in the St. Francis River and larger streams and ditches that are tributaries to the St. Francis River in Arkansas. The host fish is freshwater drum.

Status: Endangered

Range



Geocarpon

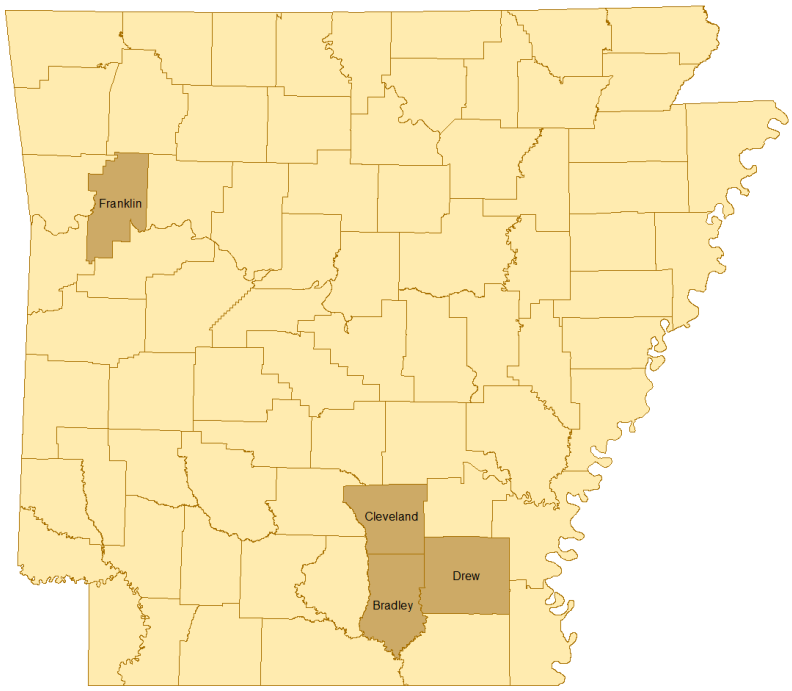
(Geocarpon minimum)

Habitat Summary

Geocarpon prefers the edges of saline (salt) barrens in grasslands called "slicks" or "slickspots." Geocarpon is a tiny inconspicuous plant, ranging in size from 0.4 – 1.6 inches. Vegetation encroachment, cattle grazing, and landscape alteration are the main threats.

Status: Threatened

Range



Gray Bat

(Myotis grisescens)

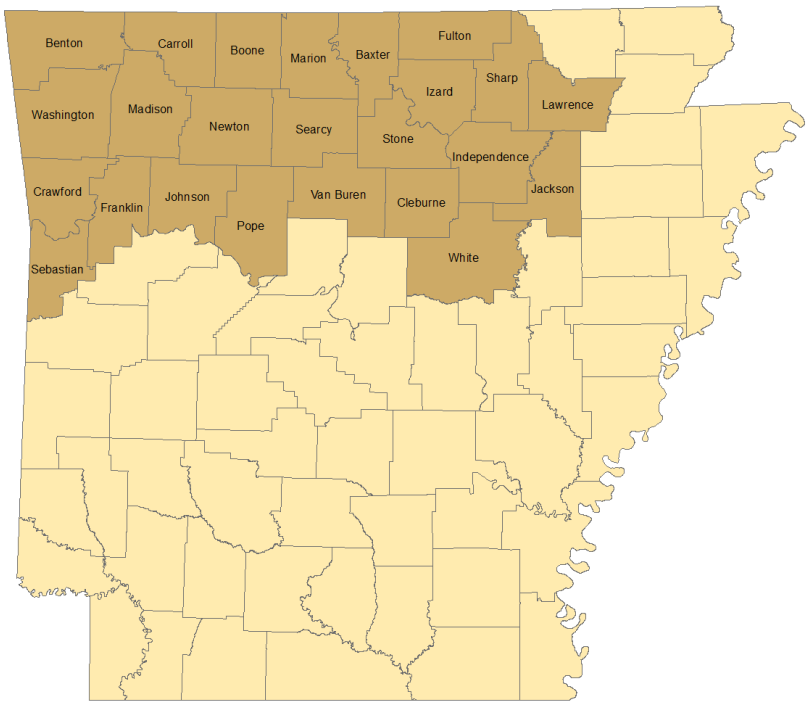
Habitat Summary

Gray bat roost sites are nearly exclusively restricted to caves throughout the year. Colonies occupy a home range that often contains several roosting caves scattered along as much as 43 miles of river or reservoir borders. Individuals forage along river or shoreline up to 12 miles from their roosts. Winter roosts are in deep vertical caves with domed halls. Winter cave temperatures range from 42 to 51 degrees F (Nature Serve). The species selects hibernation sites where there are multiple entrances and good air flow (WSFNR). Summer cave temperatures range from 57 to 75 F, trap warm air, provide restricted rooms or domed ceilings, and are nearly always located within a mile of a river or reservoir. Maternity caves often have a stream flowing through them. There are occasional reports of storm sewers, mines, and buildings being used as roost sites. Forested areas along the banks of streams and lakes provide important protection for adults and young. Young often feed and take shelter in forest areas near the entrance to cave roosts. They do not feed in areas along rivers or reservoirs where the forest has been cleared. Foraging is generally parallel to streams, over the water at heights of 6.5 to 9.8 feet where they feed mostly on flying insects, including mayflies and beetles. Adult females sometimes feed continuously for seven or more hours per night (Nature Serve).

Bats are the only major predator of night flying insects, a single bat can consume between 600 - 1200 mosquitoes and other insects in just one hour. A nursing female can eat more than her body weight in insects in one night, up to 4,500 mosquitoes and other insects. Not only do bats eat insects, but they consume pests, such as the cucumber beetle and corn earworm moth, both of which can damage millions of dollars of crops each year. Other species of bats are important pollinators and seed dispersers.

Status: Endangered

Range



Harperella

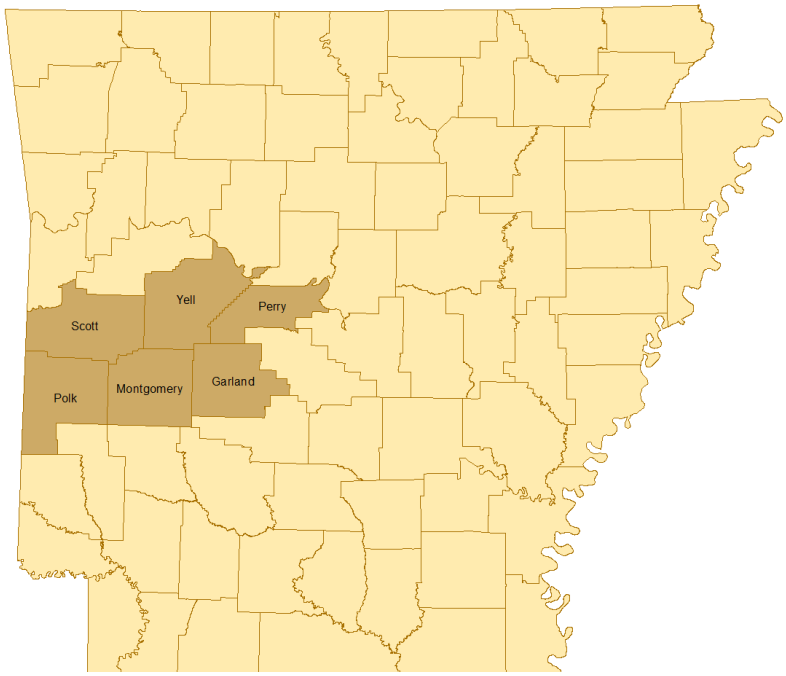
(Ptilimnium nodosum)

Habitat Summary

Harperella is an annual herb that grows 6 to 36 inches tall. It blooms in midsummer with inconspicuous white flower clusters, similar to those of Queen Anne's lace. It is found in 2 types of habitat: rocky or gravel shoals and margins of clear, swift-flowing stream sections in the Ouachita Mountains of Arkansas. It also occurs in numerous other states. Erosion leading to sedimentation of stream channels is the primary threat to the continued existence of this species.

Status: Endangered

Range



Hell Creek Crayfish

(Cambarus zophonastes)

Status: Endangered

Range

Note: Nesbitt Springs does not currently have a mapped recharge area and is depicted on the map as a point.

Habitat Summary

The hell creek cave crayfish is extremely rare, only occurring in two caves (Hell Creek Cave and Nesbitt Spring Cave in Stone County) and Yellville Spring in Marion County, Arkansas. The Arkansas Natural Heritage Commission owns both gated entrances and 160 acres surrounding Hell Creek Cave. The cave's recharge area is about 3.5 square miles and is largely privately owned. Nesbitt Spring Cave, a privately owned karst spring, located near the city of Mountain View has an average recharge area of 2.6 square miles. The Yellville site is a groundwater system that is not accessible to humans and the system resurges mainly at a spring in Town Branch. The crayfish have been found in deep pools a short distance into the cave. . Ground water degradation by toxins, nutrient fertilizers and sewage, alteration of drainage and hydrologic patterns, lower ground water levels, and physical destruction of the cave are major threats to the crayfish. (Nesbitt Spring USGS and Recovery Plan)

Indiana Bat

(Myotis sodalis)

