

Herring Trivia

Below are the questions & answers used in Pacific Wild's online Self-Paced Herring Trivia.

pacificwild.org/self-paced-herring-trivia

1. What type of fish are Herring classified as?

- a. **Forage Fish**
- b. Groundfish
- c. Anadromous Fish
- d. Prey Fish

Explanation: Forage fish, also called prey fish or bait fish, are small pelagic fish which are preyed on by larger predators for food. Typical ocean forage fish feed near the base of the food chain on plankton, often by filter feeding.

2. Which areas do Pacific herring populations live?

- a. Central Coast
- b. Haida Gwaii
- c. West Vancouver Island
- d. **All of above**

Explanation: Herring can be found all along the coast of British Columbia - including the Central Coast, Haida Gwaii and West Vancouver Island regions. However, those three regions have not had enough fish in recent years to open the fishery.

3. What season do herring spawn in B.C?

- a. Summer
- b. Winter
- c. Fall
- d. **Spring**

Explanation: Each spring, peaking in March, the Pacific Herring return to protected inlets on the coast of British Columbia to spawn.

4. Where can you find Pacific herring spawning?

- a. **Sheltered bays and inlets**
- b. Rivers streams
- c. Sea floor
- d. In rocky water

Explanation: Adult herring congregate along the nearshore vegetation near, which often includes eelgrass and kelp in sheltered shores and protected inlets to spawn.

5. Which of the following options shows the correct food chain?

- a. Orcas feed herring feed salmon
- b. **Herring feed salmon feed orcas**
- c. Herring feed orcas feed salmon
- d. None of the above

Explanation: *Southern residents rely on Chinook salmon, which in turn feed on herring.*

6. This is a herring. True or False?



- a. **True**
- b. False

Explanation: *Their blue-green upper body, large scales, and large eyes help distinguish them from other silverfish species of similar size.*

7. What do Pacific Herring eat?

- a. Chinook salmon
- b. **Zooplankton and Phytoplankton**
- c. Sardines
- d. B and C

Explanation: *Herring consumes Zooplankton and Phytoplankton. Phytoplankton is a group of free-floating microalgae that drifts with the water current and forms an important part of the ocean, sea, and freshwater ecosystems. Zooplankton is a group of small and floating organisms that form most of the heterotrophic animals in oceanic environments.*

8. How many eggs can a female herring lay in a single year?

- a. 60
- b. 5,000
- c. **20,000**
- d. 300,000

Explanation: *On average, a female Pacific herring lays 20,000 eggs each year.*

9. Herring are known to communicate with one another. What form of communication do they use?

- a. Sonar
- b. Blinking
- c. Swimming patterns
- d. **Bubbles**

Explanation: *The herring fish communicate with each other through underwater sounds created through farting, according to a study. The high-pitch buzzing sound helps the fish to communicate at night, without alerting predators, and further helping the fish to form protective shoals. According to the study, the noise is always accompanied by a stream of bubbles.*

10. Commercially fished herring are processed into different types of products. What are the main products made from Pacific herring?

- a. Fish oil
- b. Fish meal for fish farms
- c. Filler in pet food
- d. **All of the above**

Explanation: *The waste products from the herring fishery are used to make these cheaper products like fish oil, fish meal, and pet food ingredients.*

11. Which method for harvesting Pacific herring is sustainable?

- a. Gillnet
- b. **Seine net**
- c. **Spawn-on-Kelp**
- d. Bottom Trawl

Explanation: *The Spawn on Kelp (SOK) fishery involves harvesting herring eggs which have adhered to blades of kelp after herring have spawned. It is conducted by suspending lines of kelp where herring spawn, and may use either an open or a closed ponding technique.*

12. What are major threats to Pacific herring?

- a. Climate change
- b. Habitat loss
- c. Commercial fishing
- d. **All of the above**

