



Fisheries Fact Sheet

Great Smoky Mountains National Park



Fishy Facts

- GRSM boasts over 60 species of fish in 12 families
 - Everything from lampreys to darters to shiners to trout
- There are 2,916 miles of streams in GRSM but only about 583 miles contain fish
 - Fisheries staff have surveyed 2,333 miles to date (80% of total)
- Only *native* gamefish – brook trout, smallmouth bass, rockbass
 - How did we get rainbow & brown trout . . . ?
 - Answer: They were brought here and stocked from western U.S. and Europe!
- There are 3 federally Threatened & Endangered (T&E) fish species (*All in Abrams Creek!*)
 - Smoky madtom (Endangered) – small catfish (<4 inches)
 - Yellowfin madtom (Threatened) – small catfish (<4 inches)
 - Citico Darter (Endangered) – small darter (<3 inches)
- Brook trout found in GRSM are a distinct Southern Appalachian strain (species or subspecies?)
 - All brook trout within New River, VA and south are Southern Appalachian strain
- Brook trout fishing opened in **ALL streams in 2015** – *see Fishing Regs!*
 - Can harvest 5 fish/day >7 inches
- Brook trout restoration efforts have restored 27.2 miles of brook trout in 11 streams since 1981
 - Represents roughly 14% of total brook trout range
 - Brook Trout are found in 200 miles of streams in the GRSM; rainbow in 354 miles of stream
- Fisheries staff annually monitors 15 brook trout streams and 3 large streams (10-26 years of data each!)



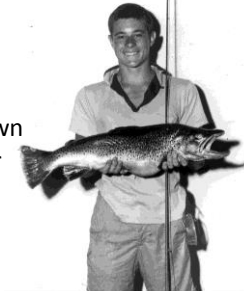
Long-term Monitoring Results

- Little River, Abrams Creek, and others typically contains 2,000-8,000 trout per mile
 - Of these 2,000-6,000 trout, there will be 250-600 legal trout (>7 inches) per mile
- Most trout only live 3-4 years and reach a maximum size of 9-12 inches
 - Annual mortality rates of adult brook and rainbow trout is 55-70% per year!
 - Why? – GRSM streams are food limited. Fish reach ~9 inches, can't take in enough food to maintain metabolic rate, begin to lose weight, and die.
 - Why do brown trout reach 30 inches? – Brown trout switch to a piscivorous (fish) diet at about 8 inches which allows them to get much bigger.
- Regulations play little role in trout population dynamics in GRSM
 - Why? – GRSM streams are food limited and natural mortality rates are so high. Anglers harvest <15%, so regulations have little effect compared to Mother Nature.
- Floods and droughts greatly influence fish populations in GRSM
 - Major droughts reduce adult numbers and major floods limit reproductive success
- Otters were introduced into GRSM in 1992, but have had no impact on native trout
 - Crayfish are the primary otter food source from spring through fall. Fish were present in 50-90% of otter stomachs examined, but these were mostly northern hogsuckers, white suckers and stonerollers.



What are some of the biggest trout ever caught in the Park?

28 inch
10.5 lb brown
Little River



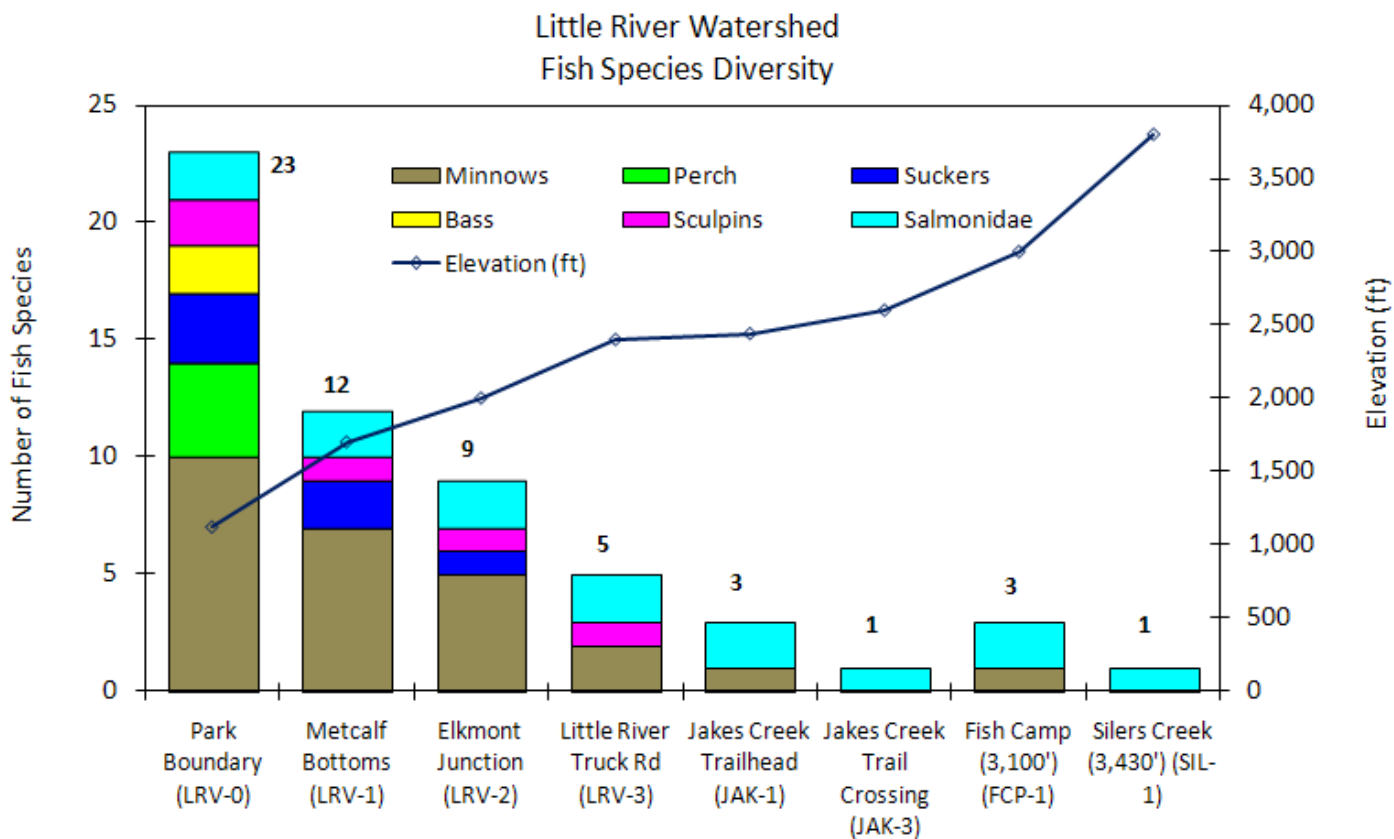
18.5 inch, 2.4 lb rainbow, Hazel Creek



32.5 inch
15.5 lb brown
Cataloochee Creek



How do fish communities change as streams increase in elevation?



How BIG do wild brook, brown, and rainbow trout get in the Smokies and how long do they LIVE?

