



Spotlight on Round Valley Reservoir

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Many anglers dream of what lurks below the surface of their favorite water body. Typically, our only link to the underwater world is a thin strand of monofilament, but as fisheries biologists, we have many other tools in our "tackle box" to help us learn what swims beneath.

Staff from the [Bureau of Freshwater Fisheries Research and Management](#) team recently spent three nights electrofishing Round Valley Reservoir in Hunterdon County. This was conducted as part of a Fisheries Inventory that will be used to assist in the development of a Lake Management Plan, used to guide fisheries management within this valuable and picturesque reservoir.

Also known as "RVR" or "The Valley," this 2350-acre water supply reservoir is extremely popular and important to many anglers and boaters. Boats are launched from Fish and Wildlife's main concrete boat ramp or the adjacent gravel launch.



Round Valley Reservoir

[Click to enlarge](#)

These launches are free to licensed hunters and anglers (who must display a photocopy of their license in the rear driver's side window). Other users must obtain a [Boat Ramp Maintenance Permit](#), which can be purchased for \$15.00 online at www.wildlifelicense.com/nj/ or at any hunting/fishing license agent. Outboard motors are limited to 9.9 horsepower (see [Freshwater Fishing Digest](#) for more details). Both ramps are located off of Round Valley Access Road, on Route 629, just north of the Division of Parks and Forestry's [Round Valley Recreation Area](#). A third launch is available to those camping within the recreation area.



Electrofishing boat with 2 netters on bow.

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Round Valley Reservoir is managed as a **Trophy Trout Lake**, resulting in more restrictive size and creel limits for trout. The general trout regulations for brook, brown, and rainbow trout of a minimum size of 7 inches, a daily limit of 4 or 6 fish (depending on the season) and a closed pre-season do not apply at Round Valley. Trophy Trout Lake regulations include a minimum size of 15 inches and a daily limit of 2 fish, but there is no closed season for these three species (see [Freshwater Fishing Digest](#)).

The lake trout regulations for Round Valley Reservoir also differ from the general regulations: anglers can harvest a daily limit of 1 fish at a minimum size of 20 inches, from January 1 through September 15. There is a catch and release season, to protect spawning lakera, starting September 16 through November 30. The season then reopens on December 1.

Although one of New Jersey's premier fishing hot spots, the conditions at RVR could be better. A lack of nutrients to support plankton, coupled by heavy predation by trout on the alewife population, may have resulted in less than optimal trout growth in recent years. Data indicate the lake trout population is out of balance. Observations by anglers, now documented by fisheries biologists, indicate the following trends:

- 1) Fewer large lake trout than in the past
- 2) Increased abundance of sub-legal fish
- 3) Severe decline in alewives (diminished forage for all salmonids), and
- 4) Reduced nutrient content as indicated by increased water clarity and other analyses, just to name a few.

Due to a stockpiling effect of lake trout from 15 to 20 inches, a change in the laker regulations has been proposed for the 2008 fishing season, however it is not yet adopted because the public comment period has not concluded. The proposed change will liberalize the harvest of lake trout in an effort to balance the population structure and reduce competition.



Fisheries Technician Kelly Davis reaching for stunned bass.

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Specifically, the proposed strategy is to reduce the number of what are currently sub-legal fish. The proposed regulation would allow the harvest of 3 lakera daily that are 15 to 20 in., a no harvest of fish between 20 and 24 inches, and 1 laker of 24 in. or greater could be kept. This potentially results in an angler bringing home 4 lakera for dinner. The increased harvest of lake trout (in compliance with current fishing regulations of course) should help minimize the previously stated problems. Stay tuned for regulation updates.

With all of that said, let's take a look at what we recently captured in The Valley. Using a Smith-Root electrofishing boat we conducted 4 hours of electrofishing surveys around much of the reservoir's perimeter. The surveys were conducted along the shoreline, at night when fish commonly move in from their deeper water mid-day refuge.

The primary purpose of these surveys was to collect valuable data concerning warmwater fish populations such as bass and sunfish. Bass were collected for the full 4 hours, while panfish were only collected for 1.5 hours. In total, over 820 fish of 19 species were collected.

The most abundant species encountered was the bluegill, for which data were collected from 204 fish. The



Large panfish like this 9.1 inch bluegill were not uncommon.
[Click to enlarge](#)

largest bluegill was 9.1 in. and weighed 0.6 lbs. (Photo # 4) Other noteworthy panfish include 124 redbreast sunfish (with a whopper at 9.7 in. and 0.7 lbs.) (Photo # 5) and 101 rock bass. Other panfish, such as pumpkinseeds, black crappie, yellow perch and white perch, were infrequently encountered.



9.7 inch Redbreast Sunfish.
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Kelly Davis with 7.2 lb. largemouth bass.
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Bass were found in good quantities, with largemouth (174) edging smallmouth (91) nearly 2 to 1, and were caught at rates of 44 and 23 per hour respectively.

The most impressive largemouth weighed 7.2 lbs. and measured 21.6 inches, while the nicest smallie weighed 3.4 lbs. and was 18.5 inches.