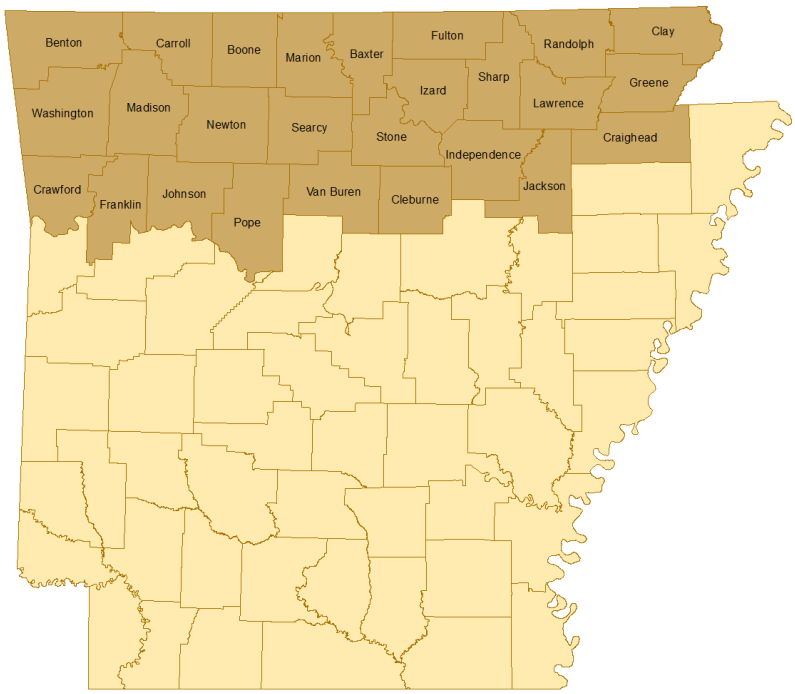
Habitat Summary

The Indiana Bat lives in forested wetland, riparian habitats that include hardwood and mixed forest woodlands. They hibernate in the coldest parts (40-46 F) of limestone caves with pools and shallow passageways. They forage in riparian areas, upland forests, ponds, and fields. In the summer and fall, colonies roost in dead or dying trees or in tree cavities exposed to direct sunlight on wooded or semi-wooded areas on upper slopes and ridge tops. The habitat is often near streams. Colonies have been found in dead, hollow, unshaded trees on pasturelands. Known roost tree species include elm, oak, beech, hickory, maple, ash, sassafras, birch, sycamore, locust, cottonwood, and pine, especially trees with exfoliating bark. Indiana bats use the same roost sites in successive summers. The bats typical prey on flying insects. They forage along river and lake shorelines, in the crowns of trees in floodplains, and in upland forest. The foraging habitat for an Indiana bat includes airspace 6-100 feet above a stream and a linear distance of 0.5 mile. (Nature Serve).

Bats are the only major predator of night flying insects, a single bat can consume between 600 - 1200 mosquitoes and other insects in just one hour. A nursing female can eat more than her body weight in insects in one night, up to 4,500 mosquitoes and other insects. Not only do bats eat insects, but they consume pests, such as the cucumber beetle and corn earworm moth, both of which can damage millions of dollars of crops each year. Other species of bats are important pollinators and seed dispersers.

Status: Endangered

Range



Interior Least Tern

(Sterna antillarum athalassos)

Habitat Summary

This small bird inhabits the sandbars of the Arkansas, Mississippi, and Red Rivers in Arkansas during the summer months, while they nest and raise their young. The riverine nesting areas are sparsely vegetated sand and gravel bars within a wide unobstructed river channel, or salt flats along lake shorelines. Nesting locations usually are at the higher elevations and away from the water's edge. Many sandbars are over 2 miles long and ½ mile wide. Least terns nest on artificial habitats such as sand and gravel pits, dredge inlands, dike fields along the Mississippi River, ash disposal areas of power plants, along the shores of reservoirs, and at other manmade sites (such as gravel roof tops). They feed on small fish in shallow waters such as small lakes, reservoirs, and ponds near their nesting sites. Egg-laying begins by late May and generally lasts 20-25 days. Departure from colonies by both adults and fledglings varies but is usually complete by early September. They winter in Central and South America. The interior least tern is endangered due to destruction, alteration, and curtailment of its nesting habitat. Channelization, irrigation, and the construction of reservoirs and pools have contributed to the elimination of much of the tern's sandbar nesting habitat in Arkansas and Red River systems. (USFWS)

Status: Endangered

Range

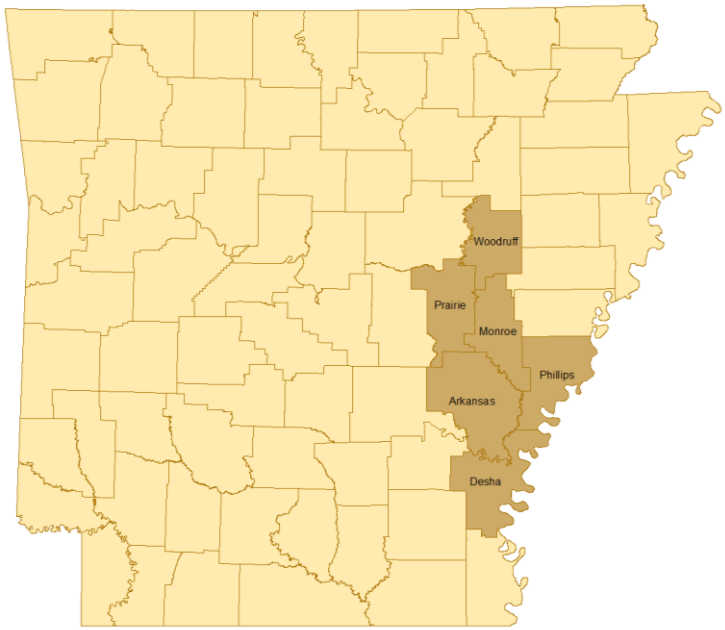
The consultation range is located on sites adjacent to the Arkansas, Mississippi, and Red Rivers and small lakes, reservoirs, ponds, and other water bodies near the three rivers.

Ivory-billed Woodpecker

(Campephilus principalis)

Status: Endangered

Range



Habitat Summary

This large woodpecker was thought to be extinct until an Arkansas discovery in 2004. This elusive bird once inhabited contiguous mature bottomland hardwood forests with numerous large trees and with a significant portion of the forest in some stage of decay. Nuttall oak and sweetgum were favored trees during a notable study. Cavities are excavated in a dead or dying portion of a live tree. Their diet consists of wood boring beetles found in dead and dying trees, occasionally supplemented with fruit and vegetable material. The clearing of these forests was the primary cause for the decline. (USFWS)

Leopard Darter

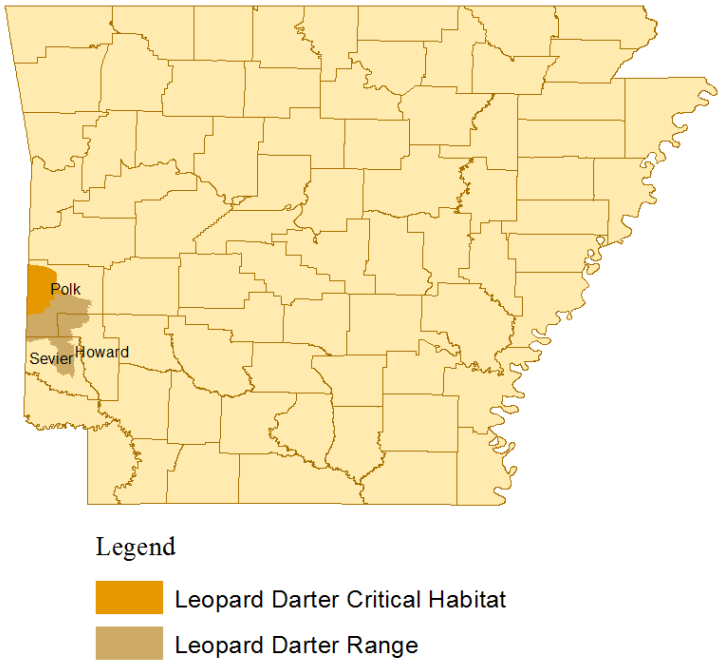
(Percina pantherina)

Status: Threatened

Habitat Summary

The leopard darter inhabits pools that have water depths of 10-40 inches, substrates of rubble and boulders, and no detectable current velocity in southwestern Arkansas and southeastern Oklahoma. They only spawn on riffles between mid-March and mid-April. After hatching, larvae drift downstream into pools. Darters feed mainly on microcrustaceans as juveniles and on immature aquatic insects as adults such as mayfly nymphs, blackfly larvae, and midge larvae. They have keen vision and are likely to feed during the day. Impounded streams in the Little River basin have eliminated crucial spawning and rearing habitat and significantly reduced their distribution. Reservoir construction and improper construction of low water crossings fragments darter habitat and creates formidable barriers to dispersal. Intensive commercial harvest (clear-cutting) of forest products, impacts from road construction, removal of streamside vegetation increase turbidity, sediment yields, and storm flow into the streams. Environmental contaminants (e.g. pesticides, fertilizers, acid rain, and untreated wastes) pose a significant threat particularly as water levels decrease during summer months, concentrating these pollutants. Nutrient laden runoff from improper disposal techniques of poultry and swine farming are considered a potential threat to the darter.

