

at a slightly younger age. Although cod are very prolific, the mortality rate is tremendous: of the several million eggs each female lays, only one in a million lives to maturity.

Of the many flatfish species which are distributed from Baffin Island to the Canada-United States border, the most important are American plaice (five stocks), grey sole (four stocks), yellowtail (one stock), turbot (three stocks) and a flatfish stock which includes all species on the Scotian Shelf. Although small flatfish (e.g., American plaice, yellowtail, grey and winter sole) differ in size, appearance, distribution and abundance, their bodies are typically flat, both eyes are on the same side of the head, and their topside is pigmented as protection from predators. Whereas larger flatfish, such as halibut and turbot, have forked tails, the smaller fish have rounded ones.<sup>(1)</sup> (Further information on individual species of fish is given in Appendix 1.)

Other important species of groundfish include haddock (six stocks), distributed along the East Coast from the Grand Banks to Georges Bank, redfish (seven stocks) from the southern coast of Baffin Island to the Canada-United States border, and pollock (one stock), which is concentrated on the Scotian Shelf and Georges Bank.

Unlike groundfish, pelagic fish are generally very streamlined, range throughout the water column and feed in surface and middle-depth waters. For the most part, they swim in large schools and include such species as mackerel (two stocks, though most Canadian catches are taken from a northern population) and capelin (five stocks). Atlantic herring, however, is the most commercially important and best known of the East Coast pelagics.

There are 11 stocks of Atlantic herring, including ten within Canadian waters and one on Georges Bank, which is shared jointly with the United States.<sup>(2)</sup> One large stock spawns off Southwest Nova Scotia in the fall and later migrates up the Nova Scotia coast to winter. When this population moves to the Bay of Fundy in the spring to feed, juveniles from the group mix with those of the Gulf of Maine to form large concentrations of so-called "sardines." In the Southern Gulf of St. Lawrence, the Baie des Chaleurs is an important spawning site for two other biologically separate spring and fall spawning populations. Large bays around Newfoundland also support local less migratory stocks.<sup>(3)</sup> Although the fish, from the egg to adult stages, are the prey of a number of predators (e.g., cod, tuna, dogfish, squid, seabirds, seals and whales), fishing is believed to be the most important cause of mortality.<sup>(4)</sup> The herring's major food are tiny crustaceans and the eggs and larvae of other organisms.

Pelagic fish also include catadromous species (e.g., eels) which migrate from the sea to freshwater and back again for spawning, as well as anadromous fish (e.g., smelt and gaspereau) which migrate in the opposite direction, spawning in freshwater but

<sup>(1)</sup> Department of Fisheries and Oceans, "Underwater World: Atlantic Groundfish," Supply and Services Canada, 1983, p. 3.

<sup>(2)</sup> Department of Fisheries and Oceans, "Underwater World: Atlantic Pelagic and Diadromous Fish," Supply and Service Canada, 1984, p. 2.

<sup>(3)</sup> Department of Fisheries and Oceans, "Underwater World: Atlantic Herring," Supply and Services Canada, 1984, p. 2.

<sup>(4)</sup> Foreign overfishing on Georges Bank during the 1960s eventually led to the collapse of the herring population in that area.