Explanation: *Main threats to Pacific herring are the loss of habitat, global warming, overfishing, and loss of available prey like zooplankton and phytoplankton.*

13. What is the name of the Canadian government organization that makes the decisions about fisheries?

- a. Climate Change Canada
- b. Environment Canada
- c. **Fisheries and Oceans Canada**
- d. Health Canada

Explanation: *Fisheries and Oceans Canada is a government institution that is responsible for managing Canadian waters and ocean resources.*

14. What does 'bycatch' mean?

- a. A type of fish
- b. **Fish or animals that are caught accidentally**
- c. Fish that are caught, but not kept and tossed back into the ocean
- d. The amount of fish that a fisher can catch

Explanation: *Bycatch is often caught in nets during commercial fishing practices and refers to the species that were not intentionally caught.*

15. The ɬə́ŋən People, are known today as the Esquimalt and Songhees Nations. What does ɬə́ŋən translate to?

- a. Place to eat herring
- b. **Place to smoke herring**
- c. Place to salt herring
- d. Place to catch herring

Explanation: *Herring are so culturally important to the Esquimalt and Songhees Nations, that it is even built into the language!*

16. What decade did B.C. Pacific herring populations crash?

- a. 1920's
- b. 1940's
- c. **1960's**
- d. 1980's

Explanation: *B.C.'s herring populations collapsed in the 1960's, in large part due to overfishing. Following decades of rebuilding, herring declined again in the late 1990s and into the 2000s.*

17. What methods or gears are used to fish herring in Canada?

- a. Gillnet
- b. Seine nets
- c. Spawn-on-Kelp
- d. **All of the above**

Explanation: *Gillnets and Seine nets are used in the commercial herring fishery and can catch hundreds of tonnes of fish at once. The Spawn-on-Kelp method harvests the eggs of the herring rather than the whole fish. Spawn-On-Kelp is both a commercial and First Nations fishing method.*

18. Which of the following species eat Pacific herring?

- a. Humpback Whales
- b. Chinook Salmon
- c. Sea Lions
- d. **All of the above**

Explanation: *Herring are integral to the diets of many large mammals and fish, including Humpback Whales, Chinook Salmon and Sea Lions.*

19. Historically what has made Pacific herring so important for Indigenous nations?

- a. **Herring were an important part of trade between nations**
- b. Herring were given to mothers before they give birth
- c. Herring were feed to pets
- d. Herring were used to make clothing

Explanation: *A portion of the coastal nations harvests are routinely set aside to be traded locally and with other First Nations communities.*

20. Chief Eric Pelkey of the Tsawout Nation explains how the Coast Salish people would practice sustainability (1:20). How would the nations ensure biodiversity?

- a. All catch is shared with everyone
- b. There are only a certain amount of days that herring can be caught
- c. Nation laws that inform on what can be caught and how much
- d. **B and C**

Explanation: *In First Nations law, it is understood that fishing should occur sustainably, with no one taking more than they need and that herring is important for the entire community.*

21. Herring commonly lay their eggs on kelp and eelgrass. What is the name of the new tool being used to improve the spawning environment in areas where kelp and eelgrass have disappeared?

- a. **Herring curtains**
- b. Roe collectors
- c. Herring drapes
- d. Spawn boosters

Explanation: *Herring eggs require a material, or 'substrate', to stick to once they are released into the water. There has been a huge loss of kelp forests, and projects like herring curtains help herring roe survival.*

22. What are some actions that everyone can do to help Pacific herring conservation?

- a. A: Buy from local or Indigenous artisanal fisheries when buying herring products
- b. Choose herring as the only fish to eat in order to support the fishery.
- c. Get involved with your local marine conservation organization that supports herring conservation.
- d. **A and C**

Explanation: *There are many different ways to help Pacific herring - even by taking part in this lesson! The best way to help the conservation of all fisheries is to encourage the buying of local products. However, when possible, it would be best to avoid herring products if there are more sustainable alternatives.*