Range

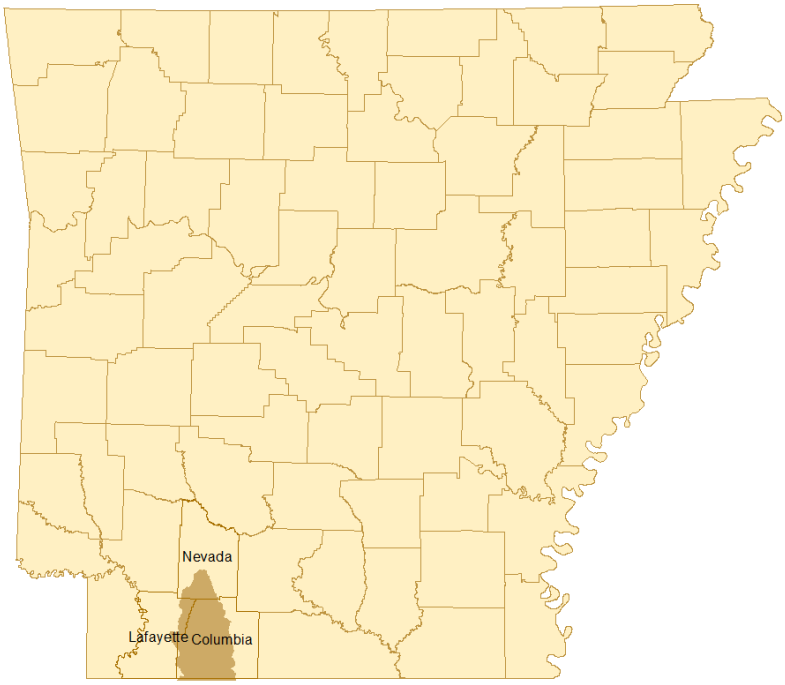


Critical Habitat Range: Mountain Fork Little River

Louisiana Pearlshell

(Margaritifera hembeli)

Range



Habitat Summary

Louisiana pearlshell can be found in sand and gravel substrate in small clear flowing streams. It is a medium sized mussel, growing up to 4 inches. The host fish is the redfin darter. The only record of this species from Arkansas is from an early 1900's collection from Bayou Dorcheat in southern Arkansas.

Status: Threatened

Missouri Bladderpod

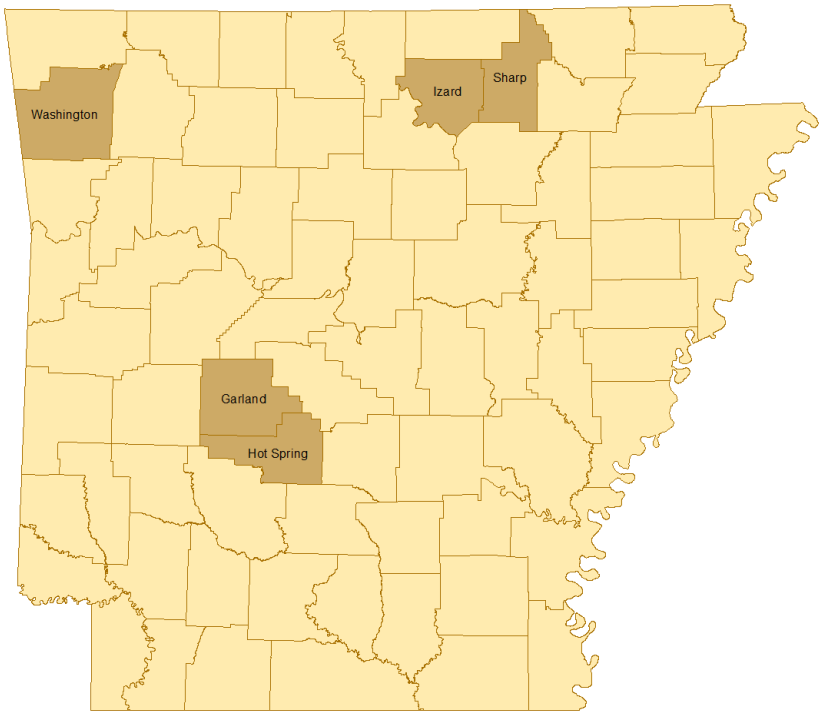
(Physaria filiformis)

Habitat Summary

The Missouri Bladderpod is a small annual plant, growing 4 – 8 inches tall that blooms May to April. The natural habitat is primarily open limestone glades; glades are naturally dry, treeless areas with shallow, loose soil and areas of exposed rock. It is found only in southern Missouri and northern Arkansas, including a few sites in the Ouachita Mountains.

Status: Threatened

Range



Neosho Mucket

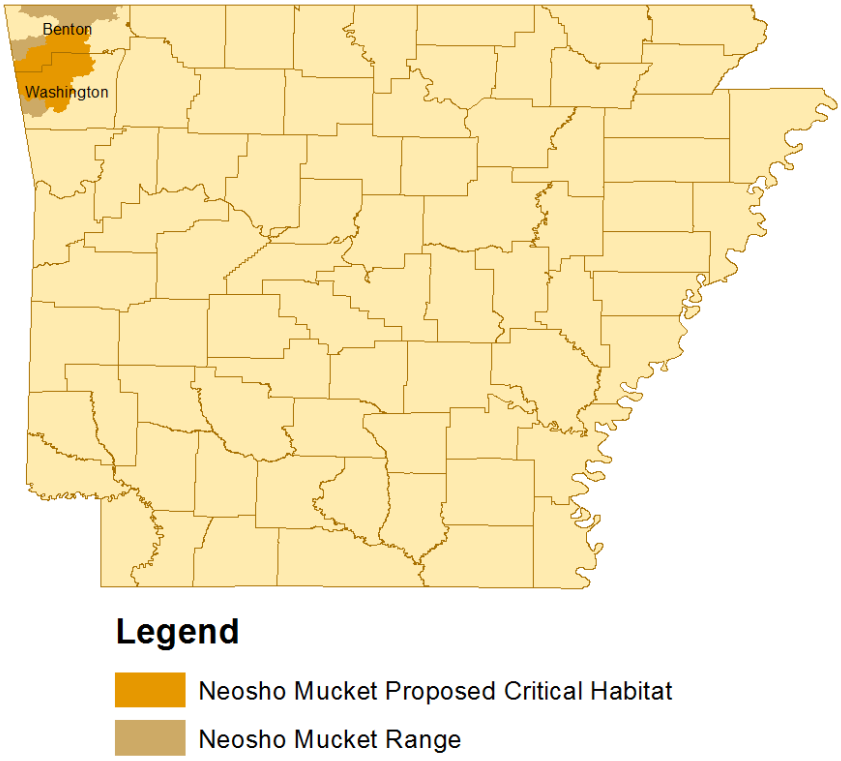
(Lampsilis rafinesqueana)

Habitat Summary

The Neosho mucket is associated with shallow riffles and runs with gravel substrate and moderate to swift currents. It also occurs in backwater areas located adjacent to gravel bars. Typically individuals are deeply embedded in the substrate. This species only occurs in streams located in the Arkansas River basin (Arkansas, Missouri, Kansas, and Oklahoma). It only occurs in the Illinois River in northwest Arkansas. The host fish is bass. Rapid urbanization and clearing of trees adjacent to the Illinois River for pastureland threaten the continued existence of this species in Arkansas.

Status: Endangered

Range



Note: The areas shown on the map represent the section 7 consultation areas. The actual area of occupancy by species or area designated as proposed critical habitat represents a smaller area.

Northern Long-eared Bat

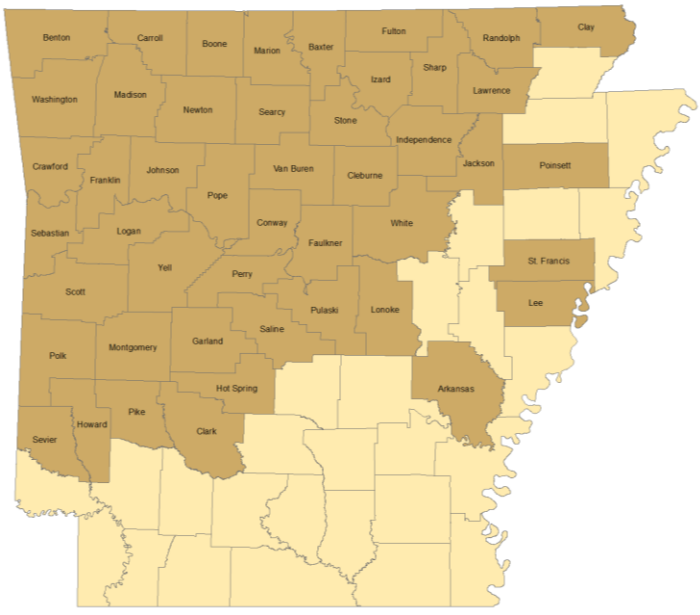
(Myotis septentrionalis)

Habitat Summary

Northern long-eared bats arrive at the hibernacula in August or September, enter hibernation in October and November, and leave the hibernacula in March or April. During the summer, bats typically roost singly or in colonies underneath bark or in cavities or crevices of both live trees and snags or in caves and mines switching roosts every 2-3 days. They are not likely dependent on a certain roost trees but may select trees that retain bark and form suitable cavities such as black oak, northern red oak, silver maple, black locust, American beech, sugar maple, sourwood, and shortleaf pine. In Arkansas, the average canopy coverage is 66 percent. Bats have also been observed roosting in man-made structures, such as buildings, barns, a park pavilion, sheds, cabins, under eaves of buildings, behind window shutters, and in bat houses. Bats roost more often on upper and middle slopes. They migrate between 35 to 55 miles between summer roosts and winter hibernaculum. They commonly overwinter in hibernacula that include caves and abandoned mines, which have large passages and entrances, relatively constant, cooler temperatures, high humidity, and no air currents. They have been found hibernating in abandoned railroad tunnels, storm sewer entrances, hydro-electric dam facilities, old aqueducts, and dry wells. Bats may often use the same hibernaculum site for multiple years. The bat has a diverse diet including moths, flies, leafhoppers, caddisflies, and beetles. Bats emerge to forage at dusk in mature forests 3 to 10 ft above the ground catching insects from the air and plucking them from the ground and foliage on forested hillsides and ridges.

