

Coho Salmon Status Report Siskiyou County



**IRON GATE HATCHERY,
BOGUS CREEK, SHASTA RIVER,
SCOTT RIVER
2014- 2015**

Coho Recovery Team Meeting, March 1, 2016

Data collected by Yreka Fisheries Program and
the Klamath River Project, CDFW

Iron Gate Hatchery 2014



- 2014: Coho entered IGH between October 20 and December 16, 2014
- 17 of the grilse were females

males	females	total
289	95	384

adults	grilse	total
117	267	384

Iron Gate Hatchery 2014 (cont.)



- PIT tagged coho from IGH

Total PIT tagged	Returned to IGH	Kept for broodstock	Shasta	Bogus	Undetected
236	86	28	31	70	109

Iron Gate Hatchery 2015



- A preliminary estimate of 72 coho entered IGH in the fall of 2015. Only 32 adult coho were used for spawning.

females	males	grilse	total
21	13	38	72

Iron Gate Hatchery 2015 (cont.)



- PIT tagged coho from IGH
- PIT tagged Shasta coho included 1 male, 1 female and 4 grilse

Total PIT tagged	Returned to IGH	Kept for broodstock	Shasta	Bogus	undetected
28		1	6	4	

Bogus Creek 2014



- Coho entered Bogus Creek between October 26 and December 7, 2014.

Males	Females	Total
76	21	97

adults	Grilse	total
22	75	97

Hatchery origin	Natural origin	Total
80	17	97

- The run size was 44.9% below the 11 year average.

Bogus Creek 2015



- A preliminary estimate of 13 coho entered Bogus Creek in the fall of 2015

Shasta River 2014



- Coho salmon entered the Shasta River between October 10 and December 10, 2014, when the video weir was removed.
- An estimated 89.6 % of the run was captured.
- Estimated 83% of the coho detected were of IGH origin
- One coho redd observed on Parks Creek

