

# BAITFISH OF VERMONT

INCLUDING LAKE CHAMPLAIN AND THE CT RIVER



## Vermont Fish & Wildlife Department

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**Department Mission:** The mission of the Vermont Fish & Wildlife Department is the conservation of fish, wildlife and plants and their habitats for the people of Vermont.



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*Cover photo by fish biologist—Bret Ladago*

## INTRODUCTION

Using live bait to catch fish is one of the most simple and purest forms of angling. At a time when the sport of recreational fishing is becoming more and more “high-tech” with specialized rods, reels, tackle, electronics, and the like, live bait fishing offers the opportunity to slow the pace down, and get back to the root of what angling has always been about – the chance to spend some quality time in the outdoors, with friends and family, and catch a few fish. Angling with live bait is simple, easy, effective, and most of all – fun!

While live bait can include leeches, crayfish, frogs, salamanders, worms, and grubs, the king of all bait is clearly “minnows.” The term “minnow” is often used loosely to include any small fish commonly used for bait. However, the word “minnow” actually refers to the largest of all fish families known as “Cyprinids.” In Vermont, the family Cyprinidae includes chubs, dace, shiners, and minnows such as the eastern silvery minnow and the fathead minnow. Many of these types of minnows are widely used for bait in Vermont. Aside from minnows, other fish species commonly used for bait include suckers, smelt, and sometimes yellow perch, mainly for tempting large northern pike!

The following document is meant to inform anglers on changes to the baitfish rules, provide information on the risks and increased angler responsibility associated with these changes, assist anglers with regulation compliance, and promote best practices to protect the health of Vermont’s aquatic ecosystems. For example, minnow species can be difficult to tell apart, some are considered invasive, while others are rare and have special conservation status. The safest thing one can do if uncertain of the species is to let it go and not move it away from that waterbody. Please take note that all new baitfish rules take effect on January 1, 2020.



## BAITFISH: A RISK TO OUR FISHERIES

Has this ever happened to you? At the end of the day you look in your bait bucket, see leftover minnows, and dump them overboard. It’s a common practice and one the average angler does almost without thought. Maybe you think you’re doing the fish a favor by releasing them alive. Maybe you think you’re helping the game fish in your favorite fishing spot by “stocking” some extra food. However, what you really might be doing is introducing a new, invasive species to the waters—disrupting the fragile balance of the lake’s ecosystem and the sport fish population. Aquatic invasive species often reproduce and can quickly dominate a waterbody. These species compete with native species for food and habitat, and sometimes cause native species to decline or disappear. For example, the rudd, a known competitor and threat to our native golden shiner, has already been introduced to several lakes in Vermont, presumably through bait bucket dumping. The alewife was also illegally introduced into Lake St. Catherine in 1997, Lake Champlain in 2003 and Lake Carmi in 2017, and greatly threatens the native fish communities of Vermont waters.

The water in the bait bucket also can be a threat. It could contain damaging aquatic invasive species such as zebra mussel larvae, spiny water fleas or harmful fish diseases. Fragments of invasive aquatic plants, such as Eurasian watermilfoil and water chestnut, also may be in the water. Dumping a bait bucket into a waterbody could introduce any of these destructive species to waters of Vermont and is discouraged.

**Vermont anglers need to be aware of the dangers of dumping the contents of a bait bucket into waterbodies. Anglers should take these necessary precautions to avoid introducing aquatic invasive species:**

- Know and understand Vermont’s baitfish rules and regulations.
- Learn to identify Vermont’s permitted baitfish species as well as potential aquatic invasive species.
- Never move baitfish unless you are certain of the species.
- Never release live bait or water from a bait bucket into any lake, pond or stream.
- Always discard unwanted baitfish in an appropriate location on land or in the trash
- Never transport water, animals or plants from one lake or river to another.
- Encourage others to follow these guidelines.

## **Moving Live Fish**

Many new populations of fish species have been established across Vermont through illegal stocking. These introductions may have been done by anglers with good intentions to create new recreational fisheries. However, this can cause great harm to existing fisheries and aquatic communities. It is **illegal** to transport and stock fish from one water to another.

## **Moving Fish Diseases**

While fish are visible, fish diseases are usually not easily identified. You may not realize that when you catch a fish and reach into your bait bucket to get a new baitfish, the fish slime on your hands could have microscopic fish diseases. Diseases can cause widespread fish kills and have significant effects on tourism and the economy. Once a fish disease is present in a waterbody, it is nearly impossible to get rid of, so it is important to limit the movement of fish and the water they are found in.

## **Aquarium Fish and Plants**

Some people release unwanted aquarium pets (fish, snails, plants, etc.) into nearby waterbodies. This practice can be extremely harmful to Vermont’s natural aquatic communities. Return unwanted aquarium pets to a local pet shop. It will be better for your pet and the environment.

## **FREQUENTLY ASKED QUESTIONS:**

Also visit our [Using Baitfish FAQ Website](#) for the most recent version.

### **Why are baitfish regulations important?**

**Moving fish and water between waterbodies can spread dangerous fish diseases and aquatic invasive species that can be harmful to the environment.** This can negatively affect the health of the state’s fisheries and impact Vermont’s fishing economy and public welfare. By carefully managing how baitfish are moved, these regulations can help slow these impacts and preserve Vermont’s quality fishing opportunities for current and future generations.

### **What has changed?**

New regulations now allow for the movement of baitfish from one waterbody to another through a Zone system. This is meant to provide more flexibility to anglers who might want to harvest or use the same baitfish from

one waterbody in another. While these regulations provide more flexibility, they also come with added risk and angler responsibility. In short, the new baitfish regulations do the following:

- Establish an East and a West Baitfish Zone within which baitfish can be used (baitfish may only be used in a single Zone). To see more about the East/West boundaries, see the map on [page 10](#).
- Establish a list of “Black-list Waters” that have high fish disease or invasive species risk. Baitfish can be used on these waterbodies, but once used there may not be transported and used on other waterbodies. Also see, Black-list Waters for Baitfish on [page 8 and 9](#).
- Extend the time from 4 days to 10 days that baitfish transportation receipts are valid.
- Establish new baitfish storage rules that account for baitfish zones and black-list waters.
- Allow commercial baitfish dealers to harvest approved wild baitfish species from a specific baitfish zone and sell them to anglers for use in that same baitfish zone. To locate a Baitfish Dealers near you visit: [Baitfish Dealers in Vermont](#).
- Allow anglers to harvest approved wild baitfish species and use them on waterbodies in the same Zone. Anglers must possess a wild baitfish endorsement in order to harvest wild baitfish. The endorsement can be added to an angler’s fishing or combination license.

## I want to harvest and use my own wild caught baitfish. What do I need to know?

Under the previous baitfish regulations, anglers were not able to harvest and use their own wild caught baitfish anywhere other than where it was caught.

Under the new baitfish rules, any person who wants to use, sell, or transport personally harvested wild baitfish beyond the waterbody in which they were harvested must have a wild baitfish endorsement on their fishing or combination license. The endorsement is not required for baitfish that are commercially purchased from a certified baitfish dealer.

To obtain this endorsement, anglers must successfully complete a wild baitfish endorsement quiz after reviewing this Baitfish of Vermont Identification Guide which will help inform anglers on the legal requirements of personally harvesting baitfish, the risks associated with moving baitfish, and the added responsibility that anglers will have under the new rules. These risks include the potential to spread fish diseases and aquatic invasive species which can negatively affect the health of the state’s fisheries and impact Vermont’s fishing economy and public welfare.

When an angler catches and transports personally harvested wild baitfish to another waterbody, they must accept increased personal responsibility and take precautions to slow the spread of pathogens and invasive species. The goal of the wild baitfish endorsement is to reduce these risks and engage anglers in understanding their role in the health of Vermont’s fisheries

## How do I get a Wild Baitfish Endorsement?

- Go to [www.vtfishandwildlife.com/wild-baitfish](http://www.vtfishandwildlife.com/wild-baitfish) to review the wild baitfish endorsement course materials and learn the rules and regulations regarding harvesting and moving personally harvested wild baitfish.
- Successfully complete a 15 question wild baitfish certification quiz to be eligible to receive a wild baitfish endorsement. You must correctly answer 12 of the 15 questions to pass.
- Once you’ve successfully completed the quiz, go online to [www.vtfwdsales.com](http://www.vtfwdsales.com) to update your fishing or combination license to include your wild baitfish endorsement. This endorsement is a free add-on that you must have on your license if you wish to use, sell, or transport personally harvested wild baitfish beyond the waterbody in which they were harvested.

- Be sure to have your fishing or combination license with the wild baitfish endorsement add-on with you while you harvest, transport, or use personally harvested wild caught baitfish.
- Your baitfish endorsements expire on a fixed-year basis with a first expiration date of December 31, 2022.

### What happens if I transport wild caught bait without an Endorsement?

- You could be fined \$233 and have 5 points added to your fishing or combination license.
- You may not fully understand the risks associated with moving baitfish between waterbodies and may endanger the health of our ecosystems.

### Do I need a Wild Baitfish Endorsement to purchase baitfish at a bait shop?

No. You do not need to have a wild baitfish endorsement in order to buy and use bait purchased from a commercial bait shop.

