

Native and Exotic Fishes of the Jordan River Watershed

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- 1) These species are not listed in any phylogenetic or evolutionary order, rather, they are listed in a rough order starting with their occurrence in higher elevation alpine headwater areas and progressing downstream (and lower in elevation) to the Great Salt Lake, and also in order of population numbers. Many species can be found over a wide elevation range.
- 2) I counted 25 exotic introduced species, only 11 native species, and one extinct native species, the Utah Lake sculpin *Cottus echinatus*.
- 3) It is also significant that the race of Bonneville cutthroat trout (the Utah State Fish) that once inhabited Utah Lake is now also considered extinct, although genes of this strain may still exist in other *Oncorhynchus* residing in streams and lakes along the Wasatch Mountains.

Common Name *Sport and/or food fish	Scientific Binomial (and subspecies)	Native / Exotic	Status & comments Natural reproduction=NR; Stocked=S; Common=C; Rare=R
<u>ALPINE WATERS</u>			<u>All four species are introduced exotics.</u>
Arctic Grayling*	<i>Tymallus arcticus</i>	Exotic	NR, locally abundant but tends to stunt
Brook Trout*	<i>Salvelinus fontinalis</i>	Exotic	NR, S, C, aggressive, tends to stunt
Yellowstone Cutthroat Trout*	<i>Oncorhynchus clarki bouvieri</i>	Exotic	NR, S, C, natural hybrids
Golden Trout*	<i>Oncorhynchus aquabonita</i>	Exotic	NR, R (Echo Lake, Provo River Drainage?)
<u>MID-ELEV. RESERVOIRS</u>			<u>Only two of the six species are natives.</u>
Rainbow Trout*	<i>Oncorhynchus mykiss</i>	Exotic	S, some natural reproduction and natural hybrids
Bonneville Cutthroat Trout*	<i>Oncorhynchus clarki utah</i>	Native	NR, versatile, well adapted
Sockeye salmon (Kokanee)*	<i>Oncorhynchus nerka</i>	Exotic	NR, S, landlocked race in Strawberry Reservoir only
Utah Chub*	<i>Gila atraria</i>	Native	NR, well adapted, competes with salmonids
Smallmouth Bass*	<i>Micropterus dolomieu</i>	Exotic	NR, common in only Jordanelle and Deer Creek reservoirs
Yellow Perch*	<i>Perca flavescens</i>	Exotic	NR, C, gregarious
<u>MID-ELEV. STREAMS</u>			<u>Six of the seven species are natives.</u>
Brown Trout*	<i>Salmo trutta</i>	Exotic	NR, versatile, well adapted, aggressive
Mountain Whitefish*	<i>Prosopium williamsoni</i>	Native	NR, declining in Jordan Watershed
Utah Sucker	<i>Catostomus ardens</i>	Native	NR, versatile, well adapted
Mountain Sucker	<i>Catostomus platyrhynchus</i>	Native	NR, small prey, declining
Mottled Sculpin	<i>Cottus bairdi</i>	Native	NR, small prey, declining
Bonneville Redside Shiner	<i>Richardsonius balteatus</i>	Native	NR, small prey
Leatherside Chub	<i>Gila copei</i>	Native	NR, R, small prey, declining, threatened

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<u>LOWLAND WATERS</u>			
June Sucker	<i>Chasmistes liorus</i>	Native	S, R, Federally listed Endangered Species (Recovery Program)
Common Carp*	<i>Cyprinus carpio</i>	Exotic	NR, C, destroys habitat, stunted in Utah Lake (removal project)
White Bass*	<i>Morone chrysops</i>	Exotic	NR, C, problematic predator, tends to stunt, gregarious
Channel Catfish*	<i>Ictalurus punctatus</i>	Exotic	NR, C
Black Bullhead (Catfish)*	<i>Ameiurus melas</i>	Exotic	NR, C, populations tends to cycle, gregarious
Black Crappie*	<i>Pomoxis nigromaculatus</i>	Exotic	NR, C, populations tends to cycle, often suspended, gregarious
Bluegill (Sunfish)*	<i>Lepomis macrochirus</i>	Exotic	NR, C, gregarious
Green Sunfish*	<i>Lepomis cyanellus</i>	Exotic	NR, complex habitat
Walleye*	<i>Zander</i>	Exotic	NR
Largemouth Bass*	<i>Micropterus salmoides</i>	Exotic	NR
Northern Pike	<i>Esox lucius</i>	Exotic	NR, recently introduced in Utah Lake, rare but increasing
Western Mosquitofish	<i>Gambusia affinis affinis</i>	Exotic	NR, C, gregarious, problematic small predator
Fathead Minnow	<i>Pimephales promelas</i>	Exotic	NR, small prey, populations tends to cycle
Goldfish	<i>Carassius auratus</i>	Exotic	NR, R
Longnose Dace	<i>Rhinichthys cataractae</i>	Native	NR, R, small prey, declining
Bonneville Speckled Dace	<i>Rhinichthys osculus carringtoni</i>	Native	NR, R, small prey, declining
Plains Killifish	<i>Fundulus zebrinus</i>	Exotic	NR, small prey (only found upstream of Mona Reservoir)
Golden Shiner	<i>Notemigonus crysoleucas</i>	Exotic	introduced into Utah Lake decades ago, now suspected extinct
Oriental Weatherfish	<i>Misgurnus anguillcaudatus</i>	Exotic	NR, recently introduced, rare but increasing

NOTE: I find it interesting that over the past 150 years fishes including Chinook salmon, American eel, arctic grayling, lake trout, and many others, have been introduced into the extremely shallow and turbid waters of Utah Lake. Many these exotic species introductions have not established themselves in our watershed because they have simply not been well adapted to the arduous living conditions found here in the Great Basin. Interestingly, an angler did later catch a three foot eel in the Jordan River. My recent discovery of a dead Indonesian clown knifefish on the shoreline of Utah Lake reminds all of us that new introductions continue to endanger our already declining native fish fauna, as this species is known to reach lengths of more than three feet, and are known by anglers to be very aggressive. The Utah Lake sculpin is considered to be only native fish species known to have gone extinct in Utah. It probably died out due to poor water quality conditions resulting from the combination of the negative effects of Utah's own "dust bowl", that filled in the bottom of the lake with approximately three feet of eroded silt off of adjacent farm fields (the result of poor land use practices), and the damming of the lake's Jordan River outlet to convert the lake into a water storage reservoir. It is encouraging that virtually all of Utah Lake's sport/food fishes almost never go "off-flavor" (like many in other lakes in the state), the result of the lake's turbidity, which reduces the algal blooms typically associated with the problem by shading out the sunlight needed by algae.