adults	grilse	total
4	42	46

Shasta River 2015



- A preliminary estimate of 49 coho entered Shasta river in the fall of 2015

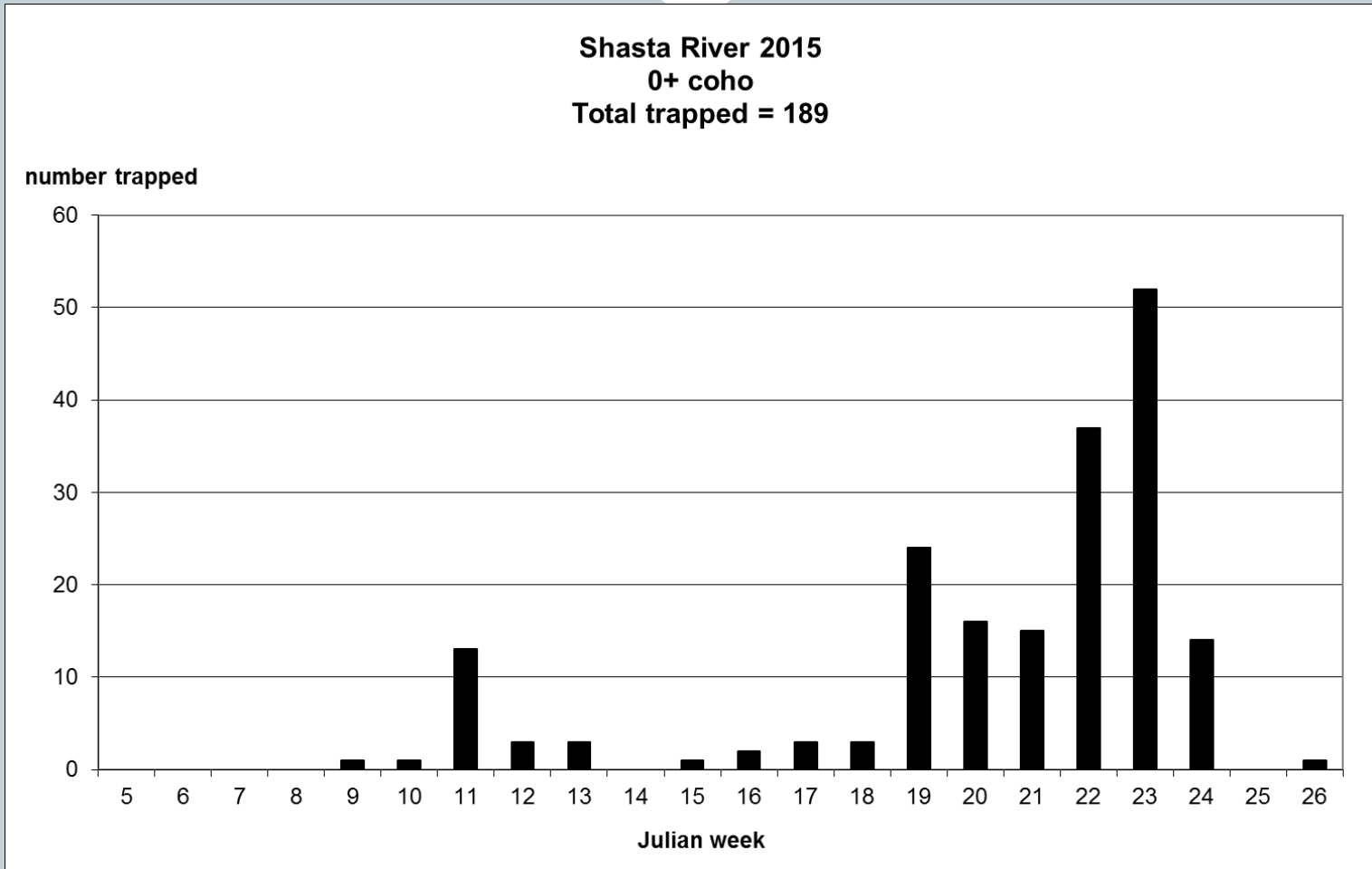
female	male	grilse	total
26	17	6	49

Shasta River Outmigration 2015



- Coho 0+: an estimated 851 0+ coho (95% CI, 514 – 1,189) emigrated from the Shasta River during Julian weeks 9 through 26.
- Coho 1+: an estimated 6,279 (95% CI, 5,510 – 7,048) 1+ coho emigrated from the Shasta River from Julian weeks 7 through 22. (These were the progeny of 163 adults)