## APPROVED FISH SPECIES FOR USE AS BAIT

ONLY the following species of fish can be harvested for use as bait:

- Banded killifish
- Blacknose dace
- Bluntnose minnow
- Common shiner
- Creek chub
- Eastern silvery minnow
- Emerald shiner
- Fallfish
- Fathead minnow
- Golden shiner
- Longnose dace
- Longnose sucker
- Mimic shiner
- Northern redbelly dace
- Spottail shiner
- White sucker
- Rainbow smelt may be taken only by open-water/ice fishing and may be commercially sold as bait.
- Bluegill (*Lepomis macrochirus*), pumpkinseed (*Lepomis gibbosus*), rock bass (*Ambloplites rupestris*), and yellow perch (*Perca flavescens*) may be taken only by open-water/ice fishing and used for bait only in those waters where taken and shall not be transported alive from the waterbody where caught.
- On Lake Champlain, in addition to the species listed above, white perch and alewife may be taken by open-water/ice fishing and used as bait, and may not be commercially harvested or sold as bait. Alewife may only be used/possessed if dead.
- All other species of fish are prohibited for use as bait as some species may be rare or even federally protected. In addition, some small/young “sportfish” are often subject to length and daily limit restrictions.



Blacknose dace

image by Will Eldridge

## PERSONAL BAITFISH HARVEST

- Except in Seasonally Closed Waters ([See 10 V.S.A. App § 122](#)), baitfish may be taken for personal use by the following methods: a) minnow traps no longer than 18 inches with an entrance not exceeding 1 inch in diameter; b) dip nets, cast nets, and umbrella nets not exceeding a total of 51 square feet of mesh, or a seine net not exceeding 25 feet in length; c) open water fishing/ice fishing by hook and line.
- The personal harvest of baitfish is only allowed on Seasonally Closed Waters between the second Saturday in April through October 31, during the open season for trout, and then only by open-water fishing or the use of minnow traps no longer than 18 inches with an entrance not exceeding 1 inch in diameter. Dip nets, cast nets and umbrella nets are prohibited on Seasonally Closed Waters.
- Anglers may hold baitfish indefinitely on a waterbody in a pen or bait box 25 cubic feet or less in volume as long as they remain in the baitfish zone or black-list water where they were harvested.
- All traps, nets, bait boxes or other holding receptacles capable of taking, holding or keeping live baitfish in public waters must be marked with the name, address, and telephone number of the owner and user.
- The personal harvest of baitfish is prohibited on any waterbody of the state that is defined as closed to baitfish harvest. The department will maintain and make available a list of closed waters.

### Personal Baitfish Harvest – Movement/Transport

- Anglers are responsible for adhering to the approved species list ([See page 5](#)).
- Anglers who personally harvest baitfish from or use personally harvested baitfish on a black-list water may not transport to or use those baitfish on any other waterbody.
- Baitfish harvested outside of Vermont waters may not be transported into the state.
- For a list and description of black-list waters please see the “Baitfish Zones and Black-list Waters Map” on [page 10](#) and the “Black-list Waters” section on [pages 8 and 9](#).
- The use of live or dead fish as bait is prohibited in ponds that support naturally reproducing populations of brook trout to protect these brook trout populations from competition with introduced fish species. See the law digest for waters where the use of fish as bait is prohibited.

### Personal Baitfish Harvest – Wild Baitfish Endorsement

- Anglers who wish to transport personally harvested wild baitfish outside of the waterbody in which they were harvested must possess and show upon request a wild baitfish endorsement on their fishing/combination license.
- Anglers who possess a valid wild baitfish endorsement tag on their fishing/combination license may transport personally harvested baitfish away from a non-black-list water and use it on other waterbodies in the same baitfish zone it was harvested in as long as the use of baitfish is allowed on that waterbody.
- Refer to the “Baitfish Zones and Black-list Waters Map” on [page 10](#) to determine which baitfish zone a waterbody is located in.
- To obtain a wild baitfish endorsement, anglers must successfully complete a wild baitfish endorsement course online and add a free wild baitfish endorsement tag to their regular fishing or combination license.
- To learn more about the rules associated with catching and using your own wild baitfish and to learn about the wild baitfish endorsement course please go to [www.vtfishandwildlife.com/wild-baitfish](http://www.vtfishandwildlife.com/wild-baitfish) and refer to the full baitfish regulation ([10 V.S.A App. §141](#)) and Baitfish Identification Guide.

## Baitfish Storage

- Anglers who possess a valid wild baitfish endorsement on their fishing or combination license may transport and hold personally harvested baitfish in any non-black-list water within the baitfish zone they were harvested in provided the baitfish did not come in contact with a black-list water.
- Baitfish may not be stored in waters where baitfish use is prohibited.
- Anglers who possess a valid wild baitfish endorsement on their fishing or combination license may hold personally harvested baitfish in a different baitfish zone from where it was harvested only if the baitfish are kept in a container isolated from any flow of lake, pond, or stream water or outflows to such waters of the state.

## Fish Eggs as Bait

- Fish eggs may be collected from legally harvested fish from a Vermont water and used immediately as bait on that water unless that waterbody is closed to baitfish collection.
- Personally harvested fish eggs must not be transported and used in any other waterbody.
- It is illegal to transport fish eggs back and forth from the same waterbody for use as bait unless they have been processed in a manner approved by the department. [See approved technique.](#)

## Sale of Personally Harvested Baitfish

It is illegal for an angler to sell personally harvested baitfish except:

- Anglers may sell personally harvested baitfish to another angler while on the same waterbody where the baitfish were personally harvested.
- Anglers who possess a valid wild baitfish endorsement on their fishing/combination license may sell personally harvested rainbow smelt from a non-black-list water to a licensed commercial baitfish dealer as long as:
- The buyer possesses a valid zone-specific commercial baitfish dealers permit for the same baitfish zone the rainbow smelt were harvested.
- The angler completes and signs an affidavit specifying the waterbody where the personally harvested rainbow smelt were harvested. This form will be provided from the department to the commercial baitfish dealer.

## COMMERCIALLY PURCHASED BAITFISH

- A person in possession of commercially purchased baitfish shall only use those baitfish in the baitfish zone or black-list water recorded on the transportation receipt and shall retain and exhibit the receipt upon request of the Commissioner or the Commissioner's designee(s).
- A person may transport unused commercially purchased baitfish away from waters of the state and retain for later use in the same baitfish zone or black-list water as indicated on the baitfish transportation receipt, within 10 days from time and date of sale.
- A person transporting unused commercially purchased baitfish away from waters of the state for later use shall hold the baitfish in a closed container that does not contain surface waters of the state, and is isolated from any lake, pond or stream water, including any inflow or outflow to such waters of the state. This paragraph applies to all commercially purchased baitfish with the following exception: A person transporting unused commercially purchased bait away from waters of the state may hold them in waters

of the baitfish zone listed on the transportation receipt provided that the water is not a black-list water and the holding waters are not listed in subsection 12.0 of this regulation.

- For more information on commercially purchased bait visit: [Commercially Purchased Baitfish](#)

## BAITFISH ZONES & BLACK-LIST WATERS

### East/West Baitfish Zone Line

A line extending from the Massachusetts border following Route 8A north to Route 112, north on Route 112 to Route 100 in Whitingham, north on Route 100 to East Jamaica, northwest on Route 30/100 to Rawsonville, north on Route 100 to Ludlow, north on Route 103/100 to Grahamville, north on Route 100 to Route 4/100, west on Route 4/100 to Killington, north on Route 100 to Morrisville, west on Route 15/100 to Hyde Park, north on Route 100 to Troy, north on Route 101 to Route 105, north on Route 105 to Route 243 in North Troy, north on Route 243 to the Canadian border.

This line also matches the [Wildlife Management Unit boundaries](#) for the eastern edge of WMUs C, G, I, L and P.

