



The Ferrum Nature Society Bulletin

Dedicated to the appreciation and conservation of our natural world

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Nature's events:

October is a colorful month. Falling nighttime temperatures and the first frost, usually occurring during the first or second week of the month will stimulate chlorophyll breakdown and unmask the remaining leaf pigments.



The magnitude of fall coloration may have been compromised by the late-season drought which has caused some trees to already shed some of their leaves. Some sunny warm days and cold nights are required by some tree species, such as red maple and blackgum, in order to fully develop a bright red pigment called anthocyanin.

Sky calendar:

Full moon - October 14

Planets - Look for Venus to appear after sunset. Saturn and Jupiter are also visible near the moon in the evening hours.

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Bobcats in Virginia Patrick Crooks and Todd Fredericksen

The presence of bobcats (*Lynx rufus*) in the state of Virginia is well-documented and has been recorded by hunters and wildlife enthusiasts alike. Bobcats are found throughout North America except for those areas that are highly developed. The bobcat is the smallest species in the genus *Lynx* with the female averaging 13.1 pounds and male 22.9 pounds. The cat has a very short (bobbed) tail, longer legs than a house cat, and longer cheek fur forming sideburns. Common variations in coloration of the cat include reddish-brown, spotted and streaked with black and white. The ears are dark with a white spot on top.

The elusiveness of the bobcat is legendary and many people do not realize that bobcats occur within their area and may indeed be quite common. This nocturnal species is rarely seen during the day. A typical home range for a bobcat will vary from 5-50 miles depending on food availability, cover, and competition. They nest and rest in the cover of natural cavities in limestone and sandstone formations that are well-camouflaged.

While the species is known to exist in every county across the state of Virginia by the Virginia Department of Game and Inland Fisheries, areas more populated by the bobcat lie in rural areas with mountainous terrain and in swampy areas of the Coastal Plain, particularly in the Great Dismal Swamp. The Mountain and Coastal Plain bobcats are considered to be geographic variants. The bobcat is mostly a forest animal and prefers early successional forests with dense thickets for cover. The lack of early successional habitat or excessive urban development may limit its abundance in some portions of the state.

The species is not protected or threatened and it appears to be thriving in many areas of the state. Populations fluctuate based on the cyclical availability of their main food supply,

including small rodents and rabbits. Bobcats also feed on many other mammal species and may occasionally take prey as large as deer. Wild turkeys and other birds are occasionally eaten. Bobcats will often cover partially eaten prey and return to eat it later.

Bobcats are solitary animals and mating takes place during chance encounters between male cats and females that are in estrus in late winter or early spring. The gestation period is about two months after which the female will typically produce a litter of one to five 10-12-ounce kittens. Den sites include rock outcroppings, rock ledges, hollow trees and brush piles. The mother will vigilantly guard her young for 2 months. Young bobcats stay with their mother



Bobcats are more common in Virginia than most people realize. Photo – Illinois Department of Natural Resources

until fall or early winter. Newborn kits may be preyed upon by foxes, great horned owls and coyotes. Adult bobcats have few predators, aside from humans and large dogs. Mortality of adults may result from starvation or diseases, such as rabies or distemper; human hunting trapping for their pelts; or collisions with vehicles.

The Diminutive, but Diverse, Darters

Zach Wright

Meandering down a back country stream, one may catch the glimpse of an apprehensive fish darting for cover among the river rocks. Upon further investigation, you have found yourself enveloped in the world of that mysterious fish darting about the rocks, holding your attention while you wait to observe another dance of the fin. These interesting little fish are commonly known as darters.

Darters are diminutive members of the perch family, *Percidae*, which also contains three game fish familiar to many American fishermen: walleye, sauger, and yellow perch. These larger perch are rather long and slender, covered with toothed (ctenoid) scales, and equipped with long sharp teeth in both jaws. Their first dorsal fin is supported by sharp stiff spines and the second dorsal by flexible rays. Rays support all of the remaining fins, but the anal and pelvic fins may each have an initial spine or two. All these larger species have moderately to well-developed air bladders which give them considerable buoyancy. Darters are similar to these game fish but are usually more slender and are much smaller, ranging from about 2.5 cm to a maximum of only 16.8 cm. They have small teeth and either no air bladder or one of reduced size.

Darters are found extensively throughout Virginia's waterways and are classified in three different subgenera. The first genera, *Percina*, is the most generalized of the three darter genera. It comprises 31 species. *Percina* have a single row of modified scales between the breast and anus, or are unscaled along the anterior portion of the belly. Adult size is moderate to large (45-169 mm) and the body slender to robust; often fusiform in shape. The majority of *Percina* are river darters which prefer moderate

current and sand, gravel, or bedrock substrate. *Percina* are most often encountered in streams as small as third order, but fourth- or fifth-order streams are the most common streams for most *Percina*.

Of the species in this genus, the Roanoke logperch (*Percina rex*) has become one of three federally endangered fish species endemic to Virginia. Knowledge of its distribution and habitat requirements is limited, but the species is known to occur in the Smith, Pigg, Roanoke, and Nottoway River watersheds. Logperch occur primarily in medium-sized rivers with silt-free, unembedded pebble and gravel substrate. Logperch populations in the upper Roanoke and Pigg River drainages continue to be seriously



The federally endangered Roanoke logperch occurs in rivers and tributaries near Ferrum College. Photo from Virtual Aquarium, Virginia Tech.

threatened by siltation and contaminants stemming primarily from urbanization, agriculture, and highways. The status of Roanoke logperch has not improved since it was listed as endangered in 1989. Impacts of human activity on Roanoke logperch could be substantially reduced by more effective planning, mitigation, and/or restoration

The next genera of darters is *Ammocrypta*, which is the smallest genus and, in many respects, the most distinctive. Species in this genus are referred to as sand darters. The bodies are usually extremely slender with one anal spine, and breeding colors are either absent or present only as delicate hues. To varying degrees, all species of *Ammocrypta* are associated with sand substrate in which they may bury themselves, with only the eyes and top of head protruding. There are no known members of the *Ammocrypta* genus currently found in the state of Virginia. Finally, the subgenera *Etheostoma*, which is the largest and most diverse genus of darters, constitutes 94 species. Members of *Etheostoma* exploit a large variety of habitat conditions, ranging from poorly oxygenated swamps to turbulent, well-aerated streams. They often are abundant in streams smaller than those of the other two darter genera. There are 27 species of darters in this family that are found in Virginia.