

Idaho Fish & Game News

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Year of the Sockeye: The Red Fish are Back

When the female sockeye slipped out of his hands on August 11, U.S. Sen. Mike Crapo witnessed a sockeye swim up Redfish Lake Creek for the first time in 20 years.

"It's a ray of hope; a testament to the power and strength of this fish," Crapo said as the fish swam up Redfish Lake Creek on its own, past a barrier erected in 1991 to capture the last of a wild Idaho legacy to be bred in captivity.

Sen. Crapo was one of several federal, state and tribal officials celebrating the largest return of sockeye salmon to the Sawtooth Valley since 1956. They gathered on the bank of Redfish Lake Creek for a hands-on experience with a fish that had almost disappeared from Idaho.

"It isn't magic, but it is magical," Idaho Fish and Game fisheries bureau chief Ed Schreiber said. "We're not here because of luck, but because of sound science behind the program."

In 1990, the Shoshone-Bannock Tribes petitioned to list sockeye on the Endangered Species List. That year no sockeye returned to the lake named for the bright red spawning salmon.

The returning sockeye this year are a direct result of a captive brood stock program begun in 1990 that was managed by Idaho Fish and Game and largely financed by Bonneville Power Administration. The program has kept the fish's genetics intact for the time when river and ocean conditions would allow sockeye to rebound. The last several years have provided this opportunity.

"Salmon really are a resilient species," said Barry Thom, NOAA Fisheries Deputy Administrator. "They really do want to reproduce. If we give them half a chance, they'll take it."

In 1992, a single sockeye returned and was dubbed

"Lonesome Larry," by then-Gov. Cecil Andrus. This year, an estimated 1,400 fish are expected to complete their journey from the ocean to Idaho this year.

"Seeing so many of these fish return for the first time in so many decades says to me that all the hard work and collaboration that has gone into saving them is working," BPA Administrator Steve Wright said. "It's now time to build on the success by expanding Idaho's broodstock program to further increase the numbers heading to sea and, ultimately, returning to Idaho as adults. This is proving to be an effective investment in our heritage and our legacy."

This year, more sockeye adults have returned to Idaho than since 1956. The number returning for the past three years is allowing Idaho Fish and Game along with several federal agencies charged with sockeye recovery to begin to establish a self-sustaining wild population.

For two decades the number of sockeye returning to the Sawtooth Valley has fluctuated between 257 and zero. Then in 2008, 650 returned. Last year that number rose to 833. This summer, 1,257 sockeye have returned to the basin as of September 13.

With the recent purchase of the Springfield Hatchery, the goal of producing upwards of one million young sockeye per

year is in the early planning stages. This would be a five-fold increase in the number of sockeye produced and released for their journey to the ocean.

This year was good for sockeye in more than just Idaho. More adult sockeye returned from the ocean and crossed

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Photos by Vicky Osborn

Sen. Mike Crapo releases a sockeye into Red Fish Lake Creek to spawn naturally in Red Fish Lake.

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Bonneville Dam on the lower Columbia River than have been counted since the dam was completed in 1938. So far this year, 386,445 sockeye have been counted at Bonneville; in 1938 75,020 were counted.

The fewest returned to the Columbia in 1995, when 8,774 were counted at Bonneville. None returned to the Sawtooth Valley.

Fishery biologists say three conditions probably help boost the number of fish this year. Two years ago 145,000 young hatchery sockeye had good water conditions on their way to the ocean; ocean rearing conditions provided good survival; and adult fish had favorable water conditions for their return trip up the Columbia and Snake river and past eight large federal hydropower dams to the Sawtooth Hatchery and Redfish Lake Creek in central Idaho.

In July, Bonneville Power Administration purchased a defunct hatchery near Aberdeen. Fish and Game is proposing to restore the facility in order to raise more sockeye. The goal is to someday release between 500,000 and 1 million sockeye raised at the new site, as compared to the 200,000 fish raised and released currently.

Is the most endangered salmon on the road to recovery? Biologists and policy makers say it's too early to tell, but the events in 2010 are laying a foundation, so one day Redfish Lake may once again be home to a self-sustaining wild sockeye run.



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Profile: Sockeye Salmon-Oncorhynchus nerka

Snake River sockeye salmon were listed as endangered in November 1991 - the first Idaho salmon species to be listed.

They are unique among sockeye. They travel more than 900 miles and climb more than 6,500 feet in elevation, and they are the southern most North American sockeye population.

Historically sockeye returned up the Columbia to the Snake and then Salmon rivers to five Sawtooth Valley lakes: Alturas, Pettit, Redfish, Stanley and Yellowbelly.

A large return of sockeye also ran up the North Fork of the Payette into Payette Lake, until the Black Canyon Dam was completed in 1924.

In the 1880s, observers reported lakes and streams in the Stanley Basin teeming with red fish. There was talk of building a cannery at Redfish Lake. Returns were estimated between 25,000 and 35,000 sockeye.