**Eastern Baitfish Zone** – The baitfish zone including waters lying East of the Baitfish Zone Line.

[See map on page 10](#)

**Western Baitfish Zone** – The baitfish zone including waters lying West of the Baitfish Zone Line.

[See map on page 10](#)

### Black-list Waters

#### Connecticut River:

All waters of the river including the bays, setbacks, and tributaries, only to the first highway bridge crossing of said tributaries on the Vermont side. Also includes the following tributaries to the following boundaries:

- **Ottauquechee River** to the top of the North Hartland Dam in the town of Hartland
- **West River** to the Interstate 91 highway bridge in the town of Brattleboro Including Retreat Meadows, Brattleboro

#### Lake Champlain:

(See [10 App. §122 Section 5.0](#)) including setbacks at the same level and tributaries to the following boundaries:

- **Dead Creek** to Panton Road bridge in Panton
- **East Creek** to the falls in Orwell (downstream of Mount Independence Road)
- **Lamoille River** to the top of the first dam (Peterson Dam) in Milton
- **LaPlatte River** to the falls in Shelburne (under Falls Road bridge)
- **Lewis Creek** to falls in North Ferrisburgh (just upstream of Old Hollow Road)
- **Little Otter Creek** to falls in Ferrisburgh Center (downstream of Little Chicago Road)
- **Malletts Creek** to the first falls upstream of Roosevelt Highway (US 2 and US 7) in Colchester Mill River in Georgia to the falls in Georgia (just upstream of Georgia Shore Road bridge)
- **Missisquoi River** to the top of Swanton Dam in the Village of Swanton

- **Mud Creek** to the dam in Alburgh (just upstream of Route 78 bridge)
- **Otter Creek** to the top of the dam in the city of Vergennes
- **Poultney River** to Central Vermont Power Dam at Carver Falls in West Haven Including Coggman Pond, West Haven
- **Rock River** to the first Canadian border crossing
- **Winooski River** to the Winooski One hydropower dam west of Main Street (US 7) in Winooski and Burlington

**Lake Bomoseen**

**Lake Carmi** including the outflow to the top of Mill Pond Dam in the town of Franklin

**Lake Memphremagog** including the following tributaries:

- **Clyde River** to the top of the abandoned Mill Dam immediately upstream of the Number 1, 2, 3 hydroelectric powerhouse in Newport City
- **Barton River** to the downstream side of the US Route 5 bridge southernmost and closest to the village of Barton.
- **Johns River** to the downstream edge of the bridge on Beebe Road (TH #3) in the town of Derby
- **Halls Creek** to the headwaters
- **Black River** to the top of the falls at Old Harmon Mill in the town of Coventry

**Lake St. Catherine** including Lily Pond and Little Lake

**Batten Kill** and its associated tributaries including but not limited to:

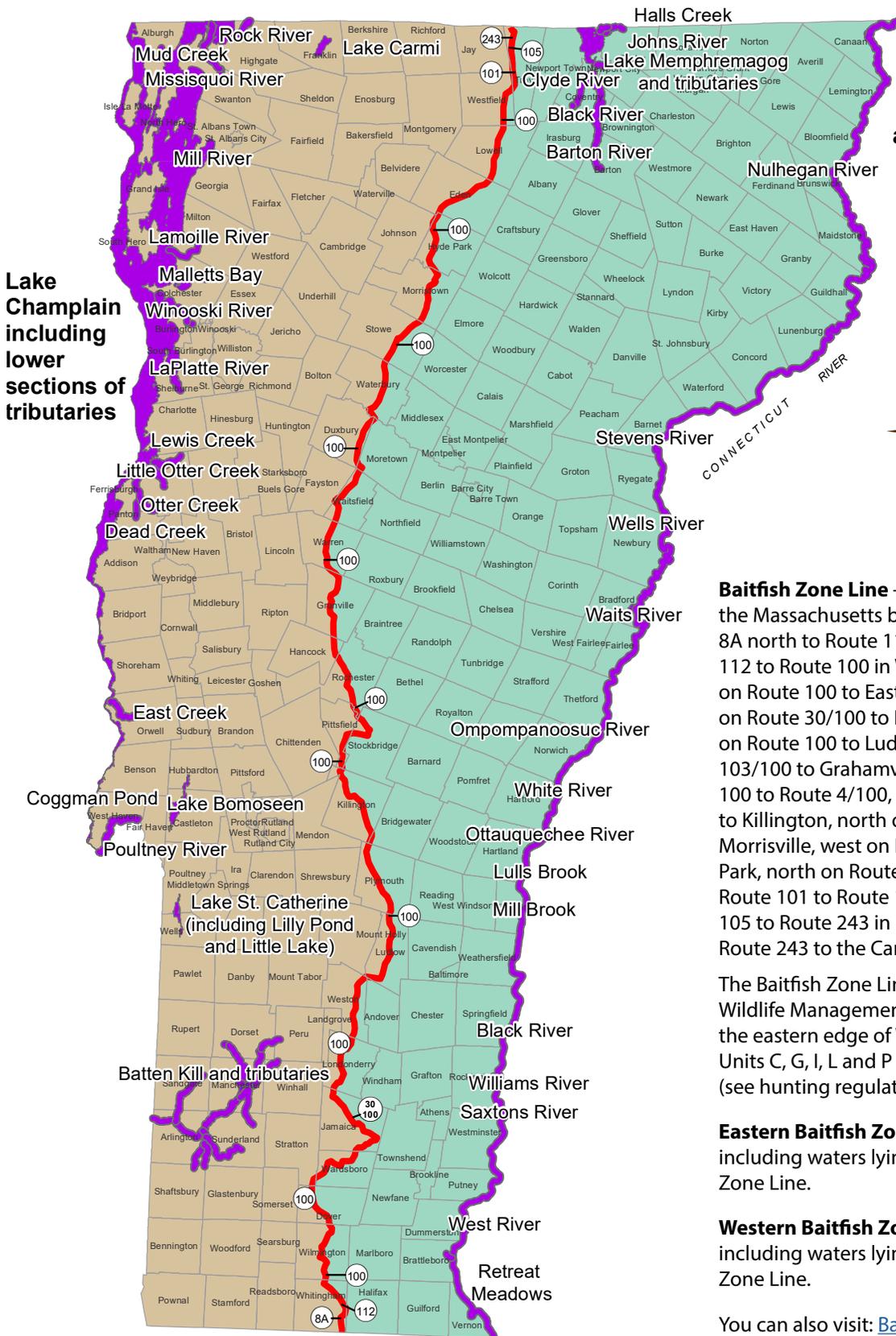
- |                        |                                  |
|------------------------|----------------------------------|
| • <b>Bourn Brook</b>   | • <b>Mad Tom Brook</b>           |
| • <b>Bromley Brook</b> | • <b>Mill Brook</b>              |
| • <b>Chunks Brook</b>  | • <b>Roaring Branch</b>          |
| • <b>Dry Brook</b>     | • <b>Warm Brook</b>              |
| • <b>Green River</b>   | • <b>West Branch Batten Kill</b> |
| • <b>Lye Brook</b>     | • <b>White Creek</b>             |



Golden shiner

image by Will Eldridge

# BAITFISH ZONES AND BLACK-LIST WATERS MAP



**Connecticut River and lower sections of tributaries**



**Lake Champlain including lower sections of tributaries**

**Baitfish Zone Line** - A line extending from the Massachusetts border following Route 8A north to Route 112, north on Route 112 to Route 100 in Whitingham, north on Route 100 to East Jamaica, northwest on Route 30/100 to Rawsonville, north on Route 100 to Ludlow, north on Route 103/100 to Grahamville, north on Route 100 to Route 4/100, west on Route 4/100 to Killington, north on Route 100 to Morrisville, west on Route 15/100 to Hyde Park, north on Route 101 to Route 105, north on Route 105 to Route 243 in North Troy, north on Route 243 to the Canadian border.

The Baitfish Zone Line also matches the Wildlife Management Unit boundaries for the eastern edge of Wildlife Management Units C, G, I, L and P (see hunting regulations).

**Eastern Baitfish Zone** - The baitfish zone including waters lying east of the Baitfish Zone Line.

**Western Baitfish Zone** - The baitfish zone including waters lying west of the Baitfish Zone Line.

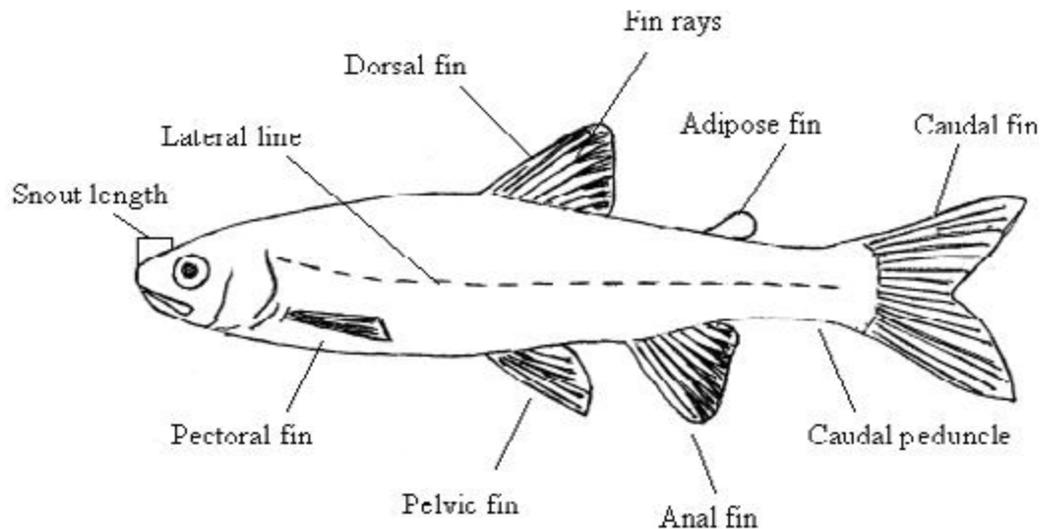
You can also visit: [Baitfish Zones](#)



## BAITFISH IDENTIFICATION GUIDE

The following pages of this guide provide photographs and descriptions to help you properly identify the fish species currently permitted for use as bait in Vermont.

The fish in the section are the **ONLY** fish species allowed to be imported, harvested, sold, bought, or used as bait.