Status: Proposed Endangered

Range



Ouachita Rock-pocketbook

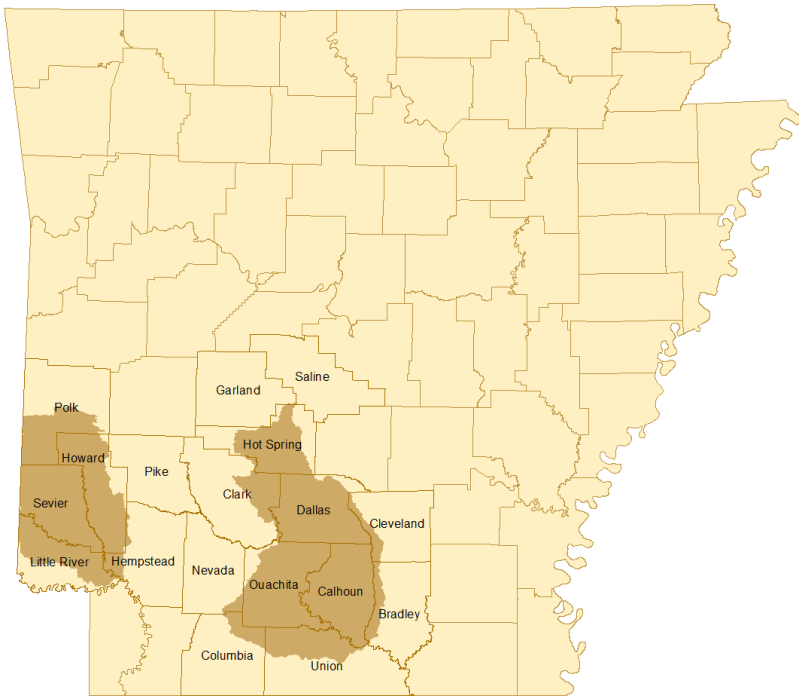
(Arcidens wheeleri)

Habitat Summary

The Ouachita rock-pocketbook inhabits pools, backwaters, and side channels in the Little River and its larger tributaries in southeast Oklahoma and southwest Arkansas and Ouachita River in Arkansas. The only confirmed reproducing population left occurs in the Little River in Arkansas, although the species is extremely rare. The species occupies stable substrates containing gravel, sand, and other materials. It generally occurs within large mussel beds containing a diversity of mussel species.

Status: Endangered

Range



Ozark Big-eared Bat

(Corynorhinus townsendii ingens)

Habitat Summary

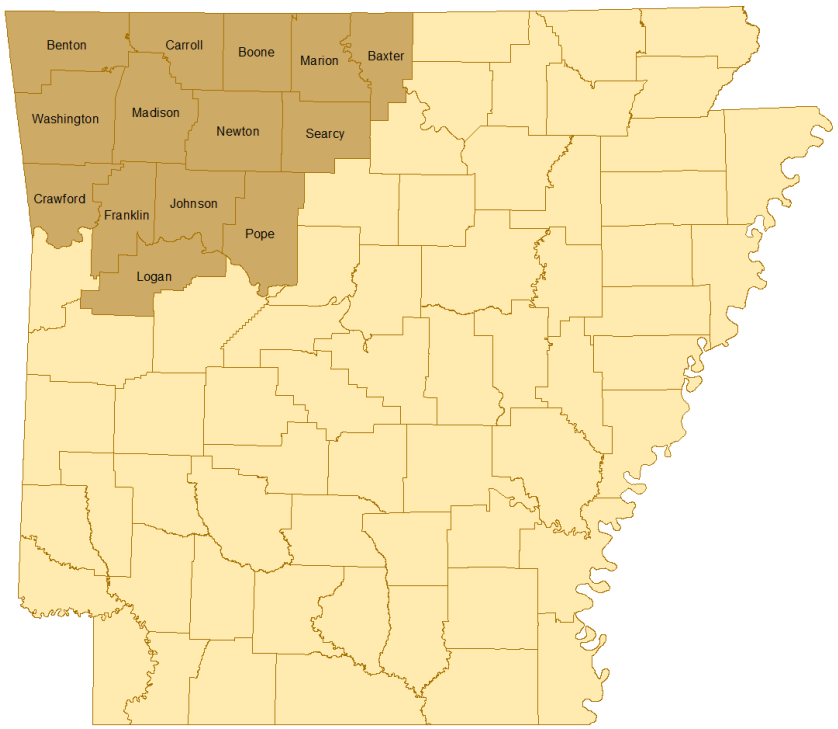
The Ozark big-eared bat inhabits caves year round. They often use the same cave during the summer and winter. The bats select caves that are dominated by mature hardwood forest of hickory, beech, and maple and forage along edge habitats of intermittent streams and mountain slopes. They usually hibernate near cave entrances just beyond twilight zone. They eat mostly moths while in flight. They emerge from caves about 45 minutes after sunset and do not return until sunrise. This species is intolerant to human disturbance. Disturbance during the summer often causes severe mortality to the young.

Disturbance to all bat species during the winter is detrimental. (Nature Serve).

Bats are the only major predator of night flying insects, a single bat can consume between 600 - 1200 mosquitoes and other insects in just one hour. A nursing female can eat more than her body weight in insects in one night, up to 4,500 mosquitoes and other insects. Not only do bats eat insects, but they consume pests, such as the cucumber beetle and corn earworm moth, both of which can damage millions of dollars of crops each year. Other species of bats are important pollinators and seed dispersers.

Status: Endangered

Range



Ozark Cavefish

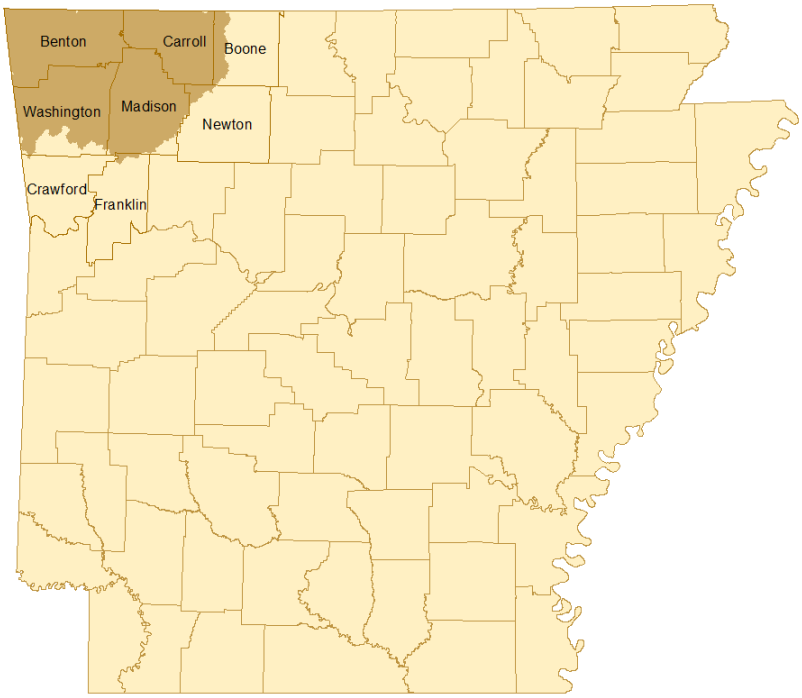
(Amblyopsis rosae)

Habitat Summary

The Ozark Cavefish is found only in the Springfield Plateau region of the Ozark Highlands in northwest Arkansas, southeast Missouri, and northeast Oklahoma. The habitat includes dark cave waters, primarily clear streams with chert or rubble bottom, occasionally pools over silt or sand bottom. The primary diet is plankton, crustaceans, and small salamanders. There is also some evidence they feed directly on bat guano. Since the fish relies on gray bat guano as an energy source, gray bat mortality and abandonment of the cave may threaten the survival of the fish. Two of the primary reasons for listing the Ozark cavefish stemmed from habitat loss and degradation resulting from human activity in caves and from activities above ground that adversely affect groundwater quality. A variety of land use activities may contribute pollutants such as nutrients, pesticides, and other contaminants that may adversely affect the species by contaminating groundwater. (USFWS and NatureServe)

Status: Threatened

Range



Ozark Hellbender

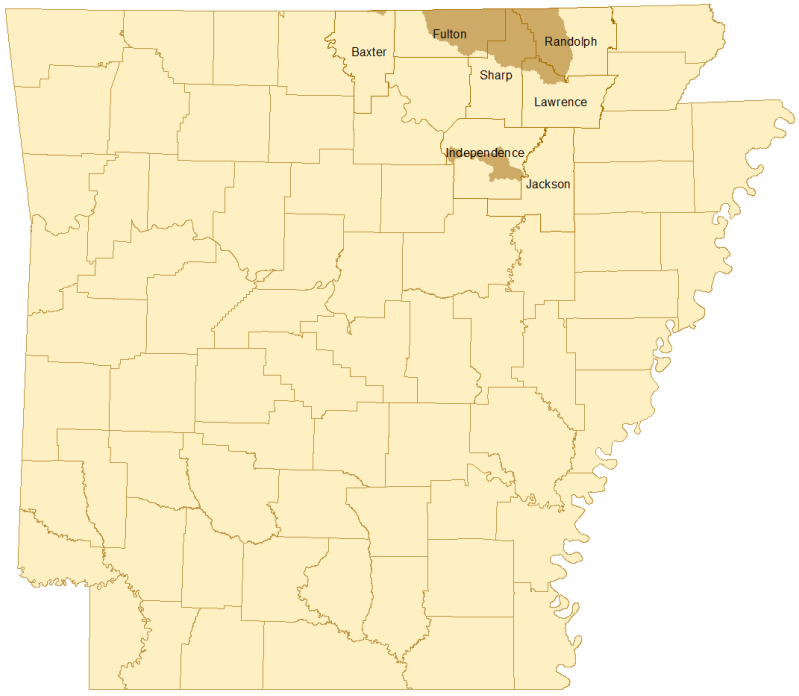
(Cryptobranchus alleganiensis bishopi)