Description

- Average adult weight: 2 to 6 pounds.
- Average adult length: 16 to 26 inches long.
- During spawning, males bodies turn bright red, their heads turn green and they develop a hump and nasty set of teeth.

Construction of the Sunbeam Dam in 1913 blocked upstream fish passage. The dam was partially destroyed in 1934 reopening the upper Salmon River, but no one tried to restore the salmon runs. The source of sockeye now in Redfish Lake is uncertain.

Redfish Lake sockeye enter the Columbia River in June or July and reach Redfish Lake in July and August. They spawn in the lake shallows in October. Juveniles emerge from April to May and feed on zooplankton in the lake for one or two years. They begin their out-migration to the ocean in May. Most Redfish Lake sockeye spend two years in the ocean before heading back to the Stanley Basin.

This year's adult returns resulted primarily from young fish that migrated to the ocean in 2008. In that year, about 200,904 natural origin and hatchery-produced sockeye left the Sawtooth Valley en route to the ocean.

The number of returning adults fluctuate because of many variables, including the number of adults spawned in the hatchery program, hatchery spawning success, hatchery egg survival, success of different life-stage releases, and environmental conditions during the life cycle in the freshwater and ocean habitats.

Adults are trapped in Redfish Lake Creek and at the Sawtooth Hatchery. Some of the adults captured in 2010 will be retained and spawned with hatchery reared adults at the Eagle Fish Hatchery.

The fish released in August will spawn in the lake and their progeny will migrate to the ocean in May 2012. The surviving adults will return to Idaho in August 2014.



Background: Captive Broodstock Program

The Redfish Lake Sockeye Captive Broodstock Program, a multi-agency and tribal effort started in May 1991, was initiated to protect population genetic structure and to prevent the further decline of Idaho sockeye salmon.

The program also produces eggs and fish to reintroduce to the habitat to increase population numbers. Idaho Fish and Game is working with the Bonneville Power Administration to increase the number of smolts the program releases.

The program releases eggs and fish back to the habitat in a variety of ways. Eyed-eggs are planted in egg boxes and placed in lakes in the fall, presmolts are released directly to lakes in the fall, smolts are released to outlet streams in the spring, and pre-spawn adults are released to lakes in the fall. A monitoring and evaluation effort is in place to document the success of the different reintroduction strategies.



Fishing Rule Changes

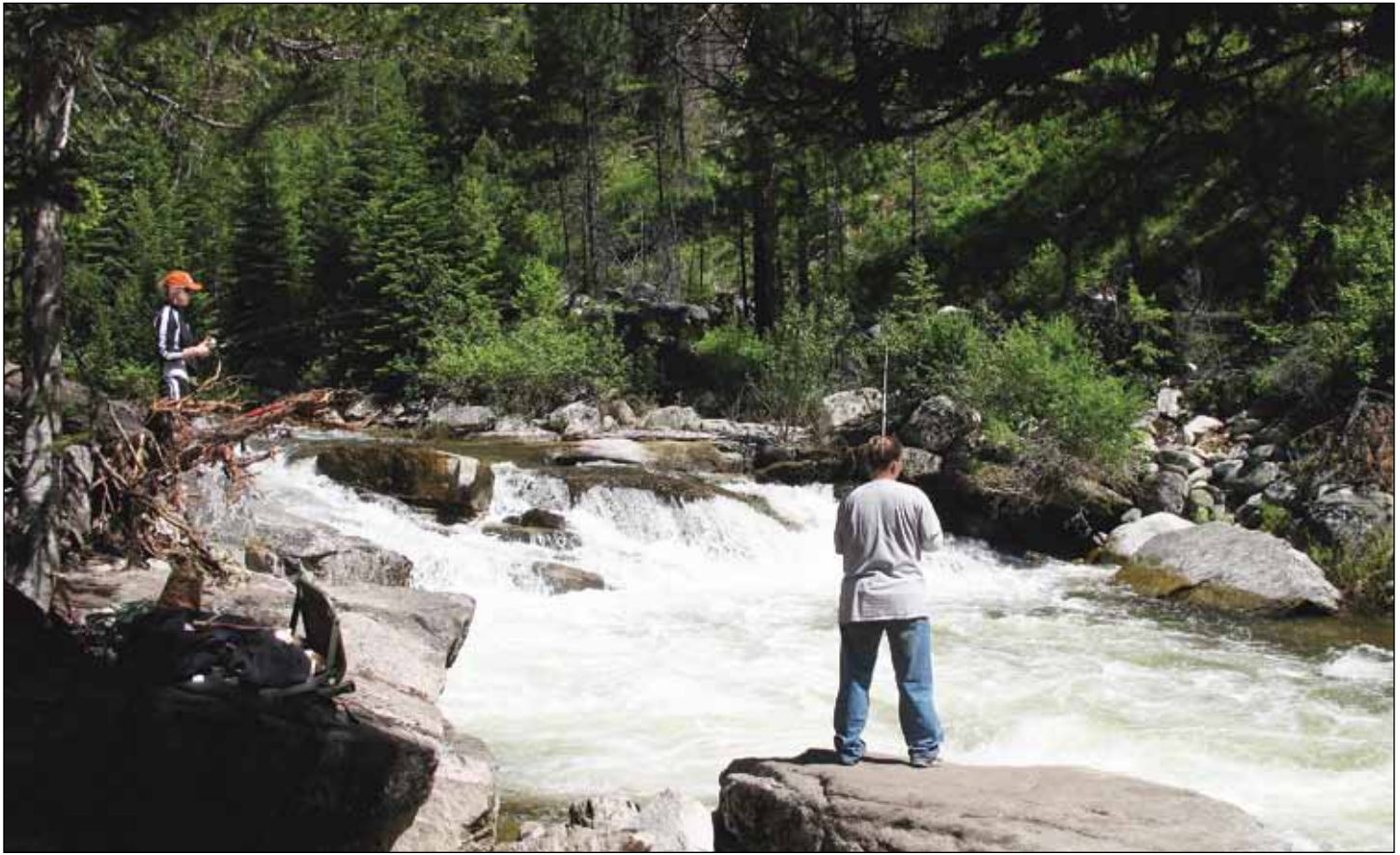
Idaho Anglers:
 Proposed rule changes for 2011-2012 fishing seasons will be announced or approved in November xxx. Many of the changes being proposed would simplify and clarify the current fishing rules and increase fishing opportunities for Idaho's anglers. Fish and Game is reviewing the public comments received from meetings in September.

