

Results

Juvenile Green Sturgeon Monitoring Summary; 2018 and 2019 Sampling Seasons

2018 Sampling Season Summary

- Juvenile sturgeon tagging conducted in Sacramento River northwest of Sherman Lake in main channel, 30-ft depth
- Forty-one green sturgeon tagged during the 2018 sampling season (7/17/2018 through 2/07/2019)
- Catch per unit effort (CPUE) for the 2018 season was 1.08 juvenile green sturgeon per sampling event (one sampling event is approximately six hours of gill net deployment)
- Two were from brood year 2018 (Age 0+); 32 were brood year 2017 (Age 1); six were brood year 2016 (Age 2), and one was brood year 2015 (Age 3)
- Thirty-eight green sturgeon detected at sampling site after release
- Residency at sampling site ranged from one to 135 days after tagging
- Twenty-five green sturgeon detected at Benicia Bridge receiver array through 9/03/2019
- Initial detection dates at Benicia Bridge receiver array ranged from three to 129 days after tagging
- Ten green sturgeon detected at Antioch Bridge receiver array through 9/03/2019
- Initial detection dates at Antioch Bridge receiver array ranged from nine to 120 days after tagging
- Four green sturgeon site detected at Rio Vista Bridge receiver array through 9/03/2019
- Initial detection dates at Rio Vista Bridge receiver array ranged from five to 313 days after tagging
- Biotelemetry data for sturgeon tagged during the 2018 sampling season is being uploaded to the Biotelemetry Autonomous and Real Time (BARD) database and will be analyzed for movement and migration patterns when it is available.

2019 Sampling Season Summary

- Juvenile sturgeon sampling conducted in Sacramento River northwest of Sherman Lake in main channel, 30-ft depth
- Sampling initiated 7/23/2019 and will continue through late winter 2020 depending on delta outflow conditions
- Eight juvenile green sturgeon tagged to date; one on 10/01/2019, three on 10/03/2019, one on 11/05/2019, one on 12/10/2019, two on 12/12/2019
- Six juvenile green sturgeon tagged to date were 2018 brood year fish (Age 1); two were brood year 2017 fish (Age 2)
- CPUE for the 2019 season as of 12/23/2019 is 0.26 juvenile green sturgeon per sampling event (one sampling event is approximately six hours of gill net fishing)
- Biotelemetry data for sturgeon tagged during the 2019 sampling season is being uploaded to the Biotelemetry Autonomous and Real Time (BARD) database and will be analyzed for movement and migration patterns when it is available.

Table 1. Catch per unit effort (CPUE) as juvenile sturgeon tagged per sampling event, 2015 through 2019 sampling seasons. One sampling event is approximately six hours of gill net deployment.

2015		2016		2017		2018		2019	
Sampling events		Sampling events		Sampling events		Sampling events		Sampling events	
33		81		44		34		31	
Number tagged		Number tagged		Number tagged		Number tagged		Number tagged	
Green	White	Green	White	Green	White	Green	White	Green	White
1	0	7	11	7	0	40	0	8	3
CPUE		CPUE		CPUE		CPUE		CPUE	
0.03	0	0.09	0.14	0.16	0	1.18	0	0.26	0.1



Approximate sampling location, Lower Sacramento River Green Sturgeon Monitoring and Telemetric Studies; 2018 and 2019 sampling seasons.

Discussion

The CPUE for the 2019 sampling season dropped to 0.26 and represents a notable decrease compared to the 2018 season CPUE of 1.18. Juvenile sDPS green sturgeon tagged during the 2018 sampling season were mostly (78 percent) from the 2017 brood year. 2017 was a near-record water year which resulted in banner recruitment to the juvenile life stage. In contrast, CPUE in 2015, 2016, and 2017 was extremely low and is thought in part to be a result of poor recruitment to the juvenile life stage during the 2013-2015 drought. The 2018 water year was classified as below normal precipitation, which may have also resulted in lower recruitment of sDPS green sturgeon to the juvenile life stage and hence the lower CPUE observed in 2019 compared to 2018.



2017 and 2018 brood year juvenile green sturgeon tagged February 7, 2018