### External Anatomy of a Fish

**Adipose fin:** A fleshy fin without spines or rays located on the back behind the dorsal fin.

**Anal fin:** A single fin located on the underside of the body and in front of the caudal fin.

**Caudal fin:** The tail fin.

**Caudal peduncle:** The narrow region of the body located between the caudal fin and anal fin.

**Dorsal fin:** One or more fins located on the back characterized as having spines and/or rays.

**Lateral line:** A series of tubes and pores on the sides of fish which fall in a single line running from just behind the gill cover to the base of the caudal fin. In some species the lateral line may be complete, and in others it may be incomplete, i.e. ends on the body before reaching the caudal fin.

**Laterally compressed:** Flattened from side to side.

**Pectoral fin:** A pair of fins (one on each side of body) located closest to the head.

**Pelvic fin:** A pair of fins (one on each side of body) located near the underside of the fish and behind the pectoral fins and ahead of the anal fin. The distance between the pelvic and pectoral fins may differ considerably from species to species

## BLACKNOSE DACE (*Rhinichthys atratulus*)



*Image by Ellen Edmonson*

**Other common names:** Dace

**Identification:** Body is stout and elongate; fairly round in cross section ahead of dorsal fin and slightly compressed behind it. Snout is long and slightly overhangs mouth. Upper lip of mouth is not separated from the snout by a groove. Scales are very small giving fish a smooth skinned appearance. Coloration: Back is dark gray; sides have a prominent black band that extends from base of tail, along lateral line, through eye, and around tip of snout; the lower sides and underside are silvery-white. Males may show a black and reddish lateral band. Body is peppered with numerous dark flecks. Size: Average about 2 inches.

**Habitat:** This species prefers small, clear, swift flowing streams having gravel bottoms. The blacknose dace is widely distributed in Vermont.

**Bait use:** Although common in many Vermont streams, it is not a particularly popular bait fish perhaps due to its overall drab appearance; however, it is usually abundant and easily obtained from the wild.

## BLUNTNOSE MINNOW (*Pimephales notatus*)



*Image by John Lyons*

**Other common names:** Minnow

**Identification:** Body is slender and elongate; round to roughly squarish in cross section ahead of dorsal fin; only slightly compressed laterally behind dorsal fin. Snout is broadly rounded and decidedly overhangs small, horizontal mouth. Scales on sides are large and dark edged producing a cross hatched appearance; scales are crowded behind head. A lateral black stripe extends from tip of snout, through eye and gill cover, and terminates in a prominent black spot at base of tail. A dark spot is sometimes visible on the first few dorsal fin rays. Lining of body cavity is black. Coloration: sides are silvery; back is olive-brown to black; underside is whitish. Size: Average about 2-3 inches.

**Habitat:** This fish inhabits a wide range of waters (small streams, rivers, lakes) but seems to most prefer clear, rocky streams. It is fairly widely distributed in Vermont.

**Bait use:** It is reported that the bluntnose minnow makes a good bait fish particularly for panfish; however, it is not generally available from commercial bait dealers unless it comes mixed with other wild caught minnows and shiners. It does not transport well and is short lived in a crowded bait bucket.

## COMMON SHINER (*Luxilus cornutus*)



*Image by Doug Watkinson*

**Other common names:** Redfin shiner.

**Identification:** Body is deep, strongly compressed laterally; heaviest toward front. Head is moderately large and blunt. Eyes are large. Mouth is large, forward pointing, and slightly slanted upward. Scales are large and easily shed; those on sides near front of body are higher than wide (at least 2-3 times). Middle of back in front of dorsal fin has a distinct black line. **Coloration:** Back is olive-green or dusky olive; Sides are silvery but may have a bluish or purplish iridescence. Fins vary from clear to having pink or orange pigmentation on outer third of fin margins. Fin color intensity depends on fish size, age and time of year. **Size:** Average about 2-4 inches.

**Habitat:** As the name implies this fish is a common resident of rivers and streams and may be occasionally encountered in the shallow shore waters of some lakes and ponds. Flowing water is required for spawning. The common shiner is widely distributed throughout Vermont.

**Bait use:** This is a popular bait species frequently taken in bait traps set out in suitable habitats. It may also be purchased at some bait shops. Common shiners generally transport well during the cooler months of the year and are easily maintained in holding tanks.

## CREEK CHUB (*Semotilus atromaculatus*)



*Image by Doug Watkinson*

**Other common names:** Chub, common chub, horned dace

**Identification:** Body is relatively thick and deep; barely or only moderately compressed laterally. Front half of body is more or less round in cross section. Head is large and blunt. Mouth is forward pointing and large, extending back to a point below pupil of the eye. Scales are large, more crowded toward front of body, and not easily shed. A distinctive black spot is present at base of first three rays of dorsal fin. Sides with a dusky lateral stripe that ends in a spot at base of caudal fin (most evident in young fish). Coloration: Back is olive-brown or olive-green; sides are silvery with a purplish iridescence; underside is silvery-white. Young fish are silvery overall with a dark, narrow lateral stripe terminating in a distinct caudal spot. Size: Average about 3-5 inches, although 10-12 inches may be attained.

**Habitat:** A species that seems to prefer pools in small brooks and streams with gravelly bottoms. It is sometimes encountered in shallow shoreline areas of small lakes and ponds. The creek chub is widely distributed and common throughout Vermont.

**Bait use:** The creek chub is a common species and is considered to be a hardy bait fish, although it is not often sold by commercial bait dealers in Vermont but more readily encountered when trapping wild bait fish in suitable habitats.

## EMERALD SHINER (*Notropis atherinoides*)



*Image by Doug Watkinson*

**Other common names:** Lake shiner, icicle, pinhead, blues, buckeye.

**Identification:** Body is elongated, slender and fragile looking; strongly compressed laterally; moderately deep. Snout is bluntly pointed; mouth is moderately large (upper jaw extends back to leading edge of large eye); forward pointing and slightly upturned. Scales are large and easily shed resulting in dark blue or bluish-green patches. Fins are clear. Dorsal fin begins noticeably behind base of pelvic fins. Anal fin has 10-11 rays. Coloration: Back is light olive to bluish-green; sides are silvery with an iridescent, green or bluish-green band; underside whitish. Size: Average about 2-3 inches.

**Habitat:** This species occurs in large open lakes and pools and runs of large and medium size rivers preferring clear water and sandy bottoms. The emerald shiner is not a widely distributed fish in Vermont but is quite abundant in Lake Memphremagog and in Lake Champlain and the lower reaches of its larger tributaries.

**Bait use:** The emerald shiner is an important bait fish to Vermont anglers particularly during the ice fishing season, when it is commonly used as perch bait. Since it requires fresh, highly oxygenated water to thrive, it does not particularly hold up well in the bait bucket or holding tank for any long length of time. It is usually available from most commercial bait dealers either alive, frozen or salted.

## FALLFISH (*Semotilus corporalis*)



*Image by Noel Burkhead*

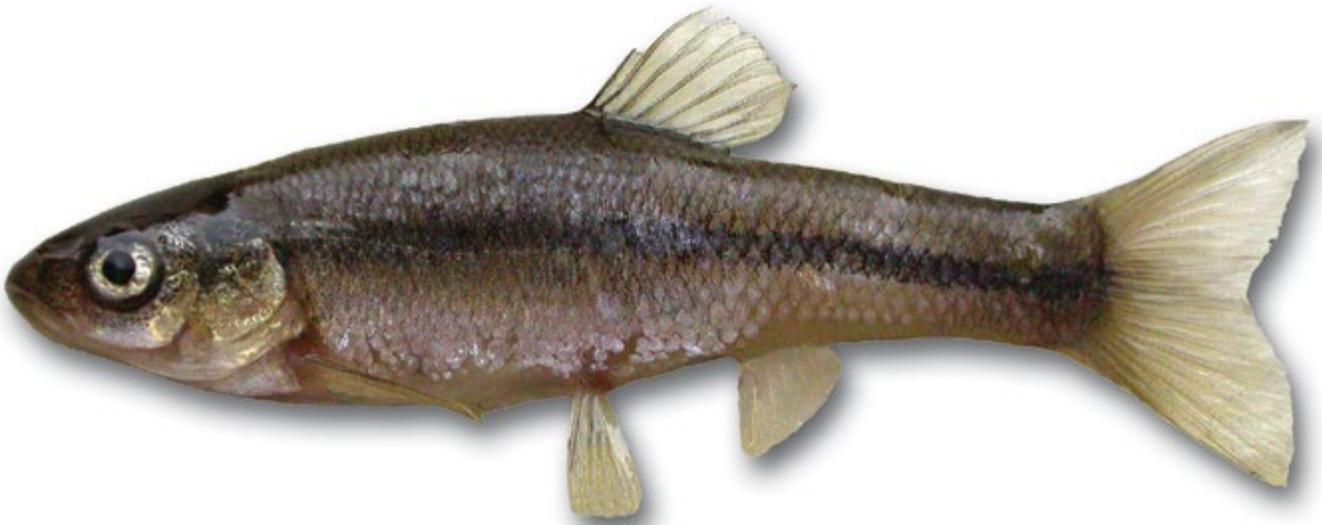
**Other common names:** Chub, silver chub, lake chub, stone roller, whitefish, dace.