Shasta River coho 0+ total trapped, 2015

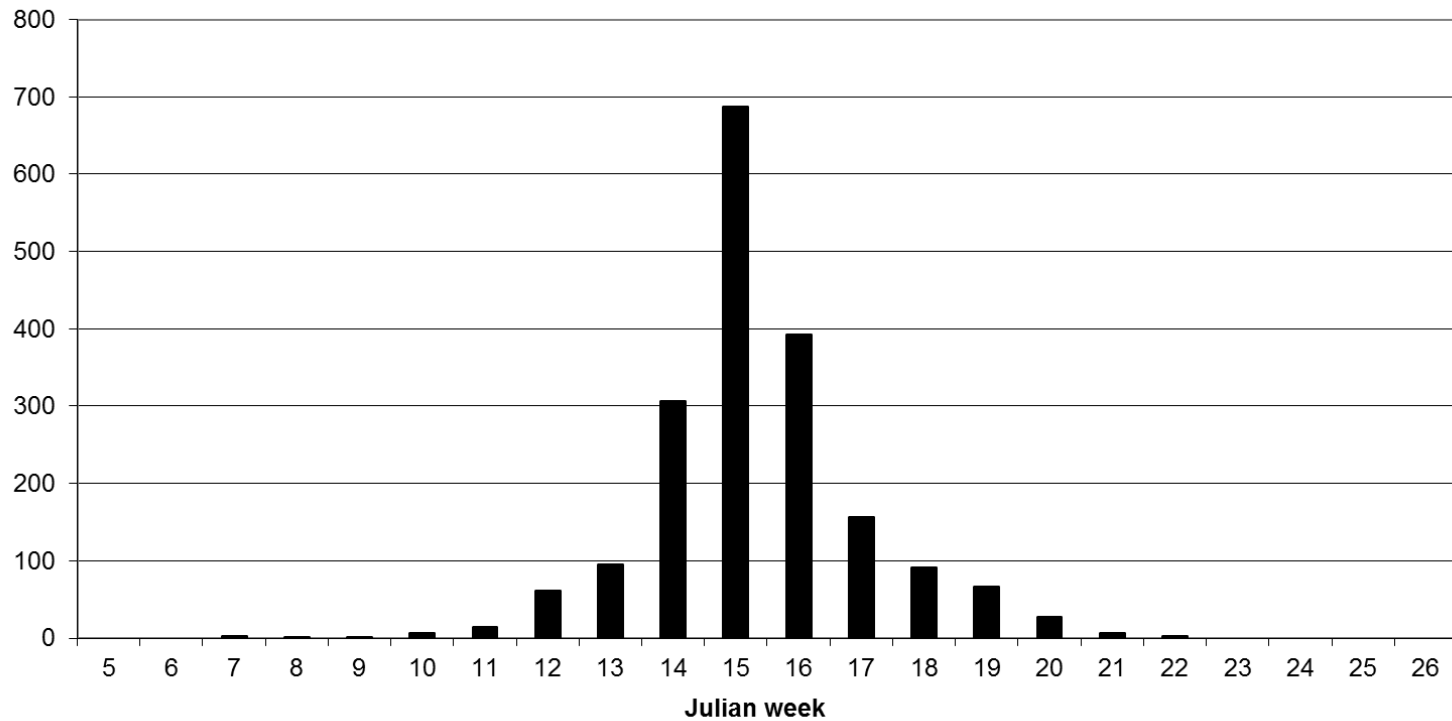


Shasta River coho 1+ total trapped, 2015



**Shasta River 2015
1+ coho
Total trapped = 1,920**

number trapped



Shasta River Outmigration 2015



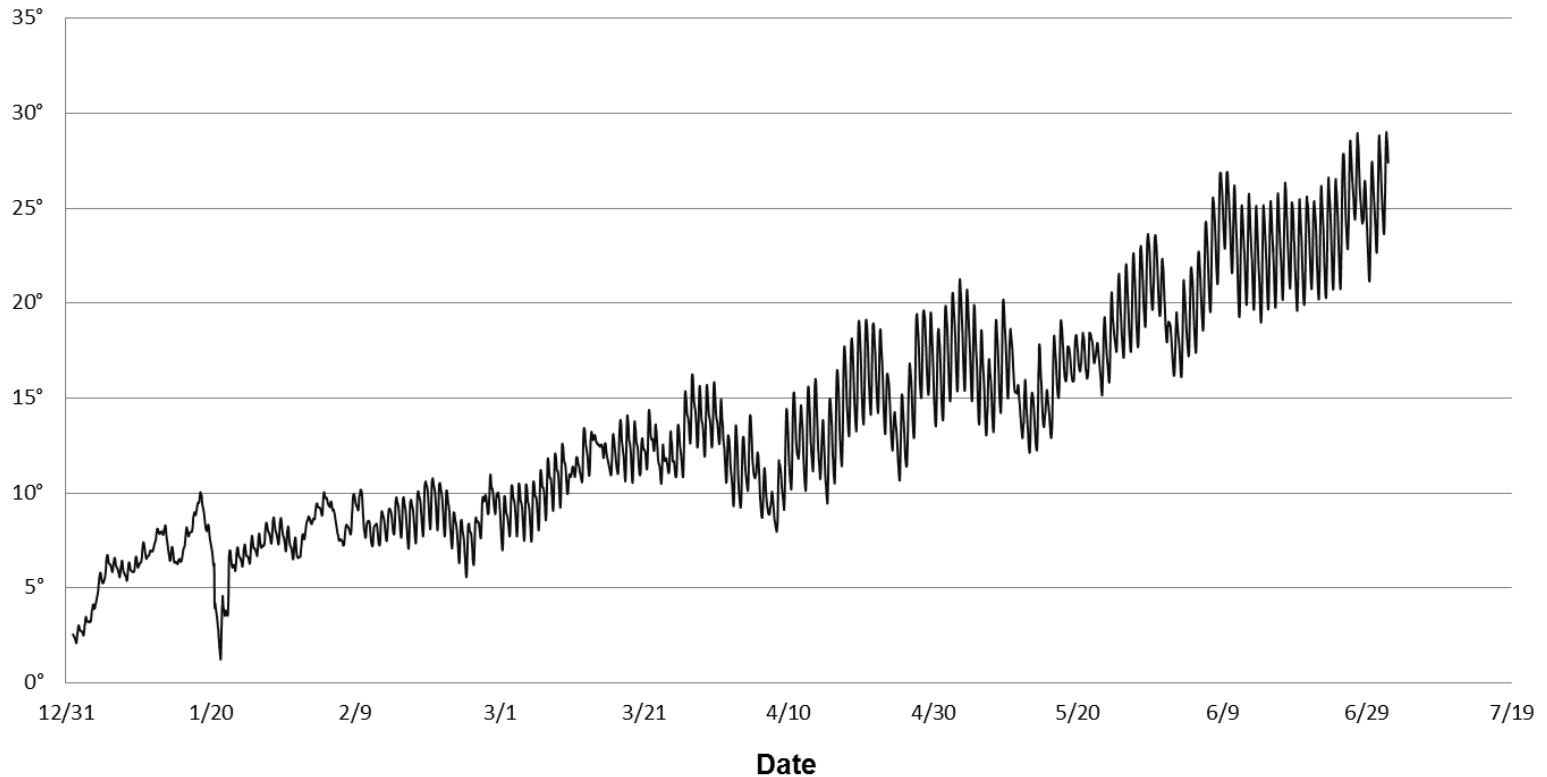
- IGH Coho
- A total of 3,014 1+ coho with left maxillary clips were caught during the 2015 season, indicating they originated from IGH.
- The greatest number caught, 1,194, occurred in Julian week 15.
- All IGH fish were identified and released off the trap; they were not used in our population estimates.

