



Pennsylvania Fish & Boat Commission
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Pumpkinseed (*Lepomis gibbosus*) Management and Fishing in Pennsylvania

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Goal: Maintain or enhance Pumpkinseed sport fisheries through harvest management of naturally sustained Pumpkinseed populations and through habitat preservation and enhancement.

Pumpkinseed occur throughout Pennsylvania and were originally indigenous to the Ohio River, Susquehanna River, Delaware River, Potomac River, and Lake Erie Drainages. The Ohio River Drainage includes the Ohio River, Allegheny River, and Monongahela River Drainages. Pumpkinseed typically occupy reservoir and lake (lentic) and slow-moving river and stream (lotic) habitats within these drainages. Most natural warm-water lakes and man-made reservoirs throughout Pennsylvania contain self-sustaining Pumpkinseed populations as a consequence of past stocking. In Pennsylvania, Pumpkinseed generally occur at lower densities in rivers and streams compared to lakes and reservoirs. Pumpkinseed tend to be more abundant in waters containing abundant aquatic vegetation.

Stocking for many warmwater or coolwater fish species, such as Pumpkinseed, does not often occur on an annual basis to maintain their populations. Pumpkinseed populations in Pennsylvania waterways are naturally sustained and do not require annual maintenance stocking. Any stocking typically occurs in conjunction with establishing a self-sustaining Pumpkinseed population in newly filled or newly acquired reservoirs that do not contain Pumpkinseed or contain low-density Pumpkinseed populations. In these cases, stocking is typically carried out from one to several years to establish a self-sustaining population or enhance a depressed population. Transfer of Pumpkinseed salvaged from a near-by reservoir, as it is de-watered (for maintenance/repair work) are often the source of Pumpkinseed for stocking. The occurrence of stocking is determined by the decisions of Fisheries Biologists and Managers who monitor and oversee waters within a drainage. Annual [stocking summary](#) details are posted elsewhere on this web site. Our [Warmwater and Coolwater fishing map](#) provides a broad selection of waters where Pumpkinseed fishing opportunities can be found in Pennsylvania.

Pennsylvania anglers may be curious as the maximum size this species can attain in Pennsylvania waters. A state record for Pumpkinseed is not maintained, but for reference to size potential, we note that one of the largest Pumpkinseed captured by PFBC biologists was 10.24 inches in length and weighed 0.97 pounds. Below, we illustrate the growth of Pumpkinseed in Pennsylvania, and note that a 7-inch Pumpkinseed is approximately 4.7 years old (Figure 1) and weighs about 0.2 pounds. When Pumpkinseed are 9 inches in length, they are approximately 11.3 years old and weigh about 0.5 pounds. Pumpkinseed populations are managed for sport fishing primarily through harvest management, habitat management, and habitat

enhancement. With respect to harvest management, [inland regulations](#) accommodate harvest of up to 50 Pumpkinseeds. The 50 panfish daily creel limit is a combined species creel limit which includes Pumpkinseed and other species. No minimum size limit or seasonal restrictions apply. Pumpkinseed are generally considered a prolific species, which has led to liberal harvest rules. In some cases, Pumpkinseed populations can become too dense and grow slowly, which results in few individuals attaining desirable size. Liberal harvest is desired in these circumstances where less competition for limited resources leads to faster growth. Despite liberal harvest rules, the average creel size of anglers completing their fishing trip in Pennsylvania who have kept at least one Pumpkinseed or Bluegill (*Lepomis macrochirus*) is 11 Pumpkinseed and/or Bluegill. Overall, angler creels range from no Pumpkinseed kept to 50 kept. Low average harvest reflects an increased practice of catch and release fishing, however in some cases anglers may encounter few Pumpkinseed of desirable size in the population. Many small Pumpkinseeds may be a result of slow growth, or may reflect angler removal of desirable size Pumpkinseeds such that small size specimens make up most of the remaining population.

If a biologist is faced with angler harvest reducing density of desirable size Pumpkinseed, harvest restrictions may be applied though selective application of [Panfish Enhancement regulations](#). In this program, Bluegill, Pumpkinseed, and Redear Sunfish (*Lepomis microlophus*) harvest is limited to specimens 7 inches or greater in length, with a maximum daily harvest of 20 combined. This size enhancement program in Pennsylvania has proven effective where growth is adequate and where angler harvest truncates size structure. Biologists regularly sample fish populations to measure their density, growth, size structure, and sample anglers while fishing to measure harvest. Circumstances more complex than those described may apply where a variety of alternate management approaches may be employed.