Returns to Sawtooth Valley		Sockeye at Lower Granite Dam	
Year	Number	Year	Number
1954	998		
1955	4361	1975	209
1956	1381	1976	531
1957	523	1977	458
1958	55	1978	123
1959	290	1979	25
1960	75	1980	114
1961	11	1981	218
1962	39	1982	211
1963	395	1983	122
1964	335	1984	47
1985	11	1985	49
1986	29	1986	24
1987	16	1987	29
1988	1	1988	23
1989	1	1989	4
1990	0	1990	0
1991	4	1991	14
1992	1	1992	15
1993	8	1993	12
1994	1	1994	5
1995	0	1995	3
1996	1	1996	3
1997	0	1997	27
1998	1	1998	4
1999	7	1999	14
2000	257	2000	299
2001	26	2001	36
2002	22	2002	55
2003	3	2003	14
2004	24	2004	113
2005	6	2005	19
2006	3	2006	17
2007	4	2007	52
2008	650	2008	907
2009	833	2009	1219
2010	1257	2010	2192

(Note: Data on returns to the Sawtooth Valley not available for years 1965 through 1984) Sources: USACE dam counts and IDFG.



Salmon Fishing in Idaho



Salmon anglers test their skills against wily Chinook salmon on the South Fork of the Salmon River.

Photo courtesy of Travis Oakes

Idaho's Streams are Filling with Salmon and Steelhead Again

This year anglers are riding the waves of Idaho's anadromous fish runs returning home.

For only the second time in decades, anglers have been able to fish for steelhead while a Chinook season was still open on the same stream. It seems that this is a glimpse of the good old days when fishing for salmon and steelhead occurred all year long.

Why have our fish been plentiful this year?

Idaho Fish and Game fisheries biologist Russ Kiefer credits good migration conditions and great ocean productivity.

"In 2008, ocean productivity was at its highest we've seen in the past decade. When ocean productivity is good, the salmon and steelhead of the Columbia Basin do very well. Idaho's snowpack was also above average in 2008," he said. Good snowpack translates into high spring flows that quickly carry young salmon to the ocean, increasing survival.

Kiefer also credits what Fish and Game calls "mainstem management." This emphasizes management of fish during their out-migration through the lower Snake and Columbia rivers. Predictions on when to collect smolts for transport have improved coupled with improved collection mechanisms at dams called "fish slides." Another contributor to the success is the improved quality of Idaho hatchery fish.

Spawning habitat is also a critical component of the success. Since 2000, Idaho has seen increased adult salmon and steelhead returns. As most fish come back, they themselves improve the habitat. After spawning, salmon die and release their nutrients into the ecosystem. Their bodies feed the system that grows young salmon. Spawning beds have also improved with more abundant numbers of fish. Adult females are now building redds in gravel beds where previous females have cleaned the gravels of sediment.



Idaho Fish and Game Policy

Idaho wildlife management policy is set by seven volunteer commissioners. The Idaho Fish and Game Commission's policy decisions are based on research and recommendations by the professional staff of the Idaho Department of Fish and Game, and with input from the governor's office, the state Legislature, hunters, anglers and the public.