Shasta River water temperatures 2015



Shasta River 2015
Daily water temperatures, recorded hourly

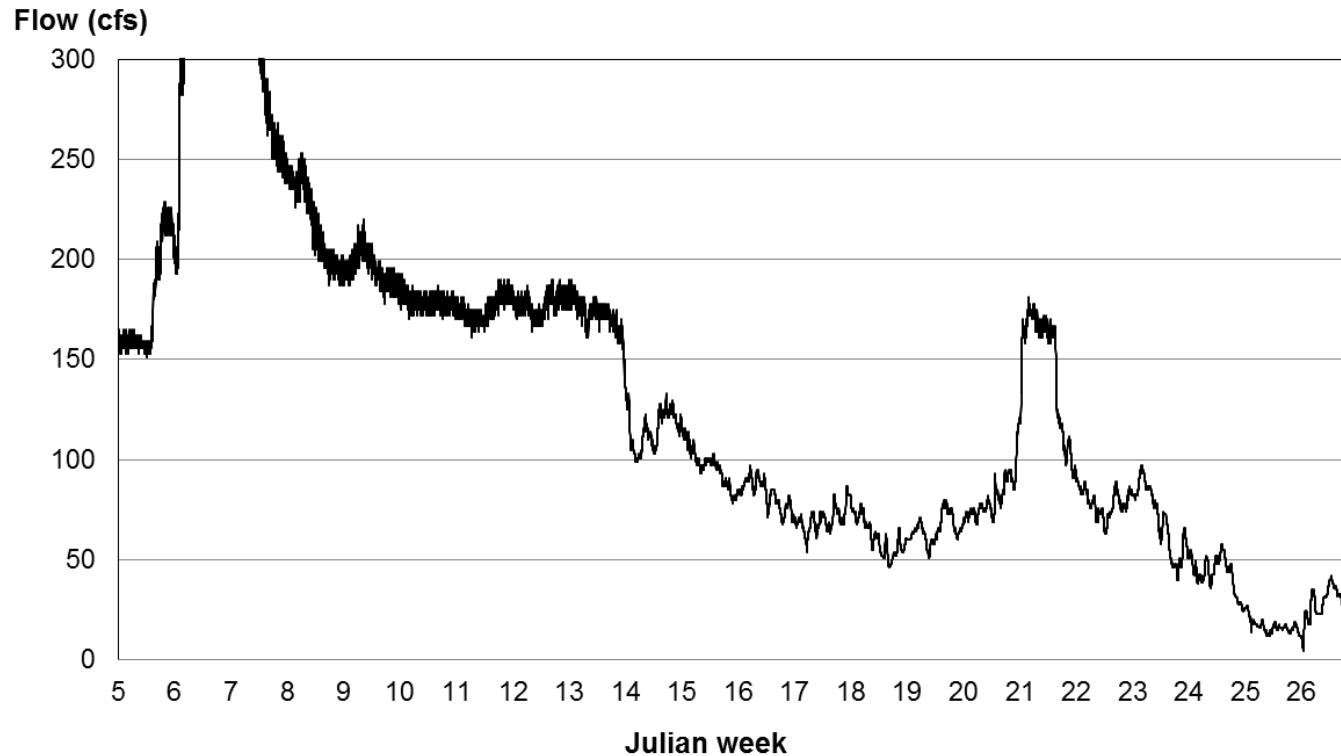
Temperature (°C)



Shasta River daily flow 2015



**Shasta River 2015 flow by Julian week,
recorded at 15 minute intervals
USGS gauge #11517500**



PIT tag data



- In 2014, most coho spawning was documented on Parks Creek.
- 647 BY 2013 were PIT tagged in the Shasta River.
- Overall survival of tagged coho to outmigration was 22%.
- Some coho at risk of stranding on Parks Creek were relocated by CDFW and NOAA personnel.