Apart from inland harvest regulation programs and Panfish Enhancement Regulations, Pennsylvania Fish and Boat Commission biologists have also collaborated with biologists in neighboring states to develop harvest regulations that apply to border waters to sustain high quality fishing experiences. These waters include the Delaware River and tributaries, Lake Erie, and Pymatuning Reservoir. [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.

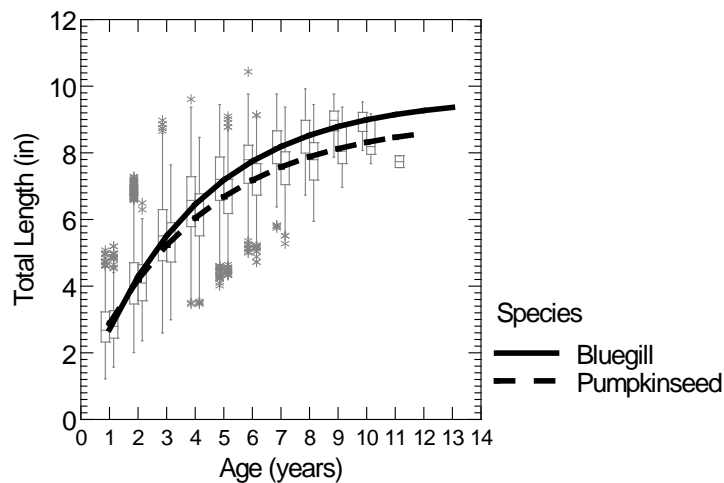


Figure 1. Average length at age of Pumpkinseed and Bluegill collected by fisheries biologists in assessment gear in Pennsylvania (March-June).

To illustrate a Fishery Biologists' management approaches, a Biologist faced with many slow growing and small Pumpkinseed in a reservoir or lake may elect to reduce refuge habitat of young Pumpkinseed through (1)

vegetation control, or (2) increase predator density to thin Pumpkinseed numbers, or a combination of both. Findings of such evaluations and proposed management approaches are often detailed in biologist reports contained elsewhere on this web site. By way of example, to reduce refuge habitat, a planned, over-winter partial draw-down will freeze and desiccate some near shore vegetation and serve to concentrate predators and prey over winter. This procedure may successfully thin Pumpkinseed numbers to enhance their growth (size). Alternatively, where refuge habitat is sparse, predator abundance might be enhanced through predator stocking, such as Walleye (*Sander vitreus*) stocking, or through application of predator harvest restrictions to bolster predator abundance. For example, [Big Bass regulations](#) may be applied to bolster abundance of black bass predators. Biologists may also prescribe addition of habitat devices that attract Pumpkinseed. These devices can bolster angler harvest. What determines the specific course of action on a water body relates to diverse features including those mentioned and others. For example, some species of aquatic plants are more susceptible to control (reduction) through water level management and others are not, managers must also consider the capability of the aquatic resource to sustain an increased density of predators, which is influenced by resource productivity. With respect to placement of fish attractant devices, the Pennsylvania Fish and Boat Commission has an active corps of volunteers that assist in construction and placement of structures after an approved habitat plan has been developed. We encourage organizations interested in volunteering time to contact our [Habitat Unit](#) for more information.

In association with these evaluations, growth of Pumpkinseed is examined by measuring length, weight, and taking a scale sample to determine age. We have tabulated average ages and weights for a variety of lengths of Pumpkinseed in Pennsylvania (Table 1). Anglers find these tables useful in approximating the weight and age of their catch. It should be known that age and weight based on length is variable between individuals and across populations. Fish length at age depends on a variety of factors including habitat, gender, genetics, forage abundance, and other conditions. In standard biological collections, the decrease in relative or absolute number of Pumpkinseed at each age can be used to describe the total annual mortality rate of Pumpkinseed. On average, the total annual mortality rate is 60%, which includes annual losses due to fishing and loss due to natural causes such as predation and disease. In addition to measuring losses, biologists index production of Pumpkinseed by examining age structure. Growth of Pumpkinseed, recruitment of young Pumpkinseed to the population, and loss of older Pumpkinseed are important considerations in developing harvest regulations that produce desirable size Pumpkinseed for harvest.

