

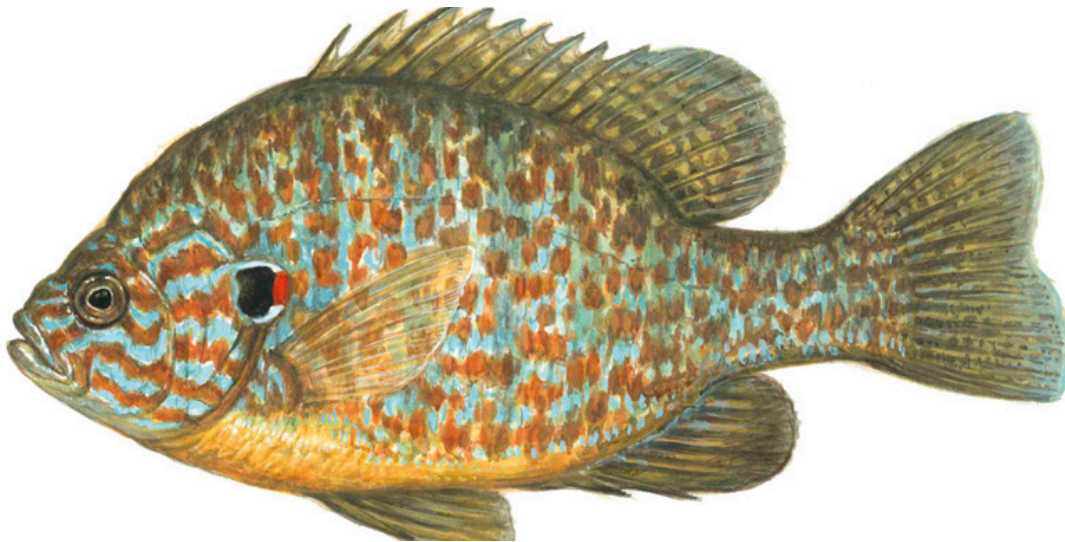


Pumpkinseed

Lepomis gibbosus (Linnaeus, 1758)
syn. *Eupomotis gibbosus*, *Perca gibbosa*, *Pommotis vulgaris*

ALBERTA REGULATION:
FISHERIES ACT

Last Updated: February 2018



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Overview:

Pumpkinseeds are a ray-finned fish of the sunfish family. They are native to Eastern North America - from New Brunswick down the Eastern seaboard, to Northeastern Georgia, and Southern Quebec to Eastern Manitoba. Introduced to the Columbia River system in the early 1900s, pumpkinseeds are now present on Vancouver Island, the lower Fraser Valley, and the Creston valley. They have also been introduced to many European countries, as ornamental pond fish, for angling, and as prey for native wild stocks.²

Pumpkinseed fish are fast growing and omnivorous; their diet consists of insect larvae, zooplankton, molluscs, and crustaceans, as well as plants and detritus. As they mature they become increasingly predatory, feeding on small fishes, amphibians,

and fish eggs.² Different life stages will occupy different zones of waterbodies, allowing them to exploit all food resources. Pumpkinseed fry and juveniles are also prey for other fish like bass or perch, and small individuals have been known to be consumed by grebes in B.C.²

Pumpkinseed fish closely resemble other *Lepomis* species but can be distinguished from bluegill by a red crescent moon spot around the operculum flap.¹

As of January 1, 2016, the possession, sale, or transport of this species in Alberta is illegal under the Fisheries Act.

Habitat:

Pumpkinseed inhabit lakes and ponds, as well as backwaters of slow moving streams and marshes, which have

abundant vegetation. They prefer clear water with optimum temperatures between 24-32°C and pH greater than 5.2.²

Identification:

The pumpkinseed has a very deep and laterally compressed body - almost oval or disc-shaped. The caudal peduncle (tail) is longer than deep. Body color is olive on the back, yellow sides, and yellow to orange on the belly and breast. Several vague vertical bars occur on the sides. Speckles or flecks of orange, yellow, blue, and emerald may be found on the sides, back, and both anal and caudal fins. The pectoral fins are clear and amber coloured. The opercular flap is black in the center with a distinct red crescent-shaped spot.¹ Pumpkinseed are a smaller fish with lengths generally around 178-229 mm but can reach up to 40 cm. Weights



Pumpkinseed (continued)

are generally less than 450 grams.

