

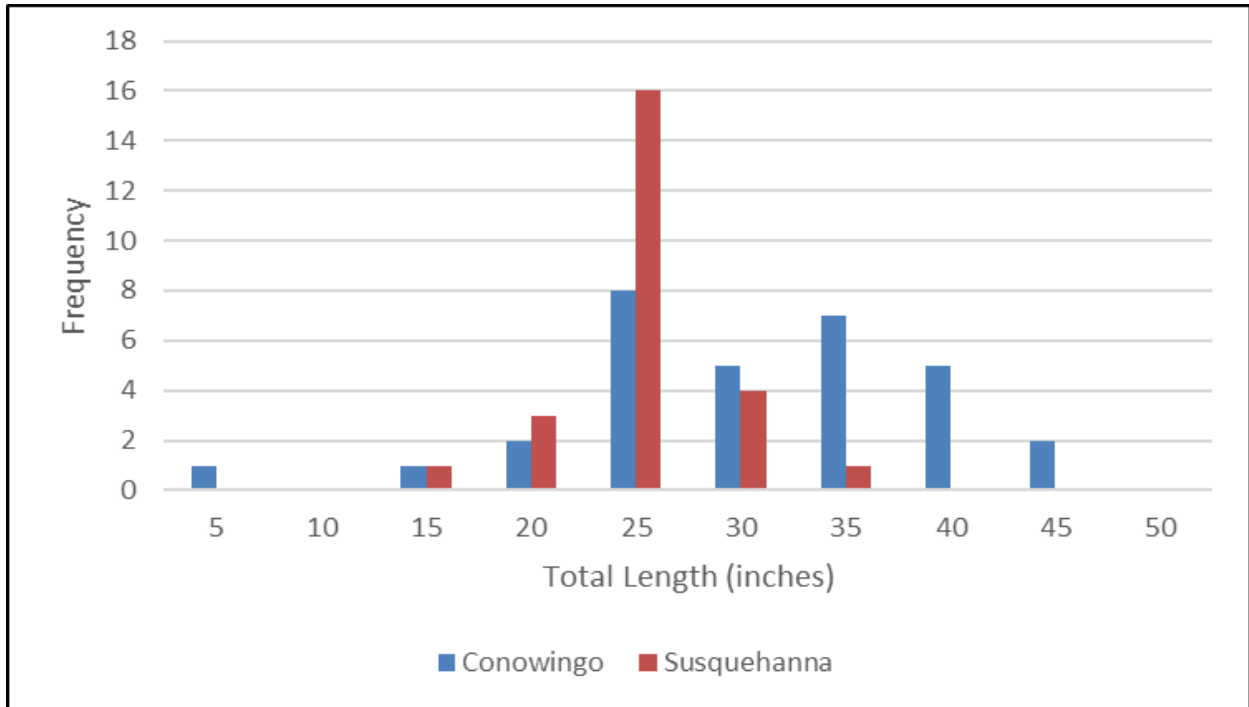
River Monsters – Studying and fishing for invasive flathead catfish in the Susquehanna River watershed.

Unfortunately, Maryland is now home to two non-native, invasive catfish species -- flathead catfish (*Pylodictis olivaris*) and blue catfish (*Ictalurus furcatus*). Both of these species are native to the Mississippi River watershed and were recently introduced into the Chesapeake Bay watershed. Both species grow very large (more than 100 pounds) and are highly predatory in nature. As their numbers increase, they pose a serious threat to our native and naturalized fish populations. Because of this, we ask that anglers harvest any blue or flathead catfish they catch.

Click [Here](#) to learn more about invasive catfish species and how to identify them!

Understanding the Adversary - Flathead catfish have been reported in Maryland's portion of the Susquehanna and Conowingo Reservoir since the early 2000's but were not collected during routine fisheries surveys until 2010. Following this, the most common sampling technique- boat electrofishing was utilized at first to try to collect individuals for study. Unfortunately, these efforts failed to effectively collect flathead catfish in the two areas. In 2017, the Maryland Department of Natural Resources, Freshwater Fisheries Program joined an ongoing study being conducted by the Pennsylvania Fish and Boat Commission to study flathead catfish populations within the Susquehanna River watershed. These studies entail collecting flatheads above and below Conowingo Dam using baited hoop nets. Total length and weight are recorded from each fish collected. Additionally, the otoliths (the fish's ear bone) from each fish is extracted and examined to determine the fish's age. During these ongoing studies we hope to learn much about their growth, life history, distribution, feeding habits and impacts to other species.