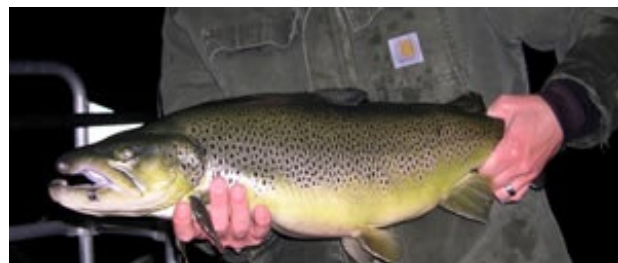
The author with 3.4 lb. smallmouth bass.
[Click to enlarge](#)

Twenty largemouth bass were retained for the purpose of testing them for the presence of a fish disease that is new to the Northeastern United States, Largemouth Bass Virus. Various organs such as the kidneys, spleen and swim bladder were collected and sent off for laboratory analysis.

Round Valley was selected as one of the lakes to be targeted by the Division of Fish and Wildlife due to its popularity. Heavy boat traffic, such as occurs at Round Valley, is one potential means of disease dispersal. Results will be made available once the studies are complete.



Abass is dissected to check for Largemouth Bass Virus. [Click to enlarge](#)



RVTA's recently stocked 9.7 lb. brown trout "money fish" with jaw tag to prove it.>

Although not in search of trout, they showed up in numbers. Browns (55) and rainbows (13) were also caught in the shallows, including a 9.7 lb. 24.8 in. monster brown.

Round Valley Trout Association's president Dennis Haggerty later informed us the tag (as seen in the photo) indicated this was a "money fish" the club had stocked just days before the surveys were conducted. Don't worry, the fish was released unharmed, along with many other nice browns and bows in the 20 in., 4 lb. class range.

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A few large American eels were encountered, the largest measuring 38 in. and weighing 4 lbs. 2 oz. This fish is closing in on the 42 in., 6 lbs. 13 oz. state record that was caught in the Round Valley in 2005. That fish resides, as replicate mount, just a few hundred yards across the street from the main boat launch at the [Lebanon Freshwater Fisheries Laboratory](#).

The longest fish collected outgrew the American eel by only 1 in., but certainly outweighed it - by more than 20 pounds! It was a common carp weighing in at just under 25 lbs. Carp are known for doing particularly well, in both abundance and size, in nutrient rich waters.

Although not an abundant species in The Valley, they do just fine in cold, deep water bodies as well. Although carp make for fun fishing, it is good that carp numbers are low in Round Valley - they are detrimental to native fish and wildlife populations by uprooting and destroying aquatic vegetation and negatively impacting water quality.



Common carp weighing in at nearly 25 lbs.

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What is on the horizon for Round Valley Reservoir? Active management. This complex ecological system has many forces of nature acting upon it at any given time and many of them are concurrently being studied. In addition to the lake inventory currently underway, recent efforts have been made to learn more about the reservoir's productivity and carrying capacity by studying nutrient and plankton levels. This work is being conducted by [Normandeau Associates](#).



Lake trout stomach packed with Gammarus.

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Dedicated angling volunteers, led by Mike Kalinchock, collected 100 stomachs from lake, brown and rainbow trout during 2006. The analysis of their contents enables us to learn more about the diets of the reservoir's salmonids. Only 4 of these stomachs contained remnants of fish bones, indicating few alewives in the system.

The dominant food source of lakera of all sizes are scuds or Gammarus. One hundred thousand (100,000) alewives were stocked in June in an attempt to reestablish a viable forage base which has all but disappeared in recent years.

Lake trout were aged by scientists from the [Patrick Center for Environmental Research](#) at the [Academy of Natural Sciences](#) in Philadelphia to determine growth rates and if the population is stunted. When compared to other populations in the Northeast and Ontario, initial results indicate our lakers' growth is above average for young fish which feed primarily on the abundant Gammarus found in the reservoir. However, the growth of older fish appears much slower, likely due to a diminished food supply.



100,000 alewives were stocked in Round Valley.
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[East Stroudsburg University](#) professor Dr. Jane Huffman with massive lake trout captured using gillnets.
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Fishing regulation changes are being proposed to realign the fishery in order to strike a balance between predators and prey. Results from the Largemouth Bass Virus testing are pending. More field work is slated for this summer and fall, including shoreline seining to assess reproductive success of warmwater species and to determine the presence of various minnow species. Trapnetting and/or gillnetting will supplement existing fisheries data, and the annual deepwater gillnetting to collect lake trout will yield information on that species.

The Division of Fish and Wildlife, [Round Valley Trout Association](#), and many anglers are optimistic that Round Valley Reservoir will continue to be one of the Garden State's premiere fishing hotspots. All of the efforts being put forth will hopefully ensure that quality fishing experiences are commonplace at Round Valley Reservoir.




Time to start electrofishing on "The Valley."

(For more on Round Valley's lake trout, see Shawn's November, 2005 article, [Lunker Lakers Lurk Below](#).)

ADDITIONAL PAGES

- ▶ [Trout Fishing Information](#)
- ▶ [Trout Fishing Facts & Information \(When, Where, How\)](#) (pdf, 18kb)
- ▶ [Hackettstown State Fish Hatchery](#)
- ▶ [Pequest Trout Hatchery and Natural Resource Education Center](#)
- ▶ [Fishing Regulations](#)

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