- Kettle Springs was not used for irrigation.
- Production estimates were high: 38.52 smolts per adult

Scott River 2014



- Fish Counting Facility at RM 18.2
- Coho salmon entered the Scott River between October 23 and December 6, 2014
- Migration peaked from Nov. 22 to Nov. 30 when 322 of the coho were observed.

adults	grilse	total
383	102	485

males	females	total
306	179	485

Scott River 2015



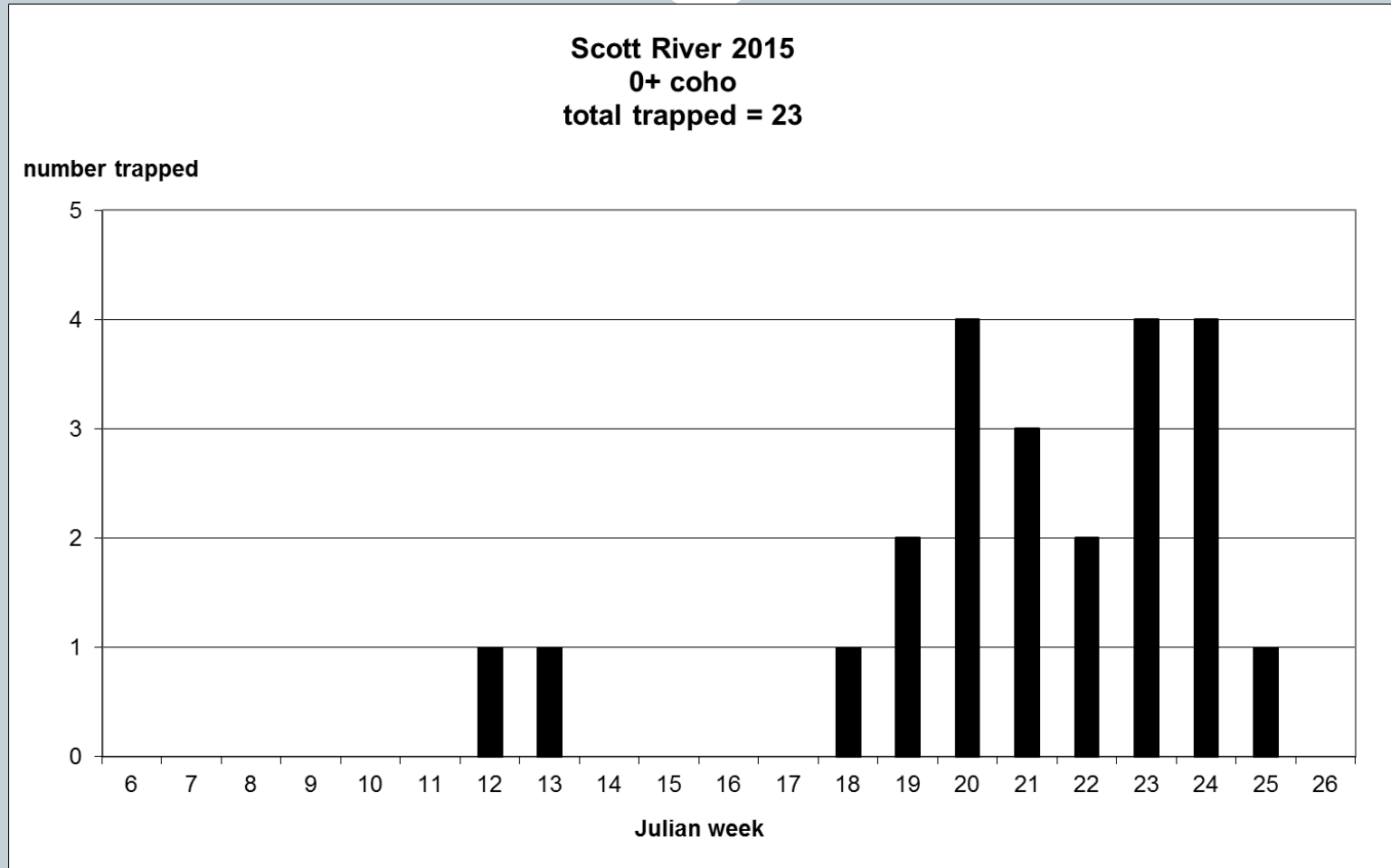
- A preliminary estimate of 212 coho entered Scott River in the fall of 2015