Habitat Summary

The Ozark hellbender is one of the largest salamanders in the world. It also is the only salamander in the United States that spends its entire life in water. They live for 40-80 years. They are active throughout the year in cool streams influenced by springs and are found beneath course (rocky) substrate of well–oxygenated, fast flowing streams in clear creeks and rivers usually where there are large shelter rocks and temperatures are below 68 F. They retreat from beneath rocks at night to eat crayfish, fish, and aquatic invertebrates. They are only found in Black and White River drainages, in portions of the Spring, White, and Eleven Point Rivers. The principal existing threat is degradation of habitat, including impoundments, ore and gravel mining, silt and nutrient runoff (e.g., from timber harvest, agriculture, faulty septic and sewage treatment systems), and den site disturbance due to recreational uses of rivers. (NatureServe)

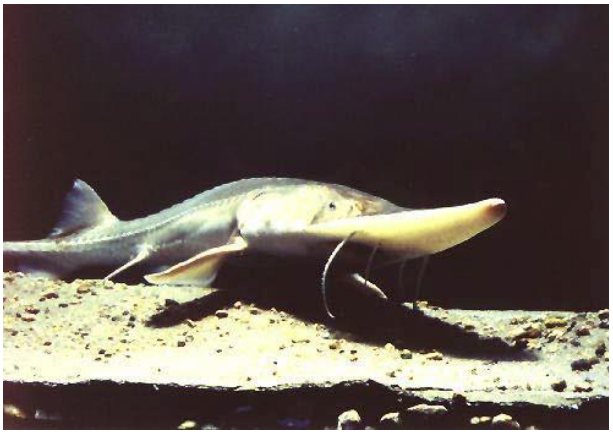
Status: Endangered

Range



Pallid Sturgeon

(Scaphirhynchus albus)

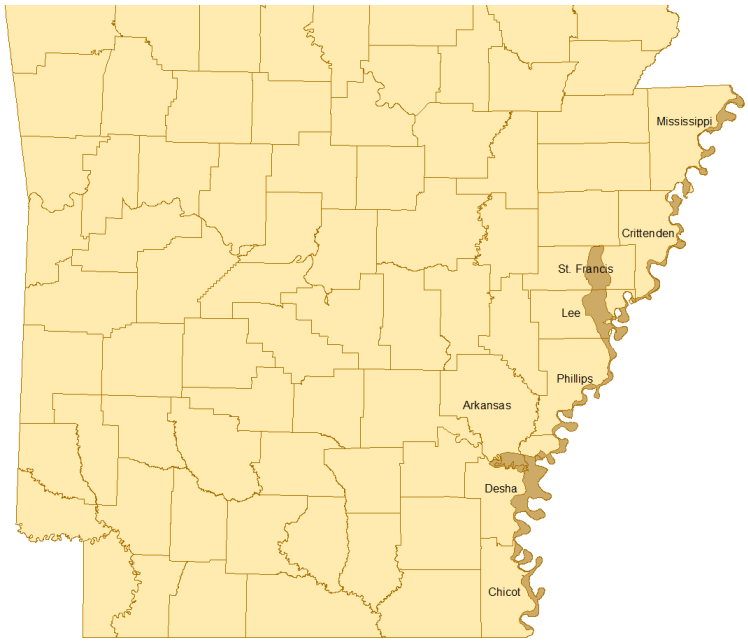


Habitat Summary

The pallid sturgeon only occurs in main channel habitats of the Mississippi River and Lower Arkansas downstream of Lock and Dam 2. This species occupies large, turbid, free-flowing riverine habitat; it occurs in strong current over firm gravel or sandy substrates. They have a toothless mouth underneath their long snout to suck up aquatic insects, crustaceans, mollusks, annelids, eggs of other fishes, and sometimes other fishes. They spawn from June to August and males and females are sexually mature in 3-4 years. River alteration for purposes such as navigation and flood control has led to a loss of habitat and large reduction in their numbers. Levee construction has eliminated major natural floodways and reduced the land area of the floodplain.

Status: Endangered

Range



Pink Mucket

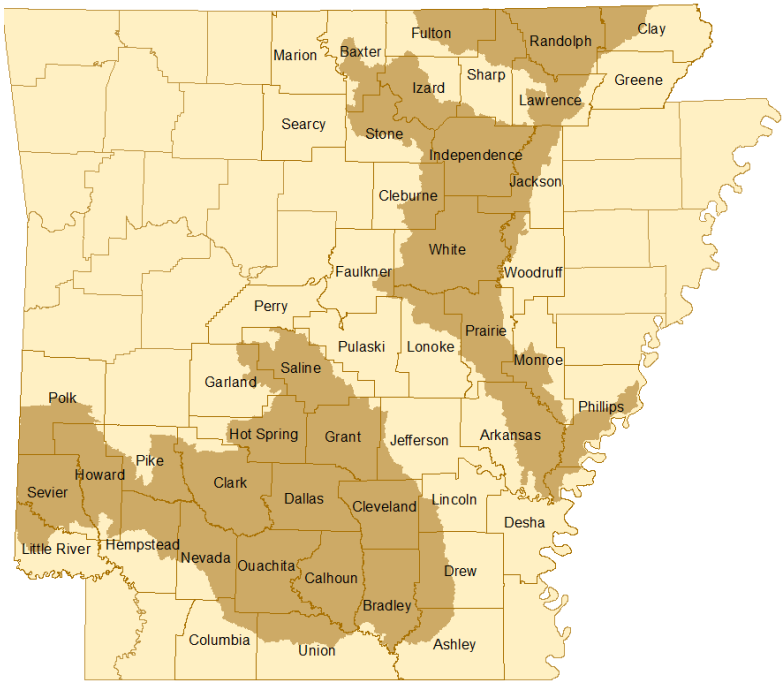
(Lampsilis abrupta)

Habitat Summary

The pink mucket is found in medium to large rivers in gravel with sand substrate. It uses a variety of sunfish species as its host fish. In Arkansas, this species inhabits the Ouachita, Saline, White, Black, and Spring rivers.

Status: Endangered

Range



Piping Plover

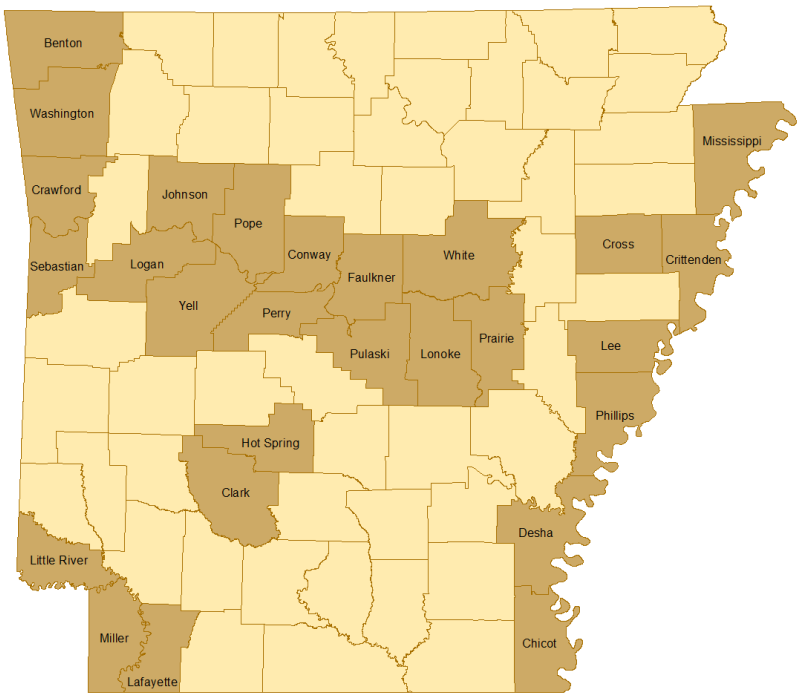
(Charadrius melodus)

Habitat Summary

Piping plovers are migratory shorebirds that breed in North America in three geographic regions: the Atlantic Coast, Northern Great Plains, and Great Lakes. Plovers from all three breeding populations winter along coastal beaches and barrier islands from North Carolina to Texas, the eastern coast of Mexico, and on Caribbean islands. They migrate to their nesting grounds in mid-April and depart mid-July to late August. Migration stopover habitat is not well documented, but they have been observed in Arkansas. Plovers use sites throughout the migration pathway during both fall and spring such as shoreline of reservoirs/man-made lakes, industrial ponds/fish farm ponds, rivers, marsh/wetlands, and natural lakes. Plovers do not concentrate in large numbers at inland stopover sites, they stay for one day, sites are highly influenced by local water levels, habitats conditions consist of muddy/sandy substrates, and they do not use the same stopover sites year after year. They are thought to eat fly larvae and beetles, grasshoppers, spiders, crustaceans, and mollusks. (Recovery Plan and USFWS)

Status: Threatened

Range



Pondberry

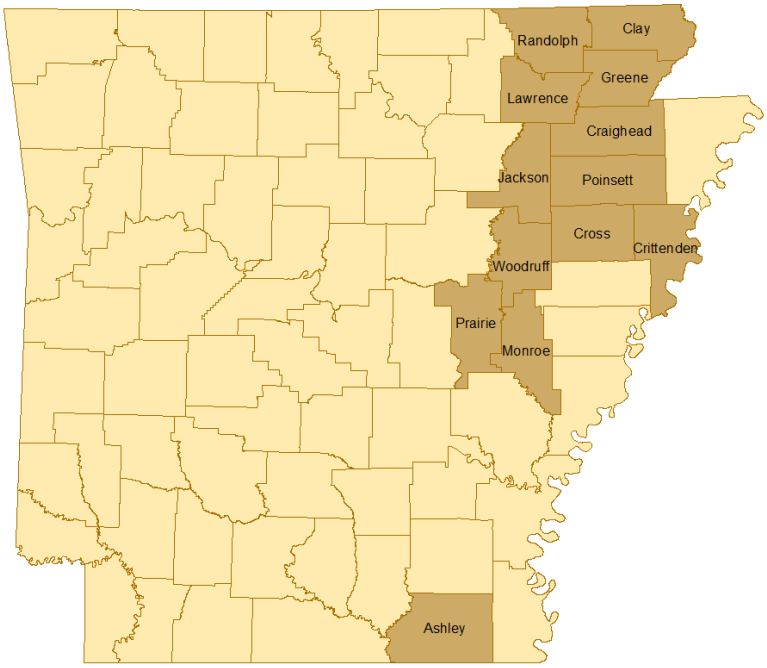
(Lindera melissifolia)

Habitat Summary

Pondberry is a deciduous shrub that can grow up to 6 feet tall. It generally is associated with wetland habitats such as bottomland hardwoods in the interior areas, and the margins of sinks, ponds and other depressions in the more coastal sites. The plants generally grow in shaded areas but also may be found in full sun. Small yellow flowers bloom in very early spring, followed by production of the red berries in the fall. Habitat loss is the main reason for listing.

