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the rivers. But they are not yet ready for the high salinity of the open ocean. At this stage they are critically dependent on the brackish waters of the estuaries and the river plumes for additional growth and acclimatization. All species spend an appreciable time in this environment, some of them several months.

When they are ready to go, they move fast and far; at first along the continental shelf following the tidal currents. Then, as their strength and energy increases, they move beyond all continental restraints. This is their time of growth, rapid and continuing growth. It is also the time when they may be exposed to high seas fisheries which can entirely destroy the effects of sound management and conservation.

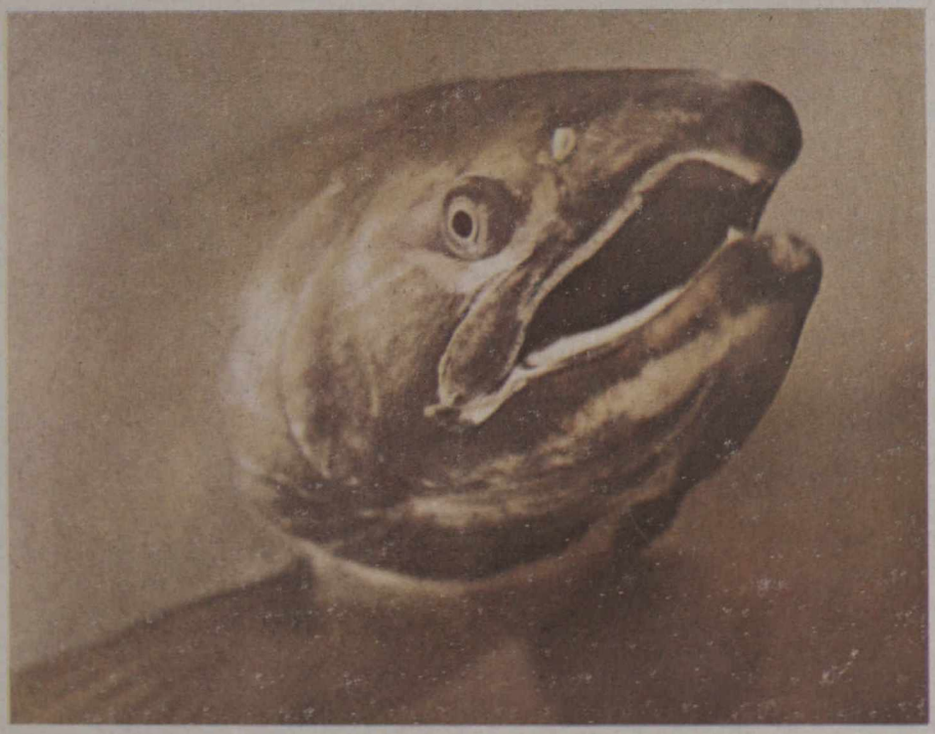
At first the movement is northward, towards the cold fertility of arctic waters. It soon swings outward, into the limitless reaches of the open ocean, eastward from Asia, westward from North America in the Pacific, eastward from North America, westward from European and Soviet rivers in the Atlantic.

The salmon of the continents meet and intermingle, to move southward as the winter approaches, northward again with summer's return until the ocean years are spent, maturity approaches and it is time to seek out the rivers again.

The countries of origin harvest the salmon where they have always harvested them, close to the shore, where sound management and conservation measures can best be implemented, the rivers of origin determined and catches closely regulated to ensure adequate spawning escapements to perpetuate the cycle. The Adams River in British Columbia, for instance, needs 1.5 million salmon to seed just 300 acres of gravel in the year of the dominant cycle. The salmon's security is in numbers, yet there is a natural rhythm in the cycles that must be respected if the fertility of the nursing waters is to be preserved.

Buried under the gravel, under the nursing flow of the stream, maintained by the oxygen carried to them by the flow of stream through the permeable gravel, the eggs must withstand snow, ice, the drought of tight freeze-up, the floods of spring.

Under natural conditions, survival is not high—varying from 1% or less to as high as 20%, but usually less than 10%. It may seem a low survival rate, but if the female lays 3,000 eggs it means 300 fry to withstand the further dangers of two to five years of fresh and salt water life. If, again, the survival is 2%, as it may be, six adults will reach the rivers again. Four of these can be harvested while two must escape to replace their parents on the spawning grounds.



A brightly coloured young salmon—the pride of Canada's rivers