Table 1. Average weight and average age of Pumpkinseed, at a given length, collected by fisheries biologists in Pennsylvania (March-June).		
<i>Inches</i>	<i>Pounds</i>	<i>Years</i>
4.5	0.1	1.8
5	0.1	2.3
5.5	0.1	2.8
6	0.1	3.3
6.5	0.2	3.9
7	0.2	4.7
7.5	0.3	5.6
8	0.3	6.8
8.5	0.4	8.4
9	0.5	11.3
9.5	0.6	> 11.3
10	0.8	> 11.3
10.5	0.9	> 11.3
11	1.1	> 11.3

11.5	1.3	> 11.3
12	1.5	> 11.3

Tabulating catch and harvest by anglers from various waterways is also essential in developing harvest regulations. Information derived from these creel surveys yields information of interest to anglers, since seasonal peaks in catch occur for most species. Pumpkinseed can be caught in most any time of year, generally though, highest catch per hour occurs in winter (ice fishing) and in medium size reservoirs (Fig 2). Pumpkinseed catch rates are equally good in all seasons on large size reservoirs (Fig. 3). Since Pumpkinseeds are concentrated in small colonies in spring, in association with spawning and brood guarding, adults can be quite vulnerable to anglers. Spring and summer yield the highest catch rate on rivers, however Pumpkinseed catch rates on lakes and reservoirs tend to be greater in all seasons (Fig. 4). With fishing destinations identified from [maps on this site](#) and information describing the best seasons to catch Pumpkinseed, anglers need only select an effective bait or lure. Many anglers were introduced to fishing by catching Pumpkinseed with a worm or minnow and bobber combination. Small jigs, flies, and surface poppers are attractive baits in spring and summer. Grubs are a popular live bait in winter. The abundance of Pumpkinseed in many waters across the state, the ability to catch them in summer, fall, and through the ice in winter makes them an especially popular panfish.

A [summary of Pumpkinseed information](#) including fishing tips, best fishing waters, species identification, and more can be found elsewhere on this website. Additional information helpful in answering angling questions can be found on the [Fishing FAQs](#) page located elsewhere on this website.

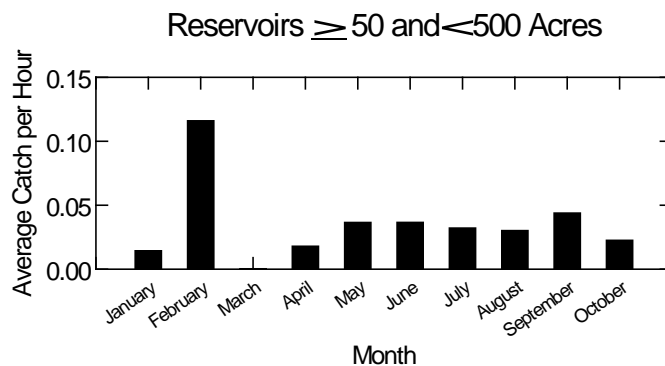


Figure 2. Average catch per angler hour, by month, of Pumpkinseed from medium size Pennsylvania reservoirs.

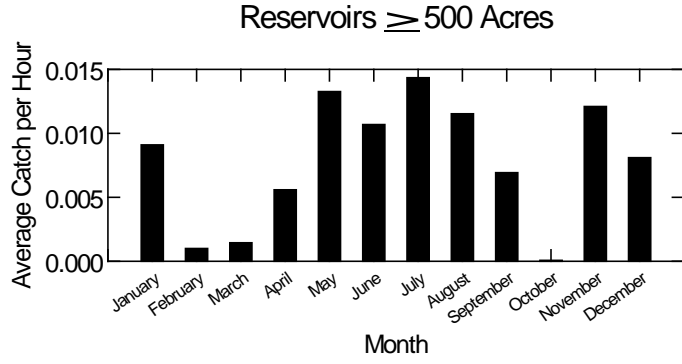


Figure 3. Average catch per angler hour, by month, of Pumpkinseed from large size Pennsylvania reservoirs.

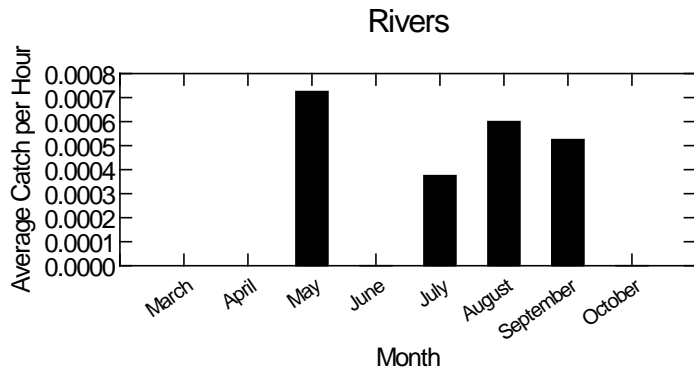


Figure 4. Average catch per angler hour, by month, of Pumpkinseed from Pennsylvania rivers.