Status: Endangered

Range



Rabbitsfoot

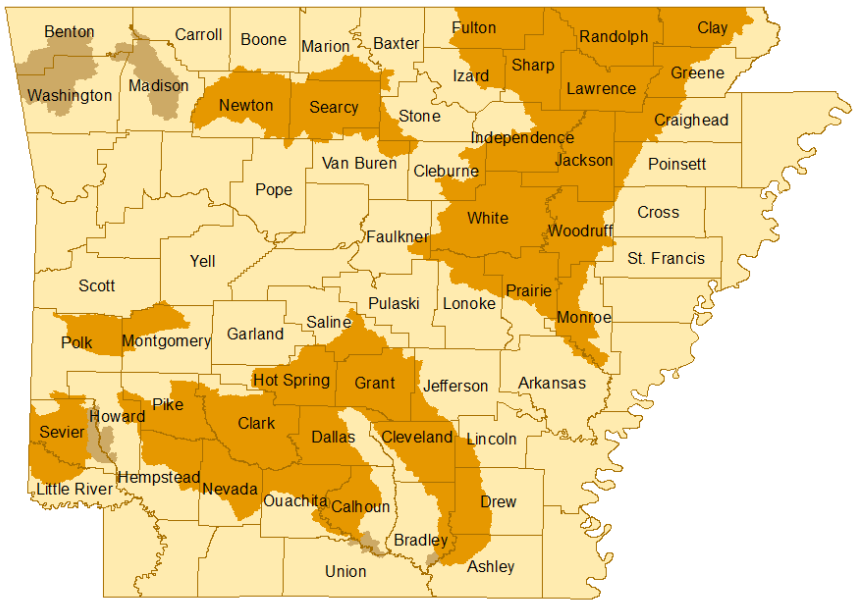
(Quadrula cylindrica cylindrica)

Habitat Summary

Rabbitsfoot can reach up to 6 inches in length. It is primarily an inhabitant of medium to large streams and rivers. It is widely distributed occurring in 13 of 15 states within its historical range. The majority of stable and reproducing populations left within its historical range occur in Arkansas. It usually occurs in shallow areas along the bank and adjacent shoals. Specimens may also occupy deep water runs. Bottom substrates generally include gravel with sand. This species seldom burrows but lies on its side instead. It uses shiners, or minnow species, as its host fish.

Status: Threatened

Range



Legend

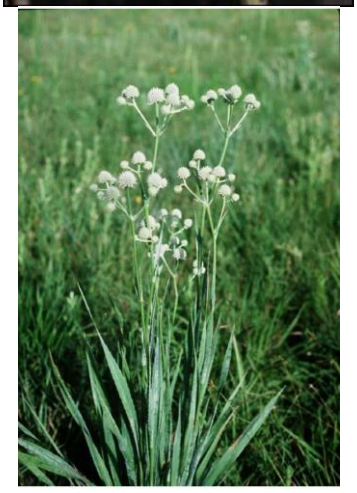
Rabbitsfoot Proposed Critical Habitat

Rabbitsfoot Range

Note: The areas shown on the map represent the section 7 consultation areas. The actual area of occupancy by species or area designated as proposed critical habitat represents a smaller area.

Rattlesnake-Master Borer Moth

(Papaipema eryngi)

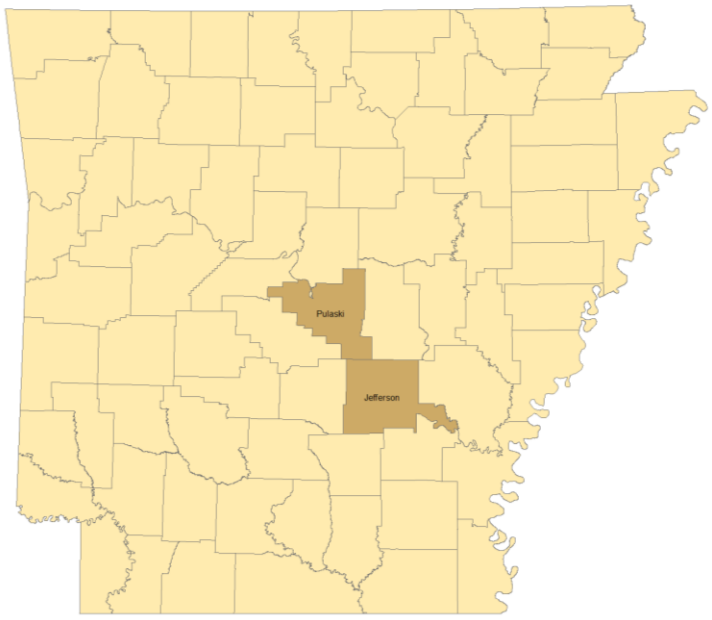


Habitat Summary

The rattlesnakemaster plant is the moth's only food source. Moths have a single flight per year. Adults emerge from mid-September to mid-October, fly through mid- to late October, females drop their eggs near the food plant in October, eggs overwinter in the duff, young larvae emerge between mid-May and early June, and pupation occurs in the stem or the root of the host plant in mid to late August. The boring activities can be fatal to the host plant. Moths are not thought to disperse widely, but will disperse up to 2 miles if the number of host plants are limiting. Moths are obligate residents of undisturbed prairie and woodland openings that contain their food plant. Although common in remnant prairies, rattlesnake-master occurs in low densities; it is a conservative species and has been found to have relative frequencies in restored and relict prairies of less than 1 percent. Moths were discovered on two sites in Arkansas in 1997, one each at the Little Rock Air Force Base and Pine Bluff Arsenal. It was found at the Arsenal in 2012 during a controlled burn. The current population status at the Air Force Base is unknown. Conversion of prairie to agriculture may be the most significant factor affecting the moth. Moth populations existed historically in a vast ecosystem maintained in part by fire. Although prairie insects are adapted to fire in some ways, experts suggest that prescribed burns that are conducted frequently and cover entire insect populations can be detrimental. Wallowing by bison and trampling by bison and cattle creates open areas that can increase species richness and heterogeneity; therefore, grazing may be used as a management tool. Herbicide applications may completely destroy moth populations.

Status: Candidate for Listing

Range



Red-cockaded Woodpecker

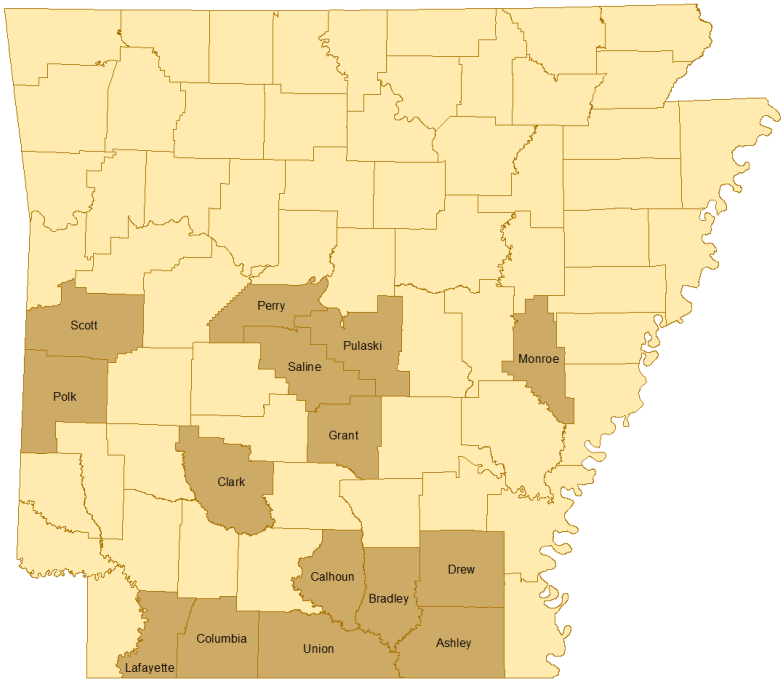
(Picoides borealis)

Habitat Summary

Red-cockaded woodpecker requires open pine woodlands and savannahs with large old pines (generally 60 to 80 years) cavity trees because the cavities are excavated completely within inactive heartwood, so the cavity interior remains free from resin that can entrap the birds. Cavity excavation typically takes many years. In Arkansas, woodpeckers use loblolly and shortleaf pine tree as cavity trees year-round. Suitable habitat consists of mature pines with an open canopy, low densities of small pines, little or no hardwood or pine midstory, few or no overstory hardwoods, and abundant native bunchgrass and forb groundcovers. Their diet consists primarily of ants, roaches, beetles, spiders, centipedes, true bugs, crickets, and moths, but they also eat fruits and seeds. Fire suppression which allows encroachment of hardwoods, lack of cavity trees, loss of mature pine trees, and habitat fragmentation are limiting factors and directly affect the number of potential breeding groups. Several silvicultural practices have been detrimental and include short rotations, clearcutting, and conversion to sub-optimal pine species. (USFWS)