**Identification:** Body is heavy set and more compressed laterally than the closely related creek chub. Head is blunt with a large mouth that is slightly overhung by the snout (obvious in large individuals). Eyes are large. Scales are large; adult fish have a dark crescent or triangular-shaped pigmentation at base of each scale on the back and upper sides. Dorsal fin rays closest to the back are often darkly pigmented but are not as limited to an anterior spot characteristic of the creek chub. **Coloration:** Back is olive to golden-brown; sides are very silvery, sometimes with purplish or bluish sheen; underside is silvery-white. Young individuals have a dark band along the sides and a spot at base of tail fin. **Size:** Average 5-8 inches, but large adults may attain 18 inches. Largest minnow species native to Vermont.

**Habitat:** An adaptable species inhabiting pools in moderate to large streams with gravel-rubble bottoms. It is also found in some lakes. The fallfish is widely distributed in Vermont.

**Bait use:** As a bait fish, the fallfish has many of the same attributes as the creek chub.

## FATHEAD MINNOW (*Pimephales promelas*)



*Image by Noel Burkhead*

**Other common names:** Rosy red, minnow, perch minnow.

**Identification:** Body is stout and chubby; moderately compressed laterally; heaviest toward the front. Head is large but short, flat on top, and with a blunt snout. Mouth is small, forward pointing, and slightly upturned. Scales are largest toward the tail; smaller and crowded toward the head. The first dorsal fin ray is short, about half the length of following rays. A dark spot is sometimes visible on the first few dorsal fin rays. A dark bar is present at the base of the caudal fin rays. **Coloration:** Back is dark olive or gray; sides are silvery or brassy; whitish below. The “rosy red” variant is pinkish-orange overall. **Size:** Average about 2 inches.

**Habitat:** This is a tolerant species of extreme environmental conditions (muddy, warm, poorly oxygenated water), and, therefore, it may be encountered in a variety of habitats, including soft-bottomed small and large streams and ponds. The fathead minnow is widely distributed in Vermont; however, they tend to be more common in the Lake Champlain drainage.

**Bait use:** This is one of the most commercially important bait fish in Vermont. Both wild and “rosy red” types may be purchased from most bait shops. This is a hardy fish for transporting and holding.

## **GOLDEN SHINER** (*Notemigonus crysoleucas*)



*Image by Noel Burkhead*

**Other common names:** Pond shiner, golden, Arkansas red.

**Identification:** Body is deep and strongly compressed laterally. Head and snout are pointed. Mouth is small and decidedly upturned causing the chin to project ahead of mouth. Scales are large. Midline of belly between pelvic and anal fins is a fleshy, scaleless ridge or “keel.” Lateral line on sides with dark pores and is deeply “U-shaped.” Anal fin has a long base (usually 11-14 rays). **Coloration:** Back is dark olive-green; sides on adult fish may vary from golden, brassy or silvery. Young fish are silvery with a broad dark lateral band. A cultured variety, called the Arkansas red, has silvery scales with a pronounced pinkish overtone. **Size:** Average about 2-4 inches; large individuals up to 8-10 inches.

**Habitat:** This is a fish of warm, clear, weedy, shallow lakes and ponds. The golden shiner is widely distributed and common in Vermont.

**Bait use:** A very popular bait fish and is readily available from most commercial bait dealers, although it is not particularly hardy either in the bait bucket or on the hook compared to some other bait fish species.

## LONGNOSE DACE (*Rhinichthys cataractae*)



*Image by John Lyons*

**Other common names:** Dace.

**Identification:** Body is stout and elongate; fairly round in cross section ahead of the dorsal fin and slightly compressed behind it. Top of head is somewhat flattened. Snout extends well beyond and overhangs the mouth. Upper lip of mouth is not separated from the snout by a groove. The lips are thick giving the fish a sucker-like appearance. Scales are very small giving the fish a smooth skinned appearance. Coloration: The upper body is light olive-green to black with numerous dark flecked scales; the lower body is silvery-white. With exception of very young individuals, a distinct black band on sides is lacking. Size: Up to 4 inches.

**Habitat:** This fish prefers swift flowing streams with riffles and pools. The longnose dace is widely distributed in Vermont.

**Bait use:** Although common in many Vermont streams, it is not a particularly popular bait fish perhaps due to its overall drab appearance; however, it is usually abundant and easily obtained from the wild. It is not a hardy fish to maintain for any length of time in holding tanks.

## WHITE SUCKER (*Catostomus commersoni*)



*Image by John Lyons*

**Other common names:** Common sucker, sucker.

**Identification:** Body is elongate with a rounded cross section throughout its length. The head is squarish in shape with a blunt snout. The mouth is aligned nearly horizontal and has thick fleshy lips covered with coarse papillae (bumps). The lip of the lower jaw extends back from the mouth as two enlarged, flattened lobes. Scales are large and number less than 74 along the lateral line. Coloration: Back is olive-brown to black; sides are brassy to silvery; underside is silvery-white to creamy-white. Young fish may have dark mottling and three dark oval blotches on the sides. Size: Adults attain large size, 10-18 inches.

**Habitat:** The species is found in a wide range of habitats including headwater streams, medium to large rivers, and lakes and ponds. The white sucker is widely distributed in Vermont.

**Bait use:** White suckers are an important bait fish in Vermont. Smaller fish are sold and used live much as shiners and minnows, while large individuals may be used for “cut bait” or fished dead as whole “sewn-on-bait.” They are hardy to transport and to maintain in holding tanks.

## LONGNOSE SUCKER (*Catostomus Catostomus*)



*Image by John Lyons*

**Other common names:** Finescale sucker, northern sucker, red-sided sucker.

**Identification:** The longnose sucker bears many similarities to the white sucker ; however, several characteristics aid in setting it apart. The snout projects noticeably beyond the leading edge of the upper lip (twice as much as with the white sucker). Scales are smaller and number more than 95 along the lateral line. Coloration: Back is brown to olive-brown; lightening to silvery or brassy-yellow on the sides frequently with dark irregular blotches; underside is whitish, yellowish or pinkish. In spring and summer, the sides of the fish may have a prominent broad, rosy band. Size: Typically up to 10-15 inches, although it can attain much larger size particularly in lake populations.

**Habitat:** Unlike the white sucker, this species prefers cool, deep lakes, although it can also be encountered in streams. The longnose sucker is widely distributed in Vermont, but because of its more specialized habitat requirements, it is less common than the white sucker.

**Bait use:** The longnose sucker has many of the same attributes as the white sucker but is of lesser importance as a bait fish.

## MIMIC SHINER (*Notropis volucellus*)



*Image by Image by Ellen Edmonson*

**Other common names:** Shiner, minnow.

**Identification:** Body is slender and compressed laterally. Snout is broad, rounded, and barely overhangs the small, slightly upturned mouth. Eyes are large. Scales particularly on the back and upper sides are dark edged; scales on forward part of lateral line are taller and narrower than elsewhere. Silvery sides have a faint, dusky lateral stripe which is more evident and thickest near the tail. Fins are clear. There is dark pigmentation around the anus and base of the anal fin. **Coloration:** Back is yellowish-olive; sides are silvery; underside is silvery-white. **Size:** Average about 2-3 inches.

**Habitat:** This is a fish of sandy pools in small to large rivers and some lakes. The mimic shiner is not a widely distributed species in Vermont but is fairly common in Lake Champlain and the Connecticut River.

**Bait use:** This fish is more apt to be encountered as wild trapped bait. It is not generally available from commercial dealers unless it comes mixed with other wild caught minnows and shiners.

## NORTHERN REDBELLY DACE (*Phoxinus eos*)



*Image by John Lyons*

**Other common names:** Yellowbelly dace, dace.

**Identification:** Body is stout and round in cross section. Snout is short and rounded; mouth is small, forward pointing, and slightly upturned. Scales are very small giving the fish a smooth skinned appearance. There are two distinct dark lines or bands on each side of the body: one is slightly below the lateral line and the other is located above it. The upper band may be interrupted and broken into dark spots toward the rear half of the fish. **Coloration:** Back and sides above the upper stripe are olive brown; sides between the two stripes are silvery or brassy; sides below the lower line and underside are silvery-white or yellowish. The underparts of male fish may be red during the peak spawning season and bright fluorescent yellow immediately prior to and following spawning. **Size:** Average about 2 inches.

**Habitat:** This is a fish of acidic lakes, beaver ponds, bogs and streams, although populations may also occur in non-acidic waters. It avoids fast moving waters preferring backwaters with silty bottoms and abundant aquatic vegetation. The northern redbelly dace is not particularly widespread in Vermont; however, in suitable habitats it can be quite abundant.

**Bait use:** Although not readily available through commercial bait dealers, it is trapped from the wild locally and used primarily for walleye bait.

## RAINBOW SMELT (*Osmerus mordax*)



*Image by Doug Watkinson*

**Other common names:** Smelt, American smelt, jack smelt, frostfish, icefish.

**Identification:** A proportionately long and slender fish with an adipose fin. Mouth is large and extends back to rear of eye; mouth has strong teeth on the jaws and tongue. Scales on the sides are easily shed when handled. Coloration: Back and upper sides are yellowish-olive or greenish. Sides have a bright silvery band extending from rear gill cover to base of tail; band frequently reflects a purplish-bluish iridescence. Underside of body is whitish. Size: commonly 6-10 inches.