The head is deep and about 1/4 the body length with a steep angle from snout to start of dorsal fin. The eye is moderately large with a pronounced hollow above the eye. The mouth is terminal, small, and the gape reaches barely as far as the eye. The jaws bear patches of short, needle-like teeth. The gill rakers are short and stubby.¹

Two dorsal fins appear as one, and measure about half the total body length. The first dorsal has 10-11 spines, the second dorsal 10-12 soft rays. Caudal fin is moderately broad, long, and shallowly forked with rounded tips. Base of the anal fin almost 1/4 of body length, with 3 sharp spines preceding 8-11 soft rays. Pelvic fins are moderately long, pointed tips, square edges, and 5 soft rays. Pectoral fins are moderately high on the body, and are long and pointed with 12-14 soft rays.¹

Scales are usually ctenoid (triangular), not large, and crowded on the dorsal front and rear. The lateral line is complete with a low, shallow arch over the pectoral fin; 35-47 lateral line scales are present.¹

Pumpkinseeds show pronounced sexual dimorphism: males are larger and during breeding their colours intensify. The females are paler in colour but the vertical bars are easier to distinguish.²

Ecology:

Spawning occurs in late spring to early summer, when water temperatures are

between 15 to 25°C. Males will build small circular nests, approximately 10-38 cm in diameter, on sand or gravel in shallow waters (<1 m). Nests may be surrounded by vegetation. Males vigorously defend the nests until spawning. The females wait in deeper water as nests are constructed and approach in schools. Males swim out from the nests to attract females.

Females release 1500 to 700 eggs in one or more nests, or share can nests. Males may spawn more than once with one or more females. Occasionally, pumpkinseeds will share nesting colonies with bluegill (*Lepomis macrochirus*), and the two fish will hybridize.²

Eggs hatch in 3-5 days producing an average of 8000 fry per nest. Males guard and fan the nests until larvae can feed on their own, which takes around 10 to 11 days. The young then move away from the nest and the males rebuild for the second spawn.²

Young pumpkinseed form large schools while adults are often found in pairs or loose groups of 3 to 5. Feeding peaks at dawn and dusk during the warmer months decrease overall in the winter months. Pumpkinseeds adapt to the colder winter waters by shrinking their stomachs and secreting mucus.²

Economic Impacts:

Pumpkinseed consumption of salmonid eggs and fry have been attributed to low trout numbers in a Vancouver Island lake.² The decline of native sportfish populations could have impacts on recreation and tourism.

Environmental Impacts:

The introduction to new habitats impacts food and habitat for native fish, as well as predation to other fish or their eggs due to the competitive nature of pumpkinseed. In a Vancouver Island lake, pumpkinseeds have been associated with a decrease in salmonid species. Benthic invertebrate diversity and density can be impacted by nest building.²

Sociological Impacts:

The transformation of native aquatic communities results in the intrinsic loss of natural capital and enjoyment of natural areas.

Prevention:

Learn how to identify pumpkinseed and how to prevent spread. If you catch a pumpkinseed, kill it - do not release back into the water. Accidental and intentional releases are responsible for pumpkinseed introduction and spread. Never empty your aquarium into natural water bodies.

Control:

Currently there are no established control options for pumpkinseed other than preventing introduction and fishing. Their meat is low in fat, high in protein and has excellent flavour. They will bite any lure and are easy to catch by young anglers.²



Pumpkinseed (continued)



Sirtalis, Wikimedia



www.ag.auburn.edu

REFERENCES:

1. Datasheet report for *Lepomis gibbosus* (pumpkinseed). Invasive Species Compendium. www.cabi.org/isc/datasheetreport?dsid=77080 Accessed: October 28, 2016.
2. Jordan, C., Backe, N., Wright, M.C., and Tovey, C.P. 2009. Biological synopsis of pumpkinseed (*Lepomis gibbosus*). Can. Manuscr. Rep. Fish. Aquat. Sci. 2886: iv + 16 p.