Status: Endangered

Range



Red Knot

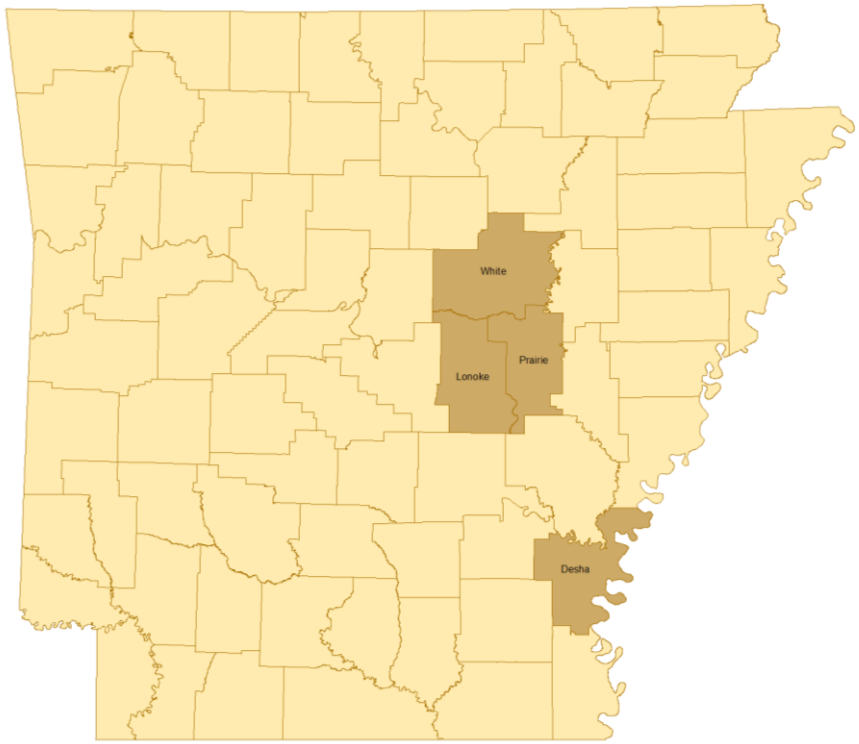
(Calidris canutus rufa)

Habitat Summary

Each year red knots make one of the longest distance migrations known in the animal kingdom, traveling approximately 18,500 miles annually between wintering grounds in southern South America and breeding areas within the Canadian Arctic. The red knot has been observed in Arkansas in four counties at stopover locations during migration. Wintering areas include four distinct areas, one of which includes the Northwest Gulf of Mexico from Mexico through Texas to Louisiana, and the Southeast United States from Florida to North Carolina. Knots are restricted to the ocean coasts during winter, and occur primarily along the coasts during migration. However, small numbers of red knots are reported annually across the interior United States during spring and fall migration—these reported sightings have been reported in nearly every interior state. Red knots occupy all known wintering areas from December to February, but may be present in some wintering areas as early as September or as late as May. During migration, knots are commonly found along sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments and lagoons, and peat banks. They are specialized in eating hard-shelled mollusks, sometimes supplemented with easily accessed softer invertebrate prey, such as shrimp- and crab-like organisms, marine worms, insect larvae, and horseshoe crab eggs. They must take advantage of seasonally abundant food resources at intermediate stopovers to build up fat reserves for the next nonstop, long-distance flight.

Status: Proposed Threatened

Range



Scaleshell

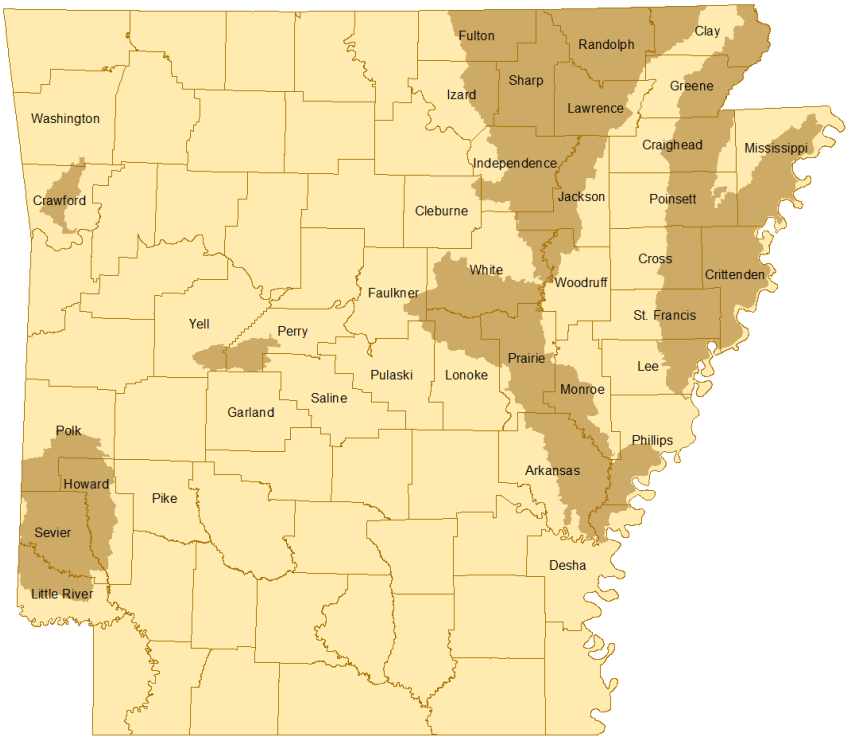
(Leptodea leptodon)

Habitat Summary

Scaleshell is a relatively small mussel that lives in medium-sized and large rivers with stable channels and good water quality. Freshwater drum have been identified as a host fish for the scaleshell but there may be other species. Relatively little is known about the life history of the scaleshell.

Status: Endangered

Range



Snuffbox

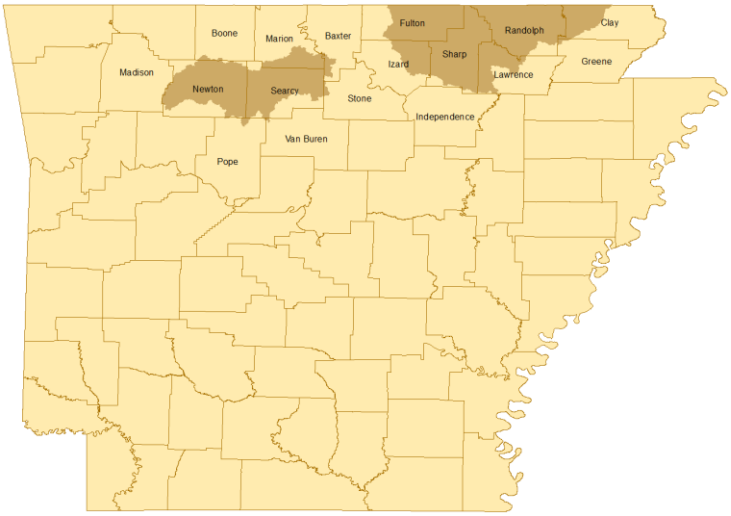
(Epioblasma triquetra)

Habitat Summary

The snuffbox is found in riffles of medium and large rivers with stony or sandy bottoms, in swift currents, usually deeply buried. The host fish is the logperch. Threats to the snuffbox include loss and degradation of stream and river habitat due to impoundments, channelization, chemical contaminants, mining, and sedimentation. Freshwater mussels require clean water; their decline often signals a decline in the water quality of the streams and rivers they inhabit.

Status: Endangered

Range



Speckled Pocketbook

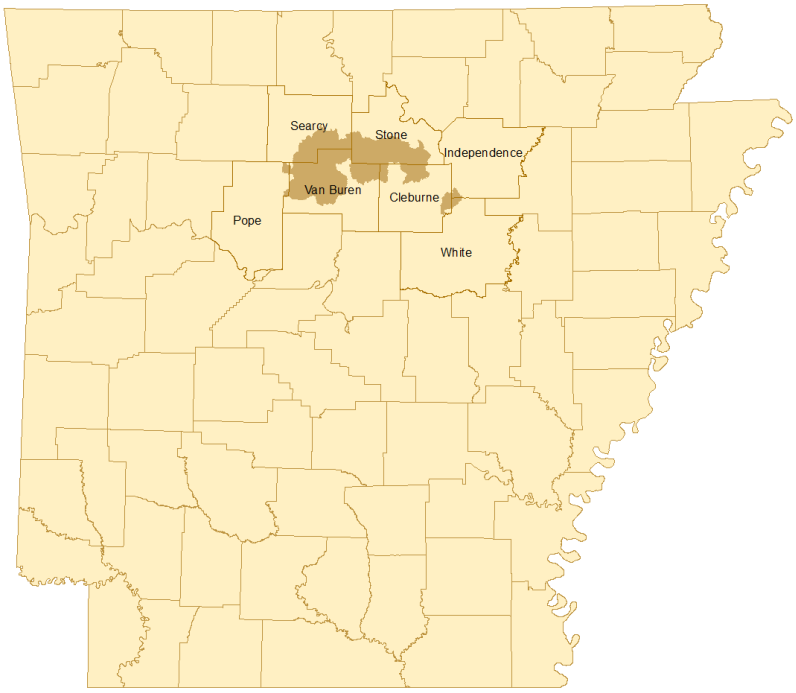
(Lampsilis streckeri)

Habitat Summary

The speckled pocketbook only occurs in the Little Red River watershed in north central Arkansas. They prefer cobble/gravel with sand bottoms with a constant flow of water. They also use a secondary habitat between and beneath large boulders in pools. It uses primarily green sunfish and other sunfish species as suitable fish hosts. This medium sized mussel reaches 3 inches in length.