**Habitat:** Smelt inhabit deep, cold, clear water lakes and may spawn either along lake shorelines or ascend tributary streams. Because of its strict habitat requirements, smelt populations are limited to relatively few lakes in Vermont.

**Bait use:** This is an important bait species especially during the ice fishing season for lake trout, landlocked salmon, and large trout. It is either obtained directly by angling or can be bought from some bait shops when in season. Smelt are also a highly esteemed table fish and are harvested in large numbers through the ice.

## **EASTERN SILVERY MINNOW** (*Hybognathus regius*)



*Image by Jon Craig Cloutier*

**Other common names:** Hunt, pinhead, shiner.

**Identification:** Body is stout; moderately compressed laterally; and deepest and widest ahead of dorsal fin. Caudal peduncle is fairly deep. Snout is blunt, rounded and slightly overhangs small mouth. Upper jaw extends back to front edge of eye. Lower jaw is nearly horizontal and chisel-shaped with a small knob at the inside tip of mouth. Eyes are moderately large. Fins are clear and body lacks any distinctive markings. Lining of body cavity is black; intestine is very long and coiled. **Coloration:** Sides are bright silvery often with a bluish metallic sheen and lack any lateral stripe or band; back is olive to silvery with a dark mid-dorsal stripe. **Size:** Up to 3-4 inches.

**Habitat:** Prefers large, slow moving streams particularly pools and backwater areas. The silvery minnow is not a commonly encountered species in Vermont, although it can be found in abundance in some waters with suitable habitat.

**Bait use:** This is an important bait fish especially during the ice fishing season. Small, young fish (pinheads) are popular perch bait.

## SPOTTAIL SHINER (*Notropis hudsonius*)



*Image by Ellen Edmonson*

**Other common names:** Spottail minnow, spottail.

**Identification:** Body is relatively elongated, compressed laterally, and moderately deep. Snout is blunt, rounded and slightly overhangs small mouth. Eyes are large. Small to medium size fish have a conspicuous black spot at base of caudal fin, otherwise the body and fins lack any markings. Scales are large and easily shed. Coloration: Back is yellowish or pale green; sides are silvery; underside is silvery-white. Size: Average about 2-3 inches.

**Habitat:** This species inhabits lakes and large rivers. Wild populations within Vermont are not widely distributed. They are most abundant in Lake Champlain and the Connecticut River.

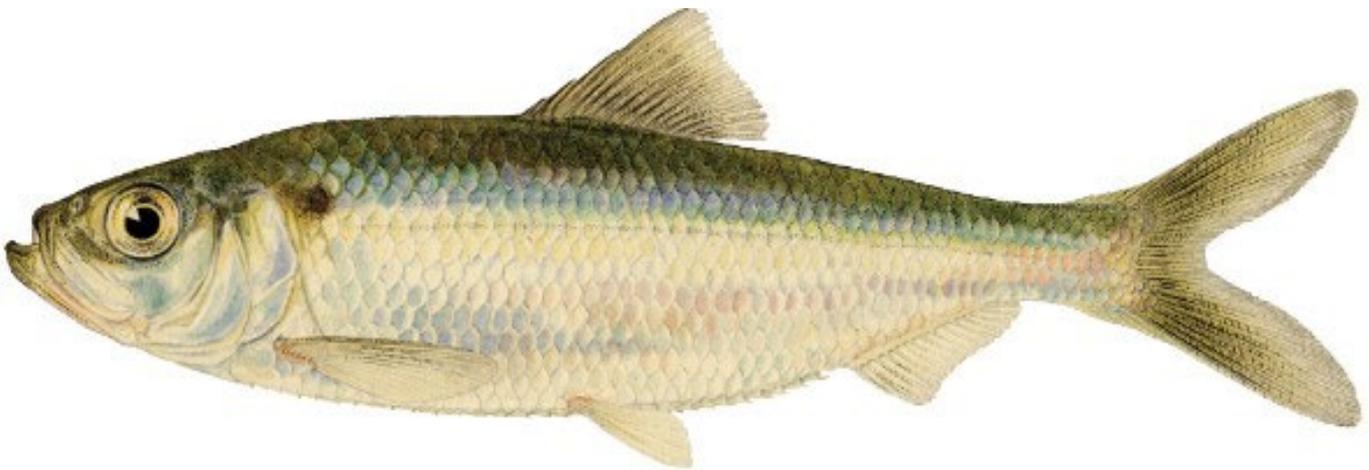
**Bait use:** The spottail shiner is an important bait fish and is readily available from many commercial bait dealers. It is a moderately hardy fish.

## INVASIVE FISH SPECIES IDENTIFICATION GUIDE

The following pages of this guide provide photographs and descriptions to help you properly identify some of the aquatic invasive fish species that could potentially be encountered in wild-harvested or store-bought bait.

Introducing invasive fish species to any waterbody can damage the environment and harm fisheries resources. These fish **SHOULD NOT** be moved between waterbodies.

### **ALEWIFE** (*Alosa pseudoharengus*)



*Image by Ellen Edmonson*

**Other common names:** Sawbelly, skipjack, shad, herring, gaspareau

**Identification:** The alewife is a member of the herring family. It is generally 3 to 7 inches in length and silvery in color with a blue-green back. The alewife's belly is serrated, giving it a saw-tooth feel when rubbed from tail to head. The alewife's eyes are large and its lower jaw extends outward beyond its upper jaw. The alewife's body is compressed laterally (flattened from side-to-side). There is typically a large prominent black spot on its side just behind the gill cover.

**Habitat:** The alewife is a schooling fish, preferring to suspend over deep water. In the evenings and at night it also can be found foraging for food in thick aquatic vegetation close to shore.

**Invasive Species Status and Impacts:** In Vermont, alewives are currently found only in Lake St. Catherine, Lake Champlain and Lake Carmi. Alewives reproduce rapidly and can quickly dominate a new lake. They eat the eggs and fry of important sport fish and compete with native fish species for food and habitat. Native fish, such as smelt, yellow perch and walleye, can often decline or even disappear following the introduction of alewives. Alewives also interfere with the natural reproduction of lake trout and landlocked Atlantic salmon.

## **GOLDFISH** (*Carassius auratus*)



*Image by John Lyons*

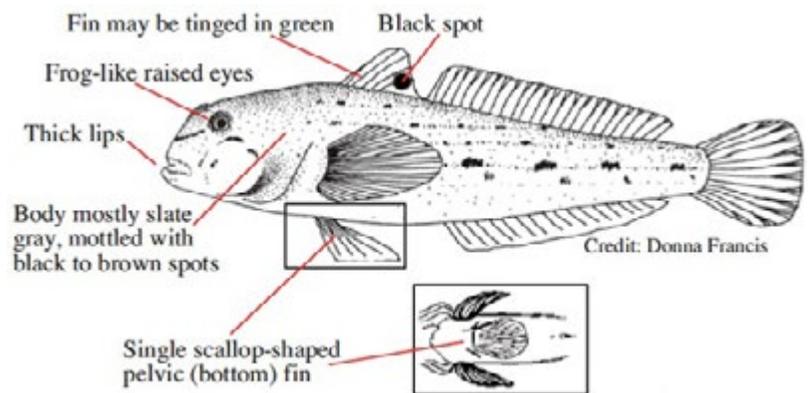
**Other common names:** Carassin, poisson rouge

**Identification:** Goldfish are a member of the Cyprinid, or minnow and carp family, and are native to eastern Asia. They are thought to have been the first foreign fish species ever introduced to North America. They vary in color and may be white, silver, gold, brown, black, or a mottling of various colors, although the most common varieties seen in aquariums and pet shops are bright orange.

**Habitat:** Goldfish prefer the shallow, warm edges of lakes and ponds with abundant aquatic vegetation. Although goldfish thrive in warmwater environments, they can easily survive the cold temperatures and low oxygen conditions found under the ice during a Vermont winter. In the wild, goldfish will often hybridize with carp, producing fertile offspring. Goldfish are limited in their usefulness as forage fish because of their rapid growth.

**Invasive Species Status and Impacts:** The use of goldfish as baitfish is prohibited in Vermont and many other states. However, wild populations of goldfish are known to exist in almost every state. Large numbers are cultured as bait and forage for sport fish, as well as for the aquarium industry. In the wild, goldfish will compete with native fish species for food and habitat. Large populations can greatly disturb sportfish habitats. Goldfish will root around the bottom of lakes and ponds, destroying aquatic plants, turning the water muddy, and creating aquatic conditions that are less suitable to native fish species and unsightly to the human eye. Never release aquarium fish into the wild! Unwanted pet fish should be returned to pet shops or humanely euthanized by placing them in the freezer for several hours and then disposing of them properly.

## ROUND GOBY (*Neogobius melanostomus*)



**Other common name:** Gobie à taches noires

**Identification:** The round goby resembles a sculpin (also known as a muddler or Miller's Thumb). They have a large head, soft bodies, spineless dorsal fins, and fused pelvic fins--a unique feature which forms a suction disk. Round gobies have a distinctive large black spot on the first dorsal fin. Sculpins often have a dark spot in the same location, but sculpins can be distinguished from gobies by their separate pelvic fins. The goby's body is mostly gray, with mottled black or brown spots. Gobies average 3 to 6 inches in length but can reach 10 inches.

