

Family - Salmonidae

Salmonid fishes include some of world's most important freshwater angling and aquaculture species. This family is native to the cool and cold waters of the Northern Hemisphere. Salmonids were first introduced to Australia in the nineteenth century, and were some of the first introductions for this family. This family is characterised by small scales, a lateral line, dorsal fin high on the back, forward on the pelvics. Closely related to the native families Aplochitonidae, Galaxiidae, Protoroctidae, and Retropinnidae.

Brown trout *Salmo trutta* Linnaeus



(R.M. McDowall)

Other names: Sea trout, Englishman.

Description: A thick-bodied and shallow species with a big head and mouth. Mouth becoming increasingly large with growth, and eyes relatively smaller. Dorsal fin (12-14 rays); pectoral rays (13-14); adipose fin well developed. Caudal peduncle relatively deep, and tail forked slightly or not at all. Distinct lateral line. Vertebrae 56-61.

Distribution: Established in high altitude, cooler waters mostly in the highlands above 600 m. Throughout New South Wales, The Australian Capital Territory, and Victoria, including the headwaters of the Murry-Darling, and Tasmania. In Tasmania it is widespread and abundant down to sea level in all major drainages with exception to the Davey River and Bathurst harbour streams. Stocked populations are maintained in the warmer waters of New South Wales, Victoria, Tasmania, South Australia (Adelaide region) and south of Perth in Western Australia.

Natural History: Is a native species to Europe, from Iceland and Scandinavia south to Spain and northern Africa, and eastward to the Black and Caspian Seas. Introduced to Australian waters in

the 1860s as an angling species.

Brook trout *Salvelinus fontinalis*(Mitchell).



(R.H. Kuitert)

Other names: Brook char, Fontinalis.

Description: Resembles the Brown trout in general form, it is rather slender and elongated. 10-14 dorsal rays, 9-12 anal rays, and 11-14 pectoral rays. Large mouth reaching back beyond eyes. Scales small (110-132 along lateral line); vertebrae 58-62; gill rakers 14-22. Mostly a small fish in stream populations may reach 200-300 mm. Can reach lengths of 850 mm and weight of 6.5 kg.

Distribution: Populations are recorded in mountain streams of New South Wales and Tasmania. Only two self-maintaining populations are in one stream in New England, New South Wales and the Clarence Lagoon, Tasmania. Other populations are maintained by stocking in Lake Jinabyne and lakes of the Tyndall, Tasmania and in South Australia.

Natural History: A native species to waters along the east coast of North America extending from northern Canada to the United States. Was first introduced in the 1870s from North America. Stocks first liberated in Tasmania in the early 1900s and streams of New South Wales mountain tablelands in the 1970s.

Rainbow trout *Oncorhynchus mykiss*Walbaum.



(R.M.McDowall)

Other names: Steelhead.

Description: Similar to Brown trout, however deeper bodied and more compressed. 10-12 dorsal rays; 8-12 anal rays; 14-16 pectoral; well-developed adipose fin, tail slightly forked or almost truncate. Small scale (115-150 along lateral line); vertebrae 61-66; gill rakers 17-22. Can reach up 1120 mm and a weight of more than 20 kg.

Distribution: Similar distribution to Brown trout with a more restricted local distribution and abundance. Self-maintaining populations exist in the higher altitude waters of The Australian Capital Territory, New South Wales, and Victoria, including headwaters of the Murry-Darling River system and Tasmania. Stocked populations exist in waters of New South Wales, Victoria, Tasmania, South Australia (Adelaide region) and Western Australia (south of Perth).

Natural History: Australian rainbow trout are derived from stock obtained from New Zealand in 1894. It is a native to the pacific coast of North America from Alaska to Mexico, primarily in rivers draining in to the Pacific Ocean. Also found along the Pacific Coast of north eastern Siberia.

Chinook (Quinnat) Salmon *Oncorhynchus tshawytscha* (Walbaum)



(C.A.Barnham)

Other names: King salmon, Spring salmon, Chinook salmon.

Description: Appearance similar to trout species, although, snout tends to be more pointed and mouth larger than other salmonids. Dorsal fin with 11-15 rays; 15-20 rays anal fin; 14-17 pectoral rays. Scales very small (130-165 along lateral line); vertebrae 62-65; 23-27 gill rakers. Landlocked species in Australia reach 850 mm and a weight of 8.5 kg.

Distribution: Maintained in Australian waters by stocking. Stocking is restricted to Bullen Merri and Purrumbete, Victoria. Hatchery brood stocks are maintained in Snobs Creek hatchery, Victoria and other private hatcheries within Victoria.

Natural History: A native to the west coast of North America, also north-eastern Asia from northern Japan to Kamchatka. Australian stocks originated in New Zealand and were first introduced to Australia in 1877.

Atlantic Salmon *Salmo salar* Linnaeus

Other names: None

Description: Closely resembles the brown trout, with the caudal peduncle longer and more slender. Tail usually more deeply forked. 11-12 rays on dorsal fin; 9-10 rays on anal fin. Mouth smaller not reaching back past eyes. Scales small (110-125 along lateral line); vertebrae 58-60; gill rakers 17-21. Common size in Australia for landlocked fish is generally 1-3 kg. Broodstock for Tasmanian aquaculture has reached up to 12 kg.

Distribution: No self-maintaining populations recorded in Australia. Is presently cultured in large numbers in sea cages in Tasmania. Also stocked in New South Wales in the Burrinjuck Dam and Lake Jindabyne. Reared in government and private freshwater hatcheries in Victoria. Recordings of established populations in the Rubicon and Latrobe Rivers.

Natural History: Native to cool waters flowing into the North Atlantic Ocean, from Northern Spain through eastern Europe to Iceland, Greenland and along the coast of north America as far as Connecticut. First introduced to Australia as fertilised eggs.