

## Pennsylvania Fish & Boat Commission fishandboat.com

## Channel Catfish (*Ictaluris punctatus*) Management and Fishing in Pennsylvania

Prepared by R. Lorantas, B. Frick, PFBC Warmwater Unit; and Fisheries Management Biologists

2018 Update

**Goal**: Maximize high quality fishing opportunities for Pennsylvania Channel Catfish anglers and ensure that effective and efficient use of PFBC hatchery stocked Channel Catfish occurs. Preserve and enhance essential habitats to maintain robust naturally sustained Channel Catfish populations.

Channel Catfish occur throughout Pennsylvania and were originally indigenous to the Ohio River and Lake Erie Drainages. The Ohio River Drainage includes the Ohio River, Allegheny River, and Monongahela River Drainages. Naturally sustained populations can be found in lake (lentic) and riverine (lotic) habitats within the Ohio, Potomac, Susquehanna, and Delaware River Drainages. It is believed that Channel Catfish did not originally occur in Atlantic slope drainages (Susquehanna, Potomac, and Delaware River Drainages) in Pennsylvania; however, Channel Catfish have been widely stocked within the Susquehanna and Delaware River Drainages for many years, creating naturalized and self-sustaining populations in these areas. The Susquehanna River Drainage includes the West Branch Susquehanna River and Juniata River Drainages. The Delaware River Drainage includes the Lehigh River and Schuylkill River Drainages.

Channel Catfish populations are managed for sport fishing through harvest management, habitat management, habitat enhancement, and through stocking. Recent completion of a comprehensive management plan detail assessments directed to evaluations of ways to improve Channel Catfish fisheries through: (1) stocking density changes, (2) measurement of stocked fish survival by size, (3) spawning habitat expansion, (4) promotion of recreational Channel Catfish fishing in summer stocked ponds, and (5) other methods (Lorson and Depew 2017). Annual maintenance stocking of juvenile Channel Catfish, in Pennsylvania, occurs where there is angler demand and where populations occur at low or modest densities, or where spawning habitats are insufficient to sustain modest Channel Catfish densities. In the period from 2013 to 2017, between 30 to 43 waters, or water sections, were annually stocked with juvenile Channel Catfish. Channel Catfish are typically stocked at fingerling size and require several years to attain sizes most desirable by anglers. Annual stocking summary details for present and past years (see Historic stocking for past years) are provided elsewhere on this site. Our Warmwater and Coolwater fishing map provides a broad selection of waters where Channel Catfish fishing opportunities can be found in Pennsylvania including may locations where populations are naturally-sustained. Most of Pennsylvania's large rivers contain abundant naturally sustained Channel Catfish populations. Many of Pennsylvania's man-made reservoirs are stocked with Channel Catfish to sustain good fishing. All stocking plans originate from sampling and assessment of individual waters conducted by Fisheries Biologists and

follow overarching management guidelines set forth in the statewide <u>Catfish Management Plan</u>. This overarching guidance details stocking rationale and new management and assessment initiatives, only identified in part in this brief synopsis.

Anglers may be curious as to the maximum size Channel Catfish can attain in Pennsylvania waters. <u>Current Pennsylvania state record fish listings</u> provide perspective regarding maximum size attainable. With respect to harvest management, <u>inland regulations</u> accommodate harvest of 50 panfish, combined species, which includes Channel Catfish and other species. No minimum size limit or seasonal restrictions apply.

Apart from inland harvest regulation programs, Pennsylvania Fish and Boat Commission biologists have collaborated with biologists in neighboring states to develop harvest regulations that apply to border waters to sustain high quality fishing experiences. These waters include Lake Erie, Pymatuning Reservoir, and Conowingo Reservoir on the lower Susquehanna River. Border water regulations applying to these locations may differ from inland harvest regulation and can be found elsewhere on this website. Anglers should consult the current Summary of Fishing Laws and Regulations and reference and abide by harvest rules applicable to boundary waters they fish.

Biologists regularly sample fish populations to measure their abundance and size structure. Biologists also measure habitat suitability, forage fish density, and presence of other gamefish predators. Habitat enhancement involves careful evaluation of a water body's physical, biological, and chemical characteristics. In Pennsylvania's many man-made reservoirs necessary Channel Catfish spawning elements may not be available where natural reproduction does not sustain a fishery. Channel Catfish spawning requirements are rather specific, water temperature must reach 80 degrees Fahrenheit and overhead cover such as an overhanging bank, overhanging rock, or hollow log must exist in which to construct a nest, spawn, and incubate eggs. Hatching occurs in about one week with the male remaining with the nest through hatching. Channel Catfish will not spawn in clear water without overhead structural elements (Scott and Crossman 1973). Assessments guide stocking decisions and they guide the size of fingerling Channel Catfish to be stocked. Assessments may show a lack of spawning or nursery habitat, in these instances, artificial or natural materials may be added to create such habitat, where stocking has previously created necessary abundance of adults, such that natural reproduction may be successful or enhanced. The Pennsylvania Fish and Boat Commission has an active corps of volunteers that assist in construction and placement of catfish nest boxes in accordance with an approved plan. We encourage organizations interested in volunteering time to contact our Habitat Unit for more information.