Scott River Outmigration, 2015



- A total of 23 0+ coho were captured.
- Coho 1+ : an estimated 7,253 1+ coho (95% CI, 4,689 – 9,816) emigrated from the Scott River during Julian weeks 6 – 22.
- The greatest number left during Julian week 8 (1,570, 95% CI, 201 – 2,938).
- A total of 529 1+ coho were trapped during sampling.

Scott River 0+ coho outmigration 2015

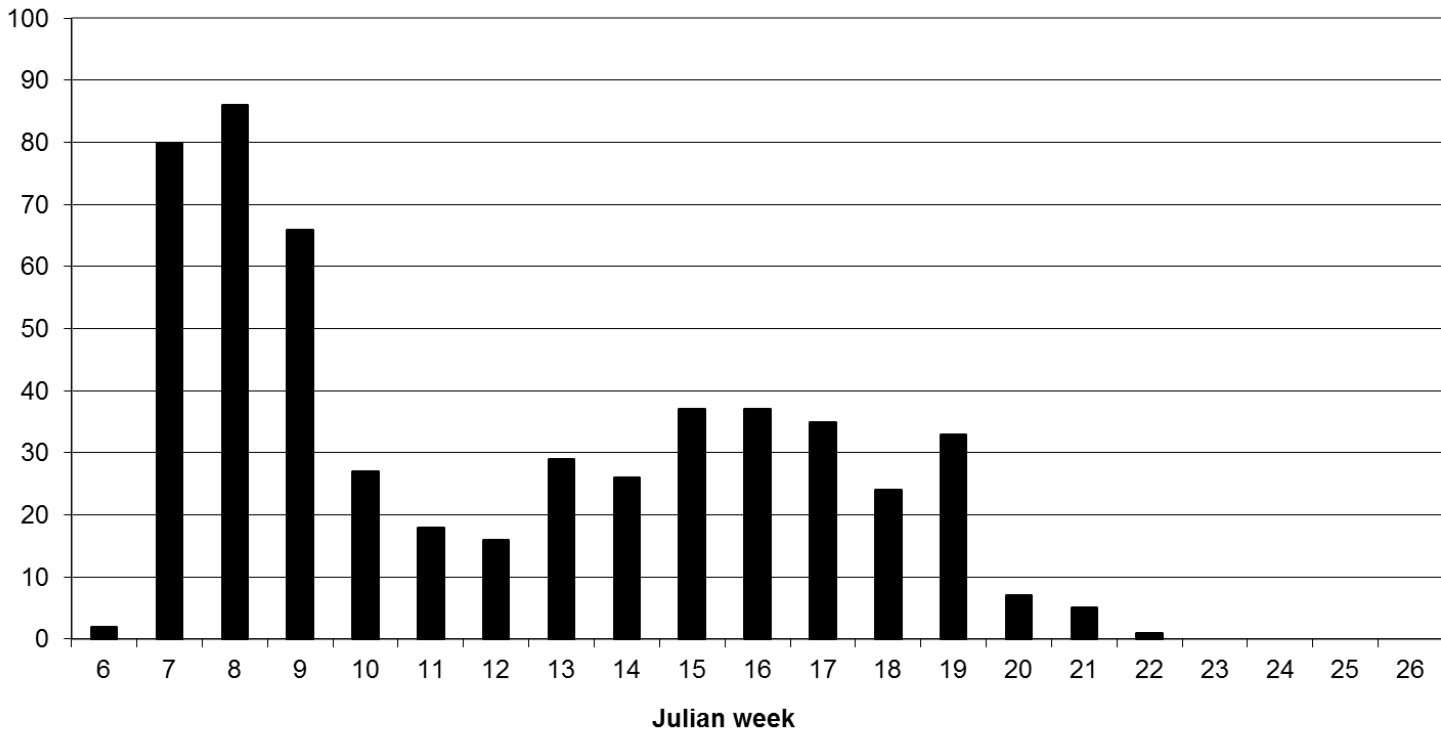


Scott River 1+ coho outmigration 2015



**Scott River 2015
1+ coho
total trapped = 529**

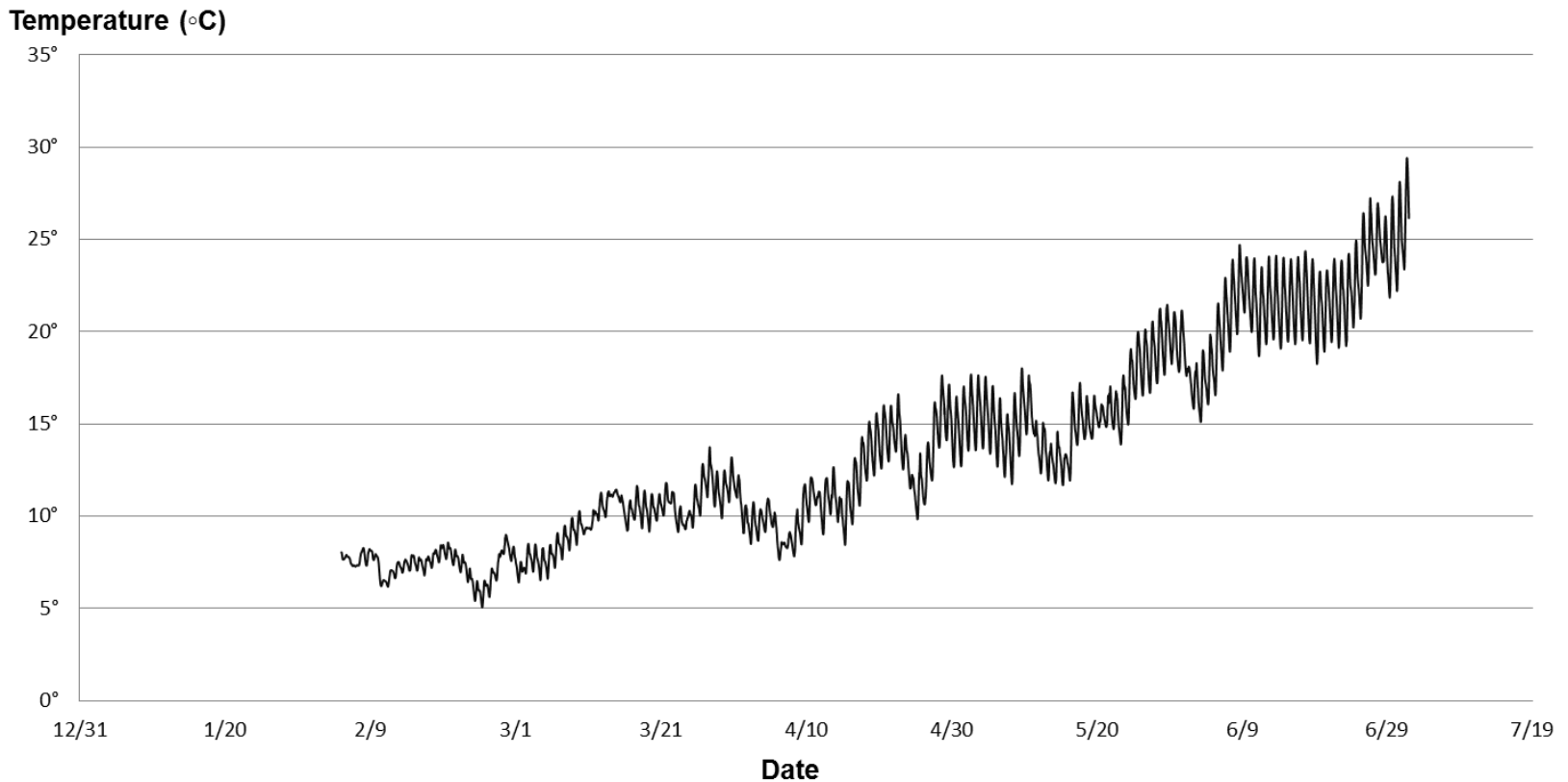
number trapped



Scott River water temperatures 2015



