

Brown Trout (*Salmo trutta*)

General Information

Although not native to New Jersey, reproducing brown trout have become established in northern New Jersey streams through wide spread stocking. It is more tolerant to warmer temperatures than brook and rainbow trout. An anadromous (sea-run) fishery is currently being established in the Manasquan River using hatchery-reared fish.



Native Range

Throughout Europe and western Asia from Iceland, the British Isles and Scandinavia to the Aral Sea and Afghanistan. Also found in the Atlas Mountains of Northern Africa. Introduced in the United States in 1883 and is now found in many states. (Smith, 1985)

Habitat Description

River: Clear, cool to cold water, relatively silt free bottom rocky substrate. 50 to 70% pool to 30 to 50% riffle-run habitat combination with areas of slow, deep water; abundance of in-stream cover is important (Raleigh, 1984).

Lake: Clear, cool to cold, deep lakes, typically oligotrophic. Require tributary streams to spawn. Brown trout grow larger in lake environments than in streams.

Optimum Habitat Requirements

Dissolved Oxygen	≥ 7 mg/l
Temperature	12 – 19°C
pH	6.8 – 7.8
Turbidity	< 50 ppm
Current	0.2 – 5.5 ft/s (feeding) 0 to 0.7 ft/s (resting)

Diet

Fry	Small bottom organisms, zooplankton
Juveniles	Terrestrial & aquatic insects, amphipods
Adults	Fish, crustaceans, insects

Notes: Size selective feeders – Insects are primarily Ephemeroptera, Trichoptera & Plecoptera. Active night feeders.

Reproduction

Time of Year	October – December	Age Males Mature	0 +
Temperature Range	7 – 9°C	Age Females Mature	1 +
Water Depth	24.4 – 45.7 cm	Nest	Bury in gravel
Substrate	Gravel (0.6 – 0.7 cm)	Egg Type	Demersal
Time of Day		Parental Care	None
Critical pH	5.0	Days to Hatching	38 – 95 (temp dependent)
Velocity Range		Oxygen Level	

Notes: Cover is essential to brown trout fry survival (Raleigh, 1984).