In association with assessments performed by fishery biologists, growth of Channel Catfish is examined by measuring length and weight (Channel Catfish do not have scales, so age determination by examination of scales is not possible). Ongoing work is underway to describe length at age using otoliths for Channel Catfish and other catfishes as guided by studies detailed in the statewide Catfish Management Plan. We have tabulated average weights for a variety of lengths of Channel Catfish in Pennsylvania (Table 1). Anglers find these tables useful in approximating the weight of their catch. Anglers should note that weight for individual fish may vary. Fish weight at a specific length depends on a variety of factors including habitat, gender, genetics, forage abundance, and other conditions.

Table 1. Average weight of Channel Catfish, at a given length, collected by fisheries biologists in Pennsylvania (March - June).									
Inches	Pounds	Inches	Pounds	Inches	Pounds	Inches	Pounds	Inches	Pounds
4	0.1	11.5	0.5	19	2.9	26.5	8.8	34	20.3
4.5	0.1	12	0.6	19.5	3.2	27	9.4	34.5	21.3
5	0.1	12.5	0.7	20	3.4	27.5	10.0	35	22.3
5.5	0.1	13	0.8	20.5	3.7	28	10.6	35.5	23.4
6	0.1	13.5	0.9	21	4.1	28.5	11.2	36	24.5
6.5	0.1	14	1.0	21.5	4.4	29	11.9	36.5	25.7
7	0.1	14.5	1.2	22	4.7	29.5	12.6	37	26.9
7.5	0.1	15	1.3	22.5	5.1	30	13.3	37.5	28.1
8	0.2	15.5	1.5	23	5.5	30.5	14.1	38	29.4
8.5	0.2	16	1.6	23.5	5.9	31	14.9	38.5	30.7
9	0.2	16.5	1.8	24	6.3	31.5	15.7	39	32.0
9.5	0.3	17	2.0	24.5	6.8	32	16.5	39.5	33.4
10	0.3	17.5	2.2	25	7.3	32.5	17.4	40	34.9
10.5	0.4	18	2.4	25.5	7.8	33	18.3	40.5	36.3
11	0.5	18.5	2.7	26	8.3	33.5	19.3		

Channel Catfish can be caught from the shoreline of a river or reservoir, or from the deck of a boat. Both "tight line" fishing from shore with a bottom bait, and trolling are popular methods. With fishing destinations identified from maps on this site, which provide a broad selection of waters where Channel Catfish fishing opportunities can be found in Pennsylvania, and information describing the best seasons to catch Channel Catfish, anglers need only select an effective bait or lure. A live minnow, night crawler, chicken liver, cut bait, or scent (cheese) bait can work well. Channel Catfish, as well as other catfish locate food by sight and taste. The environment is tasted by receptors on the skin and barbells (Scott and Crossman 1973). Surveys carried out by the Pennsylvania Fish and Boat Commission illustrate that the greatest catch per angler hour in medium reservoirs occurs in summer and early fall (Figure 1), the greatest catch rate in large reservoirs occurs in summer and winter (Figure 2), and the greatest catch rate in rivers occurs in late summer and early fall (Figure 3). Although these surveys do not cover the entire year, they provide information indicating when anglers can expect good success.

A <u>summary of Channel Catfish information</u> including fishing tips, best fishing waters, species identification, and more can be found elsewhere on this website. Additional information helpful in answering fishing questions can be found on the <u>Fishing FAQs</u> page located elsewhere on this website.

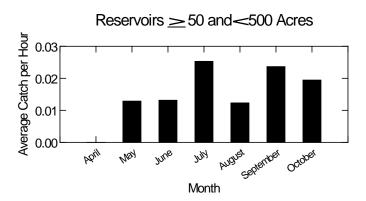


Figure 1. Average catch per angler hour, by month, of Channel Catfish from medium size Pennsylvania reservoirs.

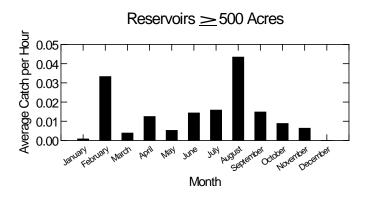


Figure 2. Average catch per angler hour, by month, of Channel Catfish from large size Pennsylvania reservoirs.

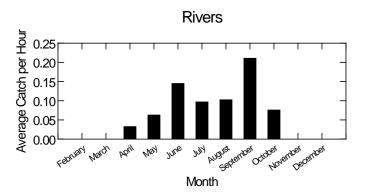


Figure 3. Average catch per angler hour, by month, of Channel Catfish from Pennsylvania rivers.

## References

• Scott, W. B. and E. J. Crossman. 1973. Freshwater fishes of Canada. Fisheries Research Board of Canada. Bulletin 184. Ontario. Canada.