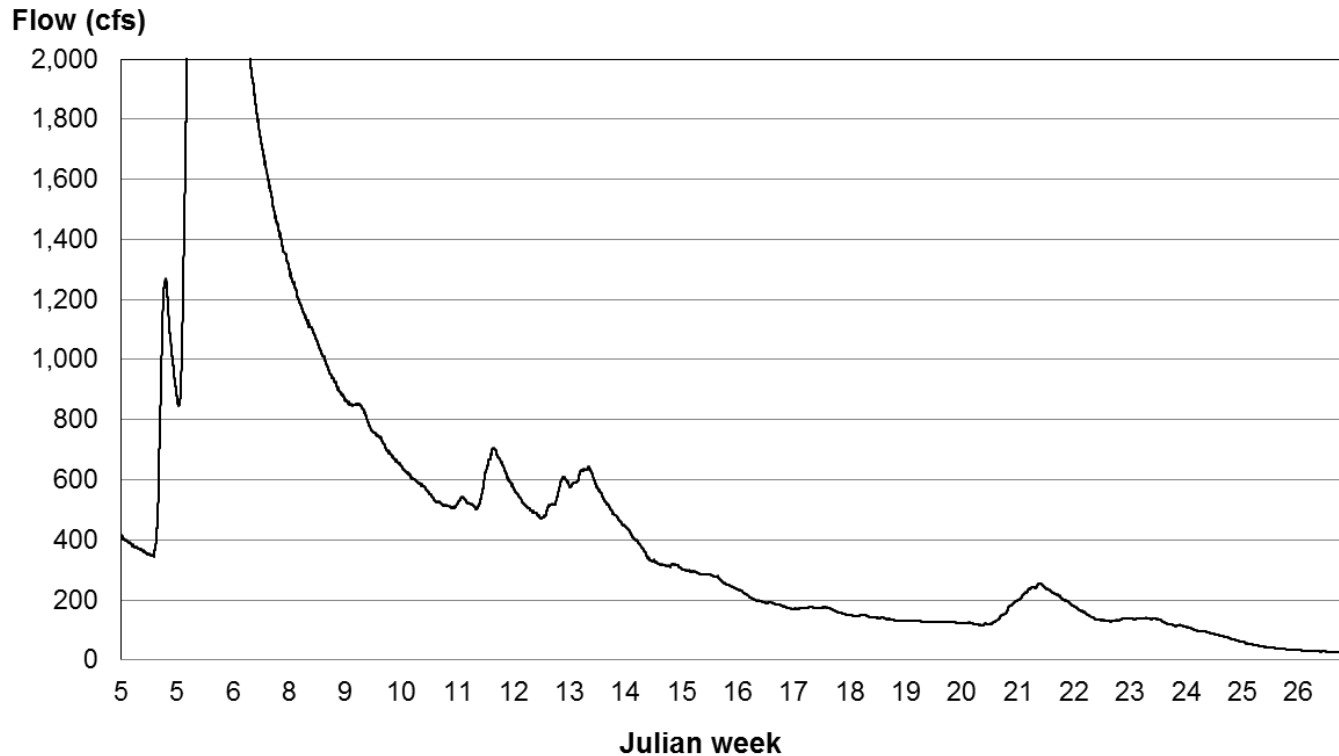
Scott River 2015
Daily water temperatures, recorded hourly



Scott River daily flow 2015



**Scott River 2015 flow by Julian week,
recorded at 15 minute intervals
USGS gauge #11519500**



PIT tag data



- Due to concerns related to drought conditions an extra effort was made to PIT tag and relocate coho in the Scott River watershed to see if we could determine the efficacy of relocation.

2014 Scott River PIT tagged coho			
Relocated	Not relocated	Held at IGH	Total
1774	961	390	3,174

Scott River PIT tagged Smolt Detections (2015)