**Habitat:** The round goby is an aggressive bottom-dwelling fish. They can be found at all depths and prefer sandy or rocky bottoms. Gobies build and actively defend nests laid in rocky crevices. Females are able to spawn up to five times during the mating season.

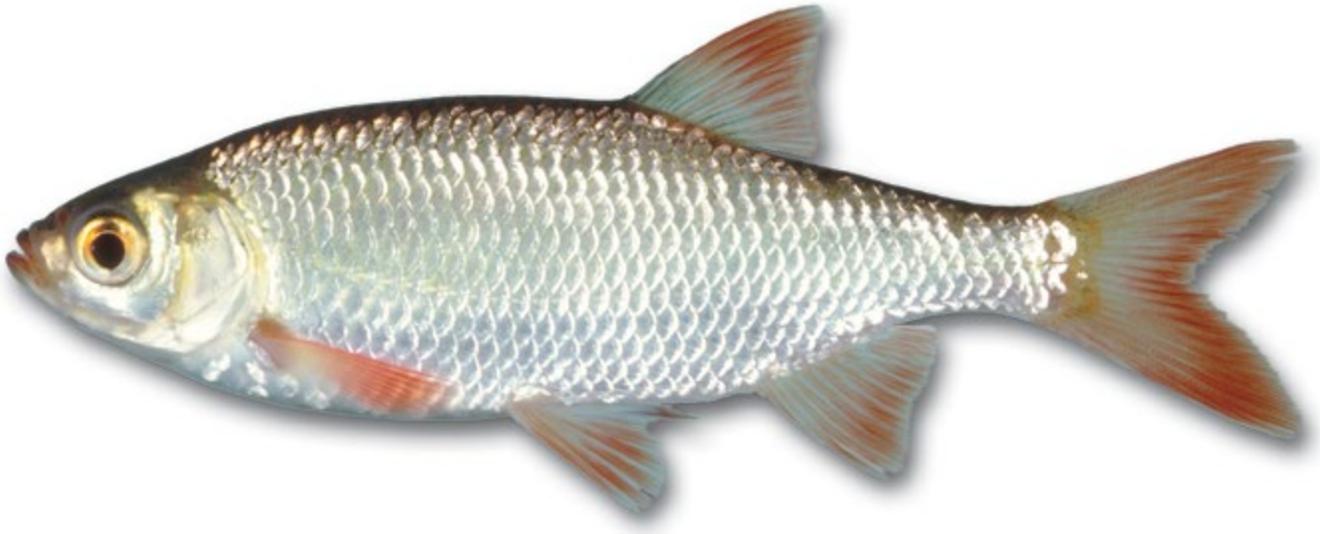
**Invasive Species Status and Impacts:** The round goby is currently found in all five Great Lakes, some of the New York Finger Lakes, Oneida Lake and Onondaga Lake.

Invasive gobies are a threat because they:

- Are aggressive and reproduce quickly, which may allow them to out compete native fish for food and spawning habitat.
- Feed on the eggs and fry of native fish, as well as directly eat smaller native fish species.
- Are a nuisance to anglers. Their aggressive feeding habits cause them to be caught frequently, making it difficult to catch target sport fish in areas where gobies are present.

Anglers should know how to identify the round goby. Anglers are often the first to discover round gobies because these aggressive fish are commonly caught by hook and line. Your help is vital in reporting new sightings and preventing their spread.

## **RUDD** (*Scardinius erythrophthalmus*)



*Image by Noel Burkhead*

**Other common names:** Rotengle, gardon rouge.

**Identification:** A member of the Cyprinid, or minnow and carp family, the rudd has been introduced from Europe to many parts of North America. The rudd is a stocky, deep-bodied minnow that can grow to 20 inches long. It has a forked tail. The mouth is distinct, with a steeply angled protruding lower lip. Small rudd are very similar in appearance to our native golden shiner but have blood-red fins (golden shiners are yellowish-orange) and a fully scaled belly. As they get older and larger, their bodies will often turn solid orange.

**Habitat:** The rudd inhabits quiet, heavily vegetated waters, similar to golden shiners. However, they can adapt to a wide range of environmental conditions, including poor water quality. Adults feed mainly on aquatic vegetation, insects and small fish, while young rudd mainly eat algae and small invertebrates.

**Invasive Species Status and Impacts:** Because of its close resemblance to the golden shiner, the rudd was widely sold as a baitfish in the past (now illegal in Vermont). It is believed that bait bucket dumping is the primary way rudd have spread. Rudd up to 17 inches and 2.5 pounds have been caught in several Vermont waters, including Keeler's Bay on Lake Champlain, Lake Hortonia in Rutland County, Dewey's Mill Pond in Windsor County and Blueberry Lake in Washington County. The impacts of the rudd on native species are not completely known. Rudd will hybridize with the native golden shiner, which could interfere with their genetics and pose a risk to this important native baitfish species. Rudd also may compete with native fish for food. They eat large amounts of shoreline aquatic vegetation, which could degrade spawning and nursery habitats for young fish.

## RUFFE (*Gymnocephalus cernuus*)

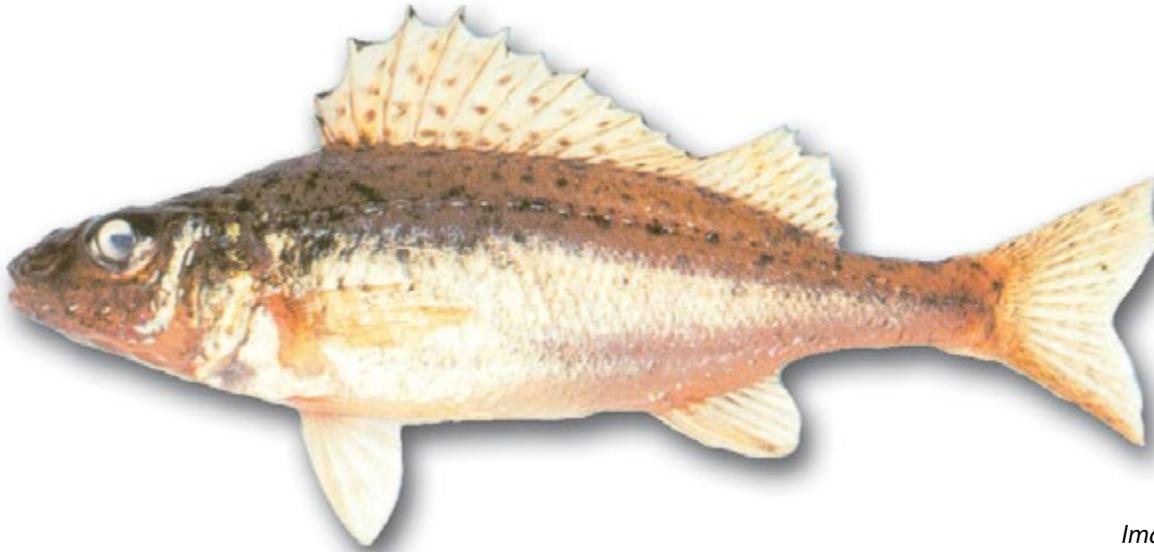
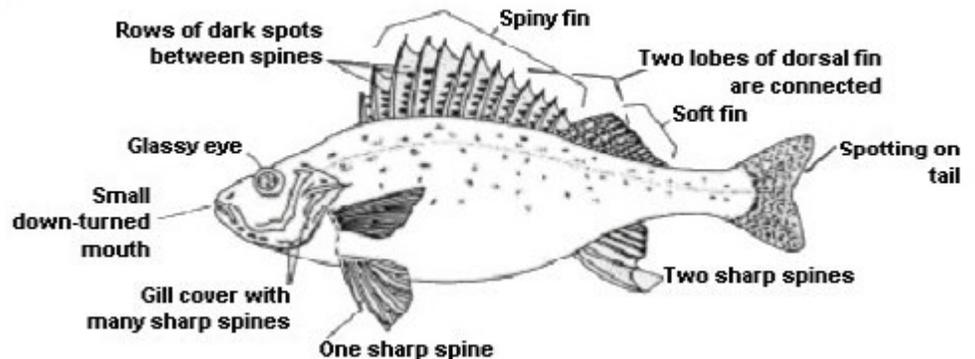


