



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 2,115 miles of streams in GRSM but only about 800 miles contain fish
 - ◊ Fisheries staff has surveyed 1,166 miles to date (55% of total)
- Only *native* gamefish – brook trout, smallmouth bass, rockbass
 - *How did we get rainbow & brown trout . . . ?*
 - *Answer:* They were brought here stocked from western US and Europe!
- There are 4 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)
 - ◊ Spottfin Chub (Threatened) – small minnow (<5 inches)
 - ◊ Duskytail Darter (Endangered) – small darter (<3 inches)
- Brook trout found in GRSM are a distinct southern Appalachian strain (species or subspecies?)
 - ◊ All brook trout south New River, VA southern Appalachian strain
- Brook trout fishing opened in **ALL but 3 streams** (1st time since 1975!) – *see Fishing Regs!*
 - ◊ Can harvest 5 fish/day >7 inches
- Brook trout restoration efforts have restored 17.2 miles of brook trout in 11 streams since 1981
 - ◊ Represents roughly 11% of total brook trout range
- Fisheries staff annually monitors 15 brook trout streams and 3 large streams (<18 years of data!)

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. When fish reach ~9 inches, they can't take in enough food to maintain their metabolic rate, begin to lose weight, and eventually 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?* – Because 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 in 1992, but have had no impact of native trout
 - ◊ Crayfish are the primary food source for otters in the Park. 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

