

# HERRING

- **Class:** Osteichthyes: Boney Fishes
- **Order:** Clupeiformes (Herring, Sardines, Pilchards)
- **Family:** Engraulis / Engraulidae



Crown Prince's Kipper Snacks are herring, specifically the Atlantic Herring - *Clupea harengus harengus*, caught off the eastern coast of Canada. The Atlantic herring is found on both sides of the North Atlantic, from Greenland to North Carolina, and from the Strait of Gibraltar to the Bay of Murmansk and Novaya Zemlya, Russia. The species dwells in the surface waters of the open ocean, traveling in huge schools.

Young herring feed on plankton, small shrimps, and crustacean larvae. Adults are also plankton feeders, although a few fish have been found in their stomachs. Cod, striped bass, mackerel, tuna, salmon, sharks, and squid prey upon herring. Ecologically, herring are important as converters of plankton into fish flesh and so are a great food resource for the large open-ocean predators.

## HERRING INFORMATION

"Kippers" are a large whole herring that has been split, brined, air-dried, and smoked over hardwood. The herring are filleted and cleaned within hours of being landed on shore. The mechanical filleting of approximately 150 fish each minute by each filleting machine results in quick processing. After brining and drying, specially selected fillets for Crown Prince Natural Kipper Snacks are rinsed with fresh water, then hand-laid on a continuous conveyor which transports the herring into the smokehouse. Wood chips are made using a combination of local hardwood varieties including maple, oak, ash, and beech. The wood chips are heated on an electric hotplate to produce smoke. The smoke passes through a water curtain to filter the smoke, then fans circulate the smoke throughout the smokehouse. As the fish enters the smokehouse the heat within the smokehouse draws the fish oil to the surface of the herring fillet. The fish oil and the surface protein absorb the natural smoke flavor. During the 30-minute process the fish becomes fully cooked and the characteristic smoky flavor and color of the kipper develop.

Immediately following smoking the kippers are hand packed into cans after exiting the smokehouse. The canning process is completed in a retort (pressure cooker), which sterilizes the cans and contents to allow a long shelf life - in the case of kippers 40 years. The kippers are then packed in cartons, palletized and shipped to Crown Prince distribution centers.

In the early 1970's the Canadian government decided to allow fishing for food purposes only. No industrial or fish meal targeted fishing would be sanctioned (in other words, all fish caught would be for direct human consumption). This decision changed the nature of Canadian fishing enormously. The quota system (or management plan) established by the Canadian government is the result of consultation with the people most involved in the fisheries - fishing license holders, processors, federal and provincial governments. The main principle of the management plan is the conservation of herring stocks and the preservation of all its spawning components. An industry-funded dockside monitoring system is in place to track herring catch. A dockside observer records the quantity of fish landed and verifies that the vessel has sufficient quota to cover the landed quantity. Fisheries Officers audit the monitoring and take enforcement action when necessary.

Other countries with mature herring fisheries such as Norway, Iceland, New Zealand, and the United States operate with a similar quota system. A total allowable catch is set to catch no more than 10% of the total resource, which allows for a sustainable herring fishery.

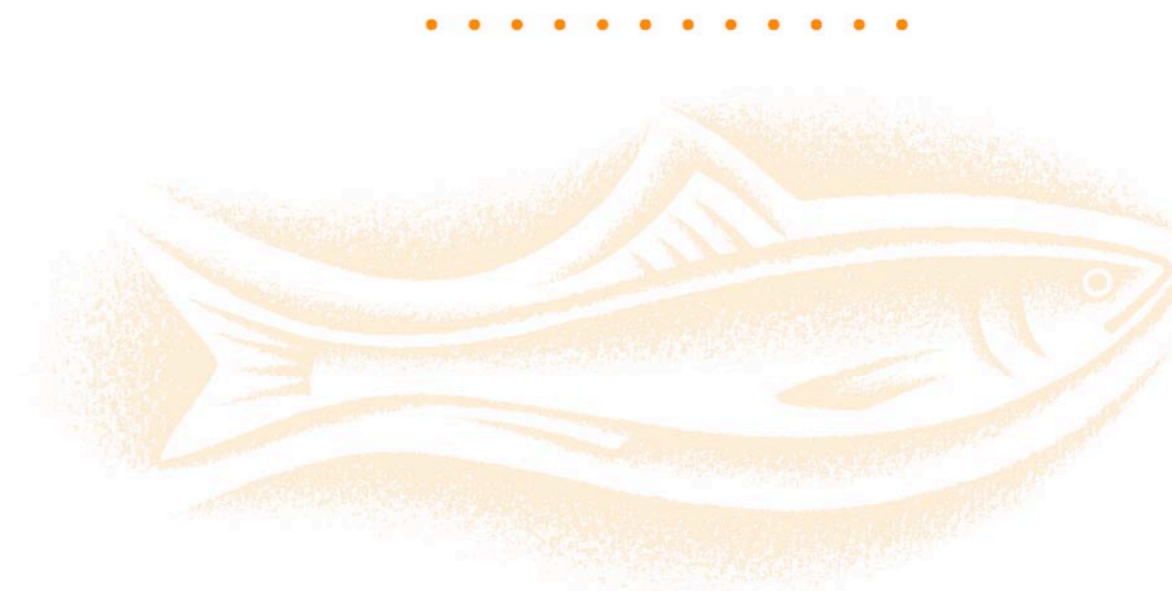
## HERRING HISTORY

The herring has had a marked influence on the course of human history. Due to its great abundance and its importance as a food, some early coastal settlements were first established as herring fishing villages. Wherever schools of herring approached the coast of Norway, there a village sprang up. The same is true in Scotland and Newfoundland, as well as in Alaska, Japan, and Siberia. Charlemagne founded Hamburg in 809 AD as a herring port. Ostend, Dunkirk, and Dieppe were all founded by the Normans as herring ports. As the herring-based trade developed, armies and navies were assembled to fight wars and naval engagements to protect the fisheries. In later centuries, Dutch fishing for herring in English waters led to war with England. Protection of fishing rights led to the foundation of the British Royal Navy and the war of 1652-54, when England fought for and won sea power from Holland.

Hence, herring are among the most valuable fish. They are eaten not only by people but also by many other fish, birds, and mammals. The Atlantic herring has a deep, steel blue to greenish-blue back; its sides and belly are silver. The fish reaches a length of about 18 inches, although the average is less than 12 inches. Maximum weight is about 1 1/2 pounds, however a few herring exceed 10 pounds. Though they are usually found swimming near the surface, herring do vertical migrations, going as deep as 150 meters and returning to the surface in the course of a day.

## NUTRITIONAL BONUS

The best herring have a high fat content, which occurs when they are spawning. Spawning occurs in spring, summer or autumn, depending on the locality. Herring are a source of Omega-3 fatty acids and protein. Currently, however, there is no RDA established for Omega-3. There is between 1.0-1.2 grams (1,000 - 1,200 mg) of Omega-3 in each can of Crown Prince Natural Kippers. Recently the British Task Force on Nutrition recommended that 0.5% of the daily caloric intake should be from Omega-3 fatty acids. In a 2,000 calorie diet this means 10 calories. At 9 calories per gram of fat this translates to 1.1 gram (1,100 mg) of fatty acids, coincidentally the same as in a can of kippers. The 19 g of protein in an average can of kippers is 38% of the RDA of 50 g of protein for adults on a 2,000 calorie diet.



Crown Prince, Inc. 18581 Railroad Street City of Industry, California 91748  
1-800-255-5063 [www.crownprince.com](http://www.crownprince.com)