Image by Gary Cholwek



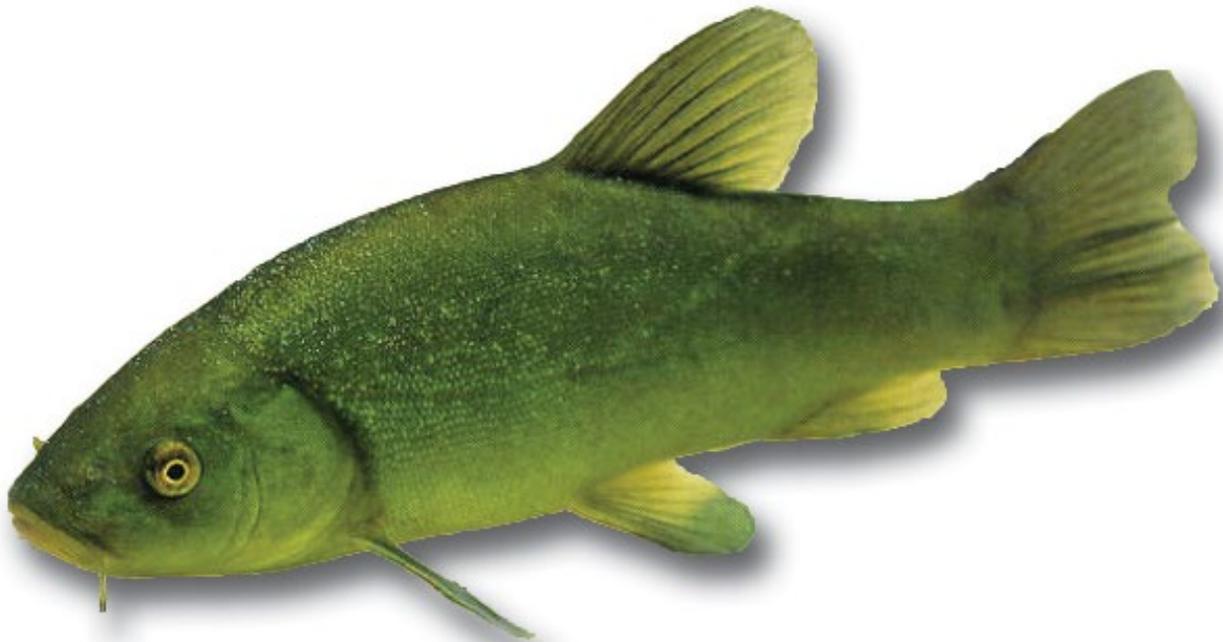
**Other common name:** Grémille

**Identification:** The ruffe is a member of the perch family native to northern Europe. An adult is generally 5 to 6 inches long but can attain 10 inches. At first glance, ruffe resemble young walleye, yellow perch or trout-perch, but there are ways to tell the difference. The ruffe has two dorsal fins, one spiny and one soft, which are joined together. The membranes between the spines on the front dorsal fin have rows of dark spots. The ruffe also has very sharp spines on its gill cover and pelvic and anal fins. The ruffe has glassy eyes and a small, down-turned mouth. Their coloration is similar to walleye, and they are slimy when handled.

**Habitat:** The ruffe spends its days in deeper water, moving to the shallows to feed at night.

**Invasive Species Status and Impacts:** Currently, the Eurasian ruffe's distribution is limited to localized spots in Lake Superior and Lake Huron. The ruffe was likely carried to the Great Lakes in the ballast water of an ocean freighter in the early 1980s. However, the ruffe is rapidly spreading, demonstrating quick growth and enormous reproductive potential. Given time, they could spread to all the Great Lakes and many inland waters. Ruffe are opportunistic feeders and will eat almost anything. The diet of the ruffe consists mainly of aquatic insects and other bottom-dwelling organisms. In Lake Superior, ruffe have also been observed feeding on the eggs of valuable species, such as lake herring, whitefish and lake trout. Ruffe have the potential to impact existing commercial and recreational fisheries. For example, the ruffe has become the most abundant fish of the more than 60 fish species present in the Duluth Harbor on Lake Superior. This happened within three years of its discovery in the harbor. Declines of native fish species such as yellow perch and emerald shiner were also observed.

## TENCH (*Tinca tinca*)



*Image by Steffen Zienert*

**Other common name:** Tanche

**Identification:** The tench is a member of the Cyprinid, or minnow and carp family, though it is unlikely to be confused with native minnows. It is a thickset fish with small scales, thick leathery skin, a short, deep caudal peduncle, and small reddish eyes. Tench also have a forward pointing mouth with a single, long barbels at each corner. It is typically greenish-brown above with bronze sides and a yellowish tinge to the belly. There also is a golden ornamental variety of tench. Tench average 8 to 10 inches long but can grow as large as 34 inches.

**Habitat:** The tench inhabits lakes, ponds and sometimes lower reaches of rivers. It can live in heavily silted, densely vegetated waters where few other fish could survive. It is very tolerant of high temperatures and low oxygen levels. Tench primarily eat crustaceans, aquatic insects, mollusks, and a considerable amount of plant material. They spawn in late spring and early summer, laying eggs in aquatic vegetation.

**Invasive Species Status and Impacts:** Tench escaped from a private facility in Quebec in the 1990s and became established in the Richelieu River. They have since been reported throughout Lake Champlain. The species can be a nuisance when it reaches high abundance, and it is a potential competitor for food with sport fishes and native minnows. Tench can stir up bottom sediments and possibly affect water quality, but probably not to the extent of common carp. Many introduced tench populations in the United States have not persisted and those that remain tend to be somewhat localized.

## WHITE PERCH (*Morone americana*)



*Image by Justin McLane*

**Other Common Names:** Perch, sea perch, silver perch, narrow-mouthed bass, baret

**Identification:** The white perch is a member of the moronidae or temperate bass family and is the only member of this family in Vermont. It has a deep body with an oval shaped cross section along with two dorsal fins with the front set of fins containing sharp spines and the rear set containing soft rays. White perch are dark grey to olive brown along the upper body shading to silver along the sides and white on the belly. They sometimes have faint horizontal dark lines along the side. They can grow up to 22 inches but generally average 8-10 inches.

**Habitat:** This species is found along the Atlantic coast in the ocean as well as in the brackish waters of estuaries and river mouths. It also naturally inhabits some lakes with current or past connections to the ocean. It is found at shallow to moderate depths during the warmer months, retiring to deeper areas during the winter. The white perch seems to prefer turbid water.

**Invasive Species Status and Impacts:** The white perch was originally distributed in the St. Lawrence River along the Atlantic coast from Canada to South Carolina. They have been introduced into the Midwest U.S., some New England lakes and has invaded the Great Lakes. In 1984 the white perch was first reported in Lake Champlain and has also been found in Lake Memphremagog, Parker Lake and the Connecticut River. Biologists are concerned about the effects of competition between the nonnative white perch and the native yellow perch.

# Aquatic Invasive Species Laws

**PROHIBITED SPECIES:** The possession of zebra mussels, quagga mussels, rusty crayfish, Asian clam, spiny water flea, fishhook water flea, and all aquatic plants is prohibited.

**VESSEL INSPECTIONS:** All watercraft operators are required to inspect their own vessels and trailers and remove and dispose of all aquatic plants and aquatic invasive species prior to launching and upon leaving a state water.

**DRAINING OF VESSELS:** Prior to leaving state waters, all watercraft operators are required to drain their vessels, trailers, and all other equipment of water, including water in live wells, ballast tanks, and bilge areas. When transporting vessels on the road, all drain plugs, bailers, valves, and other devices that are used to control the draining of water must be removed or placed in the open position. Bait buckets, water hauling, and emergency-response vehicles are exempted from this requirement.

**MANDATORY BOAT INSPECTIONS:** Boat inspections are mandatory whenever a Vermont Department of Environmental Conservation (DEC) authorized inspection station is present, is open/staffed, and one's vessel is identified as requiring inspection. Refusing to comply with a mandatory inspection and decontamination is considered a violation of state law.

*NOTE: the term "vessel" means any type of watercraft that can be used as a means of transportation on water, including boats, canoes, kayaks, paddleboards, personal watercraft, and so on.*

## Aquatic Invasive Species Identification

It is illegal to possess or transport the following aquatic invasive species found in Vermont:

### Rusty Crayfish



Jeff Gunderson, Minnesota Sea Grant

An invasive crayfish species that can displace native crayfish and destroy aquatic habitat. Rusty crayfish can reach 5 inches in length and can be identified by dark reddish spots on either side of their shell and large, strong, smooth claws that can be a brownish-olive color or a reddish-brown color with black or orange tips.

### Alewife



North American Native Fishes Association

### Asian Clam



GB Nonnative Species Secretariat

### Eurasian Watermilfoil



Alison Fox, University of Florida, Bugwood.org

### Spiny Water Flea



Jeff Gunderson, Minnesota Sea Grant

### Water Chestnut



B. Smorgans

### Variable-Leaf Watermilfoil



Dennis Roberge, Courtesy of Maine VLMP

### Zebra Mussel



U.S. Fish & Wildlife Service

**Note:** Transporting any aquatic plant or aquatic plant part, zebra mussel, or quagga mussel on the outside of a vehicle, boat, personal watercraft, trailer, or other equipment is illegal. Violators are subject to a penalty of up to \$1,000.

## BAITFISH USE IN NEIGHBORING STATES AND PROVINCE

For information on baitfish use in areas surrounding Vermont please visit these websites:

- [Baitfish Use in New York](#)
- [Baitfish Use in New Hampshire](#)
- [Baitfish Use in Quebec](#)



# STOP AQUATIC HITCHHIKERS!™

Be A Good Steward. Clean. Drain. Dry.

[StopAquaticHitchhikers.org](http://StopAquaticHitchhikers.org)

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### Stop the Transport of Invasive Species:

- **CLEAN** boots, gear, trailer & vehicle of plants, fish, animals & mud.
- **DRAIN** bilge, ballast, wells & buckets before you leave the area.
- **DRY** equipment before launching watercraft into another body of water.