Status: Endangered

Range



Spectaclecase

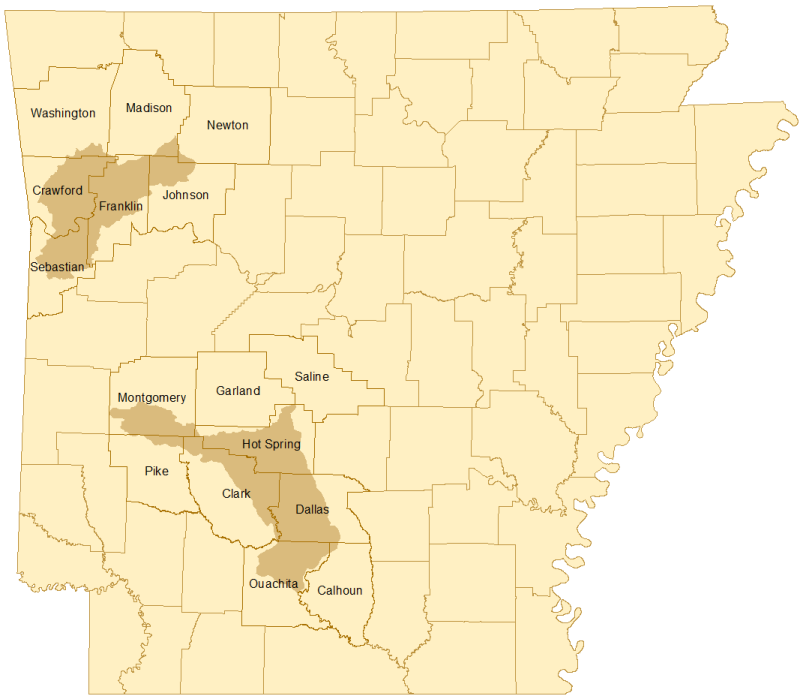
(Cumberlandia monodonta)

Habitat Summary

Spectaclecase is found in large rivers with swiftly flowing water, among and under large boulders in patches of sand and gravel with moderate to swift current. The host species are unknown. It is a larger mussel that can grow up to 8 inches in length.

Status: Endangered

Range



Sprague's Pipit

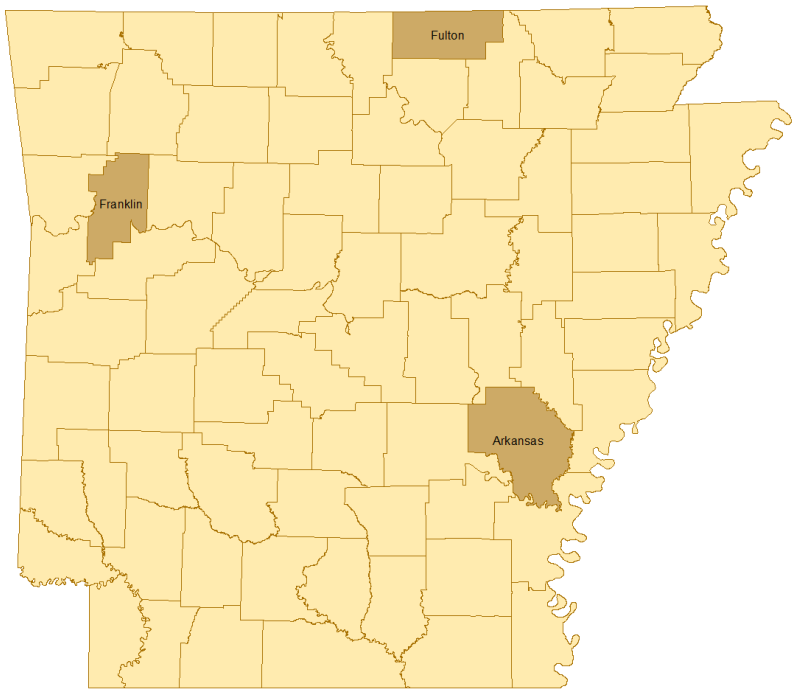
(Anthus spragueii)

Habitat Summary

The Sprague's pipit is one of the few bird species endemic to the North American prairie. It winters in south-central and southeast Arizona, Texas, southern Oklahoma, southern Arkansas, northwest Mississippi, southern Louisiana, and northern Mexico. The species prefers upland mixed-grass prairie with a grass height between 4 and 12 inches, alkaline meadows, and wet meadow zones around alkali and freshwater lakes. They are strongly tied to native prairie (land which has never been plowed) throughout their life cycle. They are rarely observed in cropland or land in the Conservation Reserve Program presumably because the vegetation is too dense. They will use nonnative planted grassland when the vegetative structure is suitable. Vegetation structure may be a better predictor of its occurrence than plant species' composition. The species avoids grasslands with excessive shrubs, roads, trails, and habitat edges. It forages on the ground eating insects during the summer (grasshoppers, crickets, ants, weevils, stink bugs and caterpillars) and seeds during the fall and winter. Conversion to agriculture and poor grassland management practices (over grazing and mowing grass below 4 inches) have led to a decline in suitable pipit habitat by causing fragmentation, which leads to more edge effects and greater impact from predators, cowbirds, and weed incursion. Since the species avoids habitats with trees and shrubs, fire suppression has decreased suitable habitat by encouraging growth of trees and shrubs.

Status: Candidate for Listing

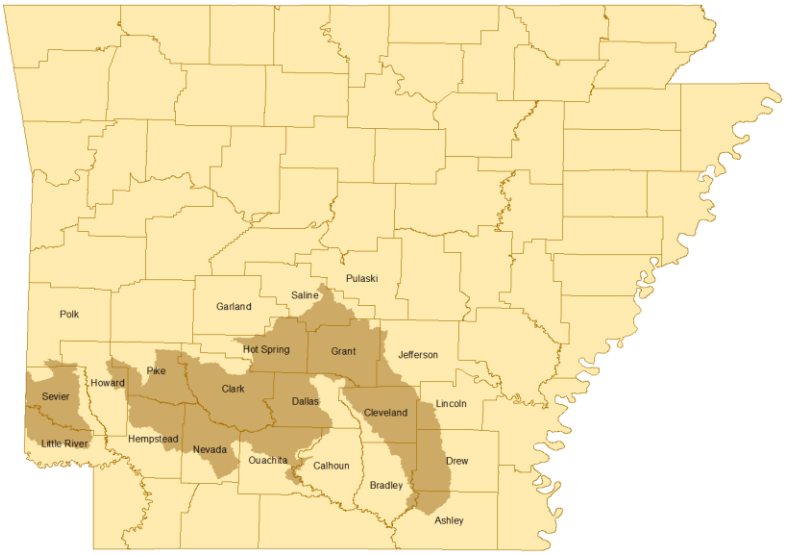
Range



Winged Mapleleaf

(Quadrula fragosa)

Range



Habitat Summary

Winged mapleleaf are found in medium to large rivers with clean gravel, sand, or cobble bottoms and. In Arkansas, they are only found in the Ouachita and Saline Rivers. Channel and blue catfish are the only fish species that are suitable hosts to complete its life cycle. Females mimic a dying or dead mussel to attract their fish host. They can grow up to 4 inches long.

Status: Endangered

Yellowcheek Darter

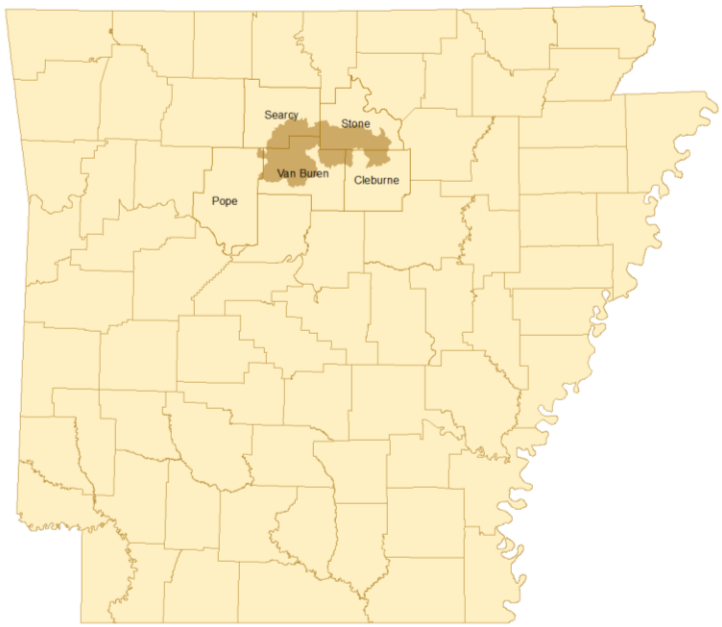
(Etheostoma moorei)

Habitat Summary

The yellowcheek darter only occurs in the upper Little Red River drainage above Greers Ferry Lake in Cleburne, Searcy, Stone, and Van Buren counties, Arkansas. Remaining populations occur in the South Fork, Middle Fork, Archey Creek, and Devils Fork (including Turkey and Beech Fork segments) tributaries of the Little Red River. This fish occupies small to medium, high gradient, clear rivers, in swift to moderate riffles with gravel, rubble, and boulder bottoms with of depths of 10-20 inches. Spawning occurs in late May through June in swifter, turbulent portions of riffles around or under the largest substrate particles available. The primary foods are aquatic fly larvae such as immature stoneflies, mayflies, and caddisflies. Threats include such activities as impoundment, sedimentation, poor livestock grazing practices, improper timber harvest practices, nutrient enrichment, gravel mining, channelization/channel instability, and natural gas development.

Status: Endangered

Range



Critical Habitat Range: The yellowcheek darter's designated critical habitat encompasses its entire range.