Not relocated	Relocated	IGH	Total
0	9	2	11

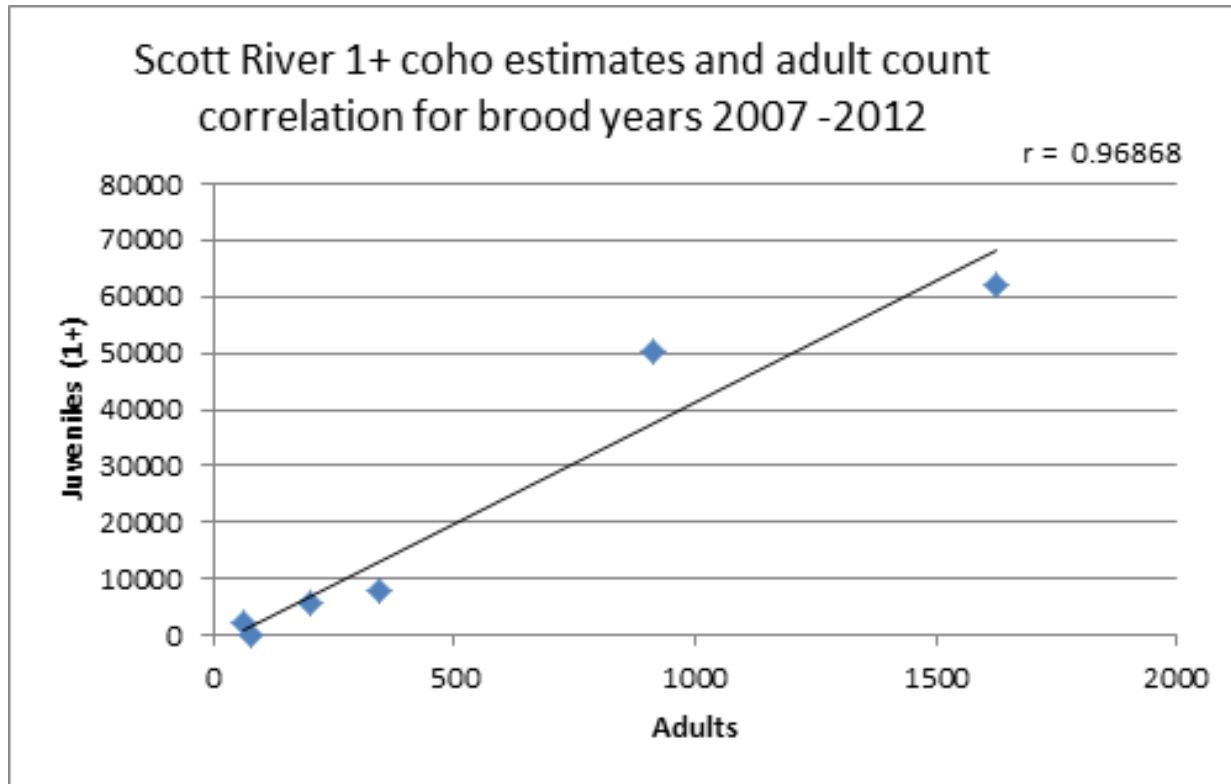


Figure 1 below shows the number of 1+ coho smolts produced per returning adult for brood years 2007-2012 . These data show a strong correlation between the number of adults returning to the Scott River and the estimate of the number of age 1 smolts produced by those adults ($r=0.96868$). In fall of 2013, we observed 2,731 adult coho returning to the Scott River, the largest number of adult coho for the period of

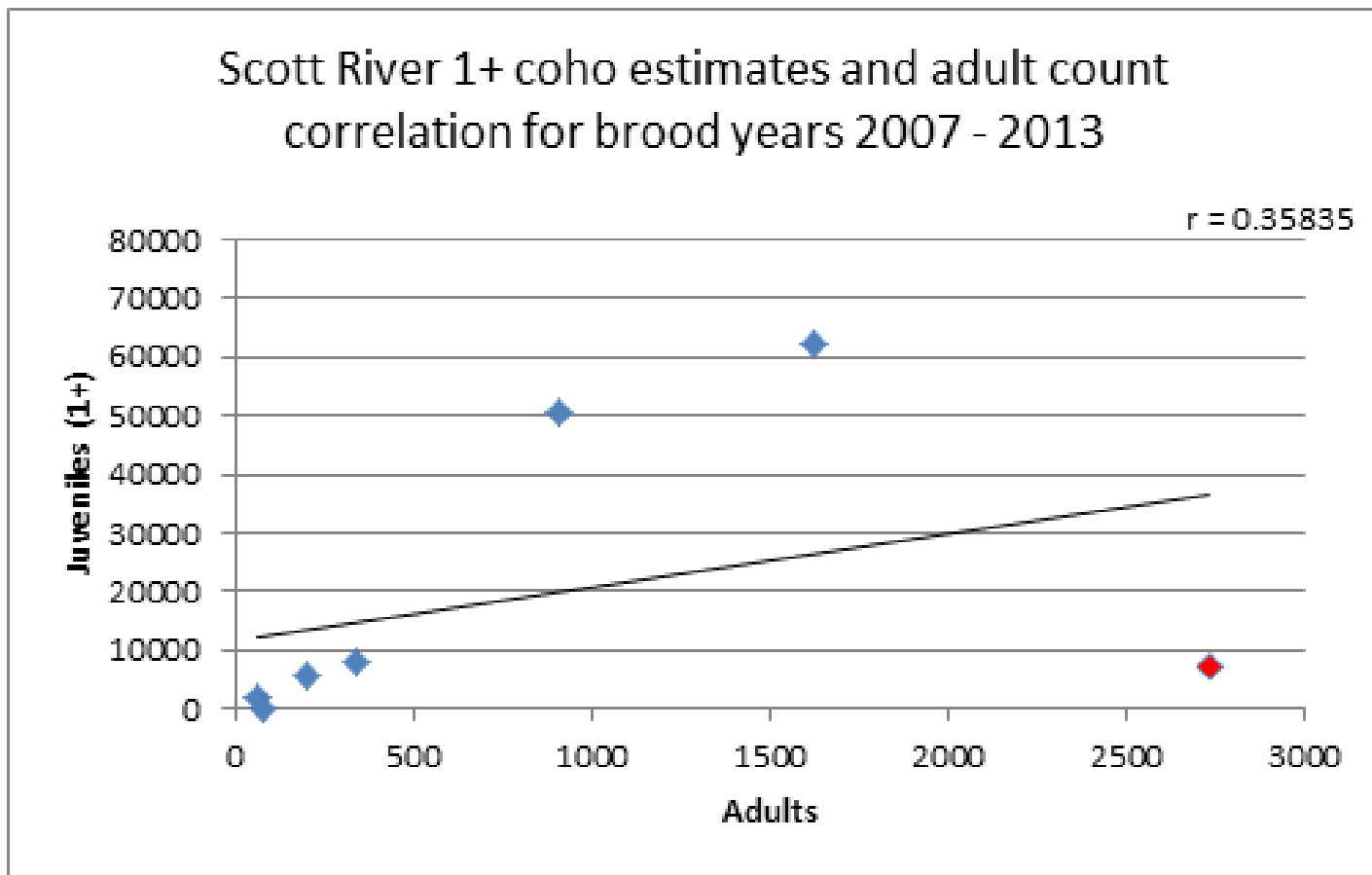


Figure 2 shows the number of coho smolts produced per returning adult for Brood Years 2007-2013 . Based on the previous 6 years of tracking the relationship between adults and juveniles produced, we did not see the expected number of smolts produced.