Hoop net data were collected in 2017 and 2019 for Conowingo Reservoir and the Susquehanna River. Nets were not able to be deployed in 2018 due to high flows during the sampling period. Results from both years are similar with flatheads representing all size classes collected at both locations at similar catch rates. However, Conowingo Reservoir did produce larger fish overall. The largest fish collected from Conowingo in 2017 and 2019 was over 45 inches in length and 48 pounds! Although not as frequently collected in the hoop nets, larger flatheads certainly inhabit the lower Susquehanna River, frequently residing in the area immediately below Conowingo Dam. The turbulent tailrace area, however, is unsuitable for sampling with anchored nets.



Length frequency distribution of flathead catfish collected in hoop nets from Conowingo Reservoir and Susquehanna River in 2017 and 2019



Biologists pulling in hoop nets

Angling Opportunity- Although they are relatively new to the river system, it did not take long for anglers to figure out how to target these large predators. Flathead catfish are highly piscivorous- meaning they like to eat other fish. For this reason, fishing with live fish is the most popular and productive method. It is best done using a boat; anchoring upcurrent of drop-offs, ledges, brushpiles and rocky points. These are the areas where flatheads are most likely to be found. Preferred live bait are sunfish or white perch, caught at the same waterbody where you intend to fish. Unlike some other predators, flatheads do not avoid spiny rayed forage. *Note - Bait should not be caught in one location, then used in another. Moving live, wild fish from one location to another can spread diseases, parasites or unwanted aquatic species from one watershed to another.* Some of these fish can push fifty pounds- so stout tackle is preferred. A simple



A simple bottom rig for catfish

bottom rig with a sliding sinker, swivel, and about two feet of leader in front a 3/0-7/0 circle hook is all that is needed. Match the hook size to the size of the bait. Reels with bait-clickers or controlled free spool work best for this kind of fishing. When the fish picks up the bait, allow it a little line, and then simply reel. It is important to remember not to attempt to set the hook when using circle hooks. Then the fight is on.

The area directly below Conowingo Dam is a very dynamic and potentially dangerous place. Flows rapidly change depending on natural river flow and the power generation schedule. As



Two large flatheads collected from Conowingo Reservoir

more power is needed, more water is released through a series of gates and turbines. The dam and its turbines create a “feeding buffet” for predatory fish. Although there is a fish ladder, the dam itself presents a blockage to many species wishing to move upstream to spawn. As a result, large numbers of anadromous fish tend to concentrate directly below the dam in the spring and early summer. Secondly, Conowingo Reservoir has a very robust gizzard shad population. When the dam turbines are activated, some gizzard shad get swept into the turbines and are either stunned or killed. When released into the river below the dam they are easy prey to predators- including flathead catfish. Flatheads tend to congregate in certain current seams downstream of working gates waiting for an easy meal. The water is deep, fast and the bottom is very rocky. No boats are allowed in this area. For these reasons, the fishing methods described



A flathead catfish "Conowingo Rig" with 6 inch twister

above are not preferred. However, fishermen have discovered a specialized technique that is very effective. It requires a long, high modulus graphite surf rod and large spinning reel filled with light braided line (15-20 pound). A small trolling weight is tied on, followed by 18-24 inches of leader. A large unweighted hook and plastic twister or paddletail is then added. Fishermen will need to change to different weight sinkers depending on flow. The rig is then cast out as far as possible, preferably to one of the current seams in the water coming out of the gates. The angler then slowly retrieves the

rig, while maintaining bottom contact with the sinker. The slender trolling weight lessens its propensity to hang in the rocky bottom, but you will hang up occasionally. Once a fish is hooked, it is important to note the exact location where that occurred. It is possible to catch many flatheads out of one particular current seam. One fisherman was observed catching six flatheads in as many casts once he found "the spot".

Once you catch and examine the sheer size of these individuals, you can understand the reasoning behind their "invasive" status. Although flatheads prefer fish like sunfish, no specific fish is off the menu. When you see the mouth on a large flathead you will see that almost no size fish is off the menu either. Give flathead fishing a try!



Flathead catfish anglers casting to a distant current seam below Conowingo Dam



A successful flathead angler below Conowingo Dam