

Species Story:

The Epic Journey of the Pacific Herring

Sam Student

Western Washington University

The Epic Journey of Herald, the Pacific Herring

This is the incredible story of a pacific herring named Herald. His story starts long before he hatched. In fact for Herald, his story begins with his parents. It was a beautiful day in late February (Laussuy, 1989), and the herring were gathering at Cherry Point to spawn. This was an ideal location, as herring prefer to spawn in vegetated and sheltered inlets, sounds bays, and estuaries (Laussuy, 1989). Once the males began to release their milt into the water, the females were triggered to release their eggs (Laussuy, 1989) and as the milt and eggs mixed, the reproduction process was underway. Once fertilized, the tiny eggs clung to the eelgrass flowing gently in the water and began to grow. Herring eggs take 2-3 weeks to hatch (Laussuy, 1989), so you can imagine Herald's excitement three weeks after his tiny egg had been fertilized by his loving and anonymous parents! The day had finally come, and Herald was ready to break out and begin his life as a pacific herring in the Salish Sea! Just as he was preparing to wiggle out of his shell and into the world, a seagull swooped down from above and swallowed him in a mouthful along with some other small herring that had already hatched. Herald made for a lovely lunch. Unfortunately, pacific herring have a high mortality rate in their late-larval and juvenile stages (Therriault, Hay, & Schweigert 2009), as many different seabirds love to dine on them (Therriault et al 2009). Goodbye Herald, you will be missed.

The Epic Journey of Hannah, the Pacific Herring

This is the incredible story of a pacific herring named Hannah. Hannah was in the same spawning pool as Herald, although her luck was a bit better than his and she managed to emerge from her egg and out into the world in one piece. A week after she hatched, Hannah had already used up her yolk-sack and began to feed on tiny zooplankton in the water (Therriault et al 2009). Phytoplankton and zooplankton are a major source of food for herring, especially when they are

young (“Pacific Herring Species Profile, 2019). After 2-3 months of this simple lifestyle, Hannah was ready for a change. Where herring go after their first summer varies, with some staying inland until their first spawning and others moving offshore until maturation (Laussuy, 1989). For Hannah, she decided to move offshore until she was ready to come back to spawn. As she got larger, there was more delicious food for Hannah to eat. Now she could eat crustaceans and would one day be able to work her way all the way up to eating small fish (“Pacific Herring Species Profile, 2019). Unfortunately for Hannah, that day would never come. Unbeknownst to her, she was slowly being poisoned by the very waters she called her home. She had heard rumors from the other herring that Cherry Point where she had spawned had less and less herring coming to spawn each year, an 80% decline in fact, because the environment there was rapidly degrading (First, 2017). And now she understood first-fin what they meant. Many humans had completely disregarded her home, leaving coal dust, oil spill residue, and stormwater to run into the water and contaminate it for herring like her (First, 2017). This caused infections, parasites, and even skeletal abnormalities to plague the herring, drastically shortening their life spans (First, 2017). Hannah was beginning to feel ill, and she now knew that she was next. Just a few weeks later, a number of infections took their final hold on Hannah, and she was no longer swimming with the fishes. Rest in peace Hannah.

The Epic Journey of Finley, the Pacific Herring

This is the incredible story of a pacific herring named Finley. Finley was also part of the spawning pool that Harold and Hannah were in, and he was by far the luckiest of the bunch. Finley breezed through his early life, hatching effortlessly, journeying offshore until maturity, and even completing his first spawning. After reaching these major milestones, he was feeling pretty good about himself. However after he heard about what had happened to Hannah, he was beginning to

become concerned for his own wellbeing. If Hannah had succumbed to something that she had no control over and had nothing to do with her herring survival skills, how could he avoid the same fate? Luckily for Finley, he was beginning to receive assistance from some helpful humans working to aid and restore local herring populations. Some knowledgeable humans decided they needed to work against the doings of the humans that harmed the herring in order to help the ecosystem and make things right again. As his life continued, Finley began to notice some positive changes in the waters around him. The nearshore habitats he called home were beginning to flourish with more eelgrass due to restoration efforts, there seemed to be less fishing nets out to get him due to stricter fishing practices, and it felt like there were less predators out to get him too due to efforts to contain overpopulation of some predatory species (“Assessment and Management of Pacific Herring in the Salish Sea”, 2018). After a long happy life, he was fished up by a coast Salish tribal member and used to feed their family. Although he was sad to go, he knew that these people respected him and saw him as spiritual food that had value far beyond the nutritional (“Stories” n.d.).

There are many stories of the pacific herring and there are many different way that those stories can come to an end. But what they all have in common is that they make up just one part of the larger ecosystem here in the Salish Sea. Some stories simply continue the natural order of things, as with Harold’s demise at the beak of a seagull. Other stories prompt us to reflect on changes we need to make to better the lives of herring and the other creatures in the ecosystem, like Hannah’s unfortunate end. And yet other stories show us the significance that herring hold beyond just their role in the ecosystem, and that there is hope for a better future.

REFERENCES

- Assessment and Management of Pacific Herring in the Salish Sea. (2018, August). *Conserving and Recovering a Culturally Significant and Ecologically Critical Component of the Food Web*, 1-74. doi:10.3897/bdj.4.e7720.figure2f
- First, L. (2017, June 7). Herring returning to spawn at Cherry Point, but local population still in trouble. Retrieved from <http://www.re-sources.org/blog/cleanwater/201706-cherrypointherring>
- Laussuy, D. R. (1989). Pacific Herring. *Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates*, 82, 1-19. doi:10.9737/hist.2018.658
- Pacific Herring Species Profile, Alaska Department of Fish and Game. (n.d.). Retrieved April 18, 2019, from <https://www.adfg.alaska.gov/index.cfm?adfg=herring.main>
- Stories. (n.d.). Retrieved April 11, 2019, from <http://www.pacificherring.org/stories-map>
- Therriault, T. W., Hay, D. E., & Schweigert, J. F. (2009). Biological Overview and Trends in Pelagic Forage Fish Abundance in the Salish Sea (Strait of Georgia, British Columbia). *Marine Ornithology*, 37, 3-8. doi:10.9737/hist.2018.658