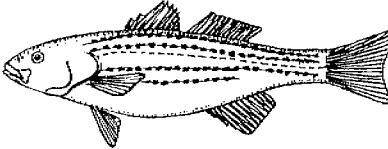
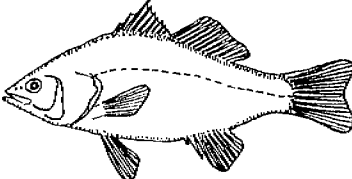

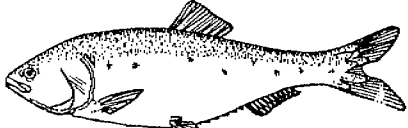




Table 5.3-1 Life Histories of Striped Bass, White Perch, Atlantic Tomcod, American Shad, Blueback Herring, and Shortnose Sturgeon

Body Form	Adult Size	Adult Habitat	North American Distribution	Hudson River Distribution	Age at Maturity	Hudson River Spawning Areas	Fecundity	Egg Characteristics	Larvae Characteristics	Juvenile Characteristics	Food Habits	Predators
 Striped Bass	3 ft (900 mm) TL, 30 lb (13.5 kg) weight	coastal marine waters; introduced populations in large lakes and reservoirs	Atlantic coast, St. Lawrence River, Canada to St. Johns River, Florida; Pacific coast, Columbia River, Oregon to southern California; introduced into many inland lakes and reservoirs	northward to Troy	all males by age VI, some by age III; all females by VII, some by age IV	primarily Peekskill-Newburgh areas; in areas of strong currents, narrow widths and greater than average depths	150,000-several million eggs per female	semi-buoyant, nonadhesive; 4-2 mm diameter; hatch in 1.5-3 days 3.4 mm	2.5 mm TL when hatched, buoyant; 6-7 days old, 6 mm TL when yolk-sac absorbed; free-swimming	move gradually downstream during first summer-many leave estuary in fall but some overwinter in lower estuary; about 110 mm TL by late fall in Hudson River	juveniles: copepods, cladocerans, amphipods, insect larvae, polychaetes, mysids, crabs, small fish adults: fish, occasionally larger invertebrates	Atlantic tomcod, Atlantic cod, silver hake, bluefish, larger striped bass when juveniles; few predators other than man when adult
 White Perch	10 inches(254 mm) TL, 1 lb(454 g) weight	estuaries, tidal rivers, streams ponds and lakes near coast; littoral or semi-demersal	Atlantic coast, Canadian Maritime Prov. to South Carolina; St. Lawrence River, Lakes Erie and Ontario; Nebraska	northward to Troy and beyond	all males by age IV, some by age II; all females by age V, some by age II (Hudson River)	primarily north of Croton-Haverstraw area; in shallow water	10,000-70,000 eggs (Hudson River)	demersal, adhesive, 0.8-1.1 mm diameter; hatch in 1.5-6 days	2-3 mm TL when hatched; 3-5 days old, 3.5-4.0 mm TL when yolk-sac absorbed; demersal	move gradually downstream during first summer, overwinter in lower portions of estuaries; in Hudson River, average 70-80 mm TL by November	juveniles: copepods, cladocerans adults: amphipods, insect larvae, isopods, polychaetes, small fish, fish eggs	striped bass (Hudson River) apparently not a preferred forage species in general
 Atlantic Tomcod	12-15 inches(305-380 mm) TL; less than 1 lb(454 g) weight	inshore marine waters, estuaries, tidal rivers; demersal	Atlantic coast, southern Labrador to Virginia	northward at least to Saugerties	Age I (Hudson River)	primarily Indian Point-Cornwall areas; in shallow water	3,800-55,600 eggs(Hudson River 1973-74)	demersal, adhesive, 1.5 mm diameter hatch in 24-30 days	5 mm TL when hatched; 4 days old when yolk-sac absorbed; demersal	spend first year in lower portions of estuaries; grew to 153 mm TL by December 1974 in Hudson River	juveniles: copepods adults: shrimp, amphipods, mysids, polychaetes, small molluscs, small fish and fish eggs	striped bass bluefish (Hudson River)
 American Shad	2 ft(610 mm) TL 6 lb(2.7 kg) weight	marine waters, pelagic	Atlantic coast, Newfoundland to Florida; Pacific coast, southern California	northward to Troy	most males by age III some by age II; most females by age IV or V, some by age III	primarily between Hyde Park and Catskill; possibly in tributaries	116,000-468,000 eggs (Hudson River)	semibuoyant, non-adhesive 2.5-3.5 mm diameter; hatch in 4-7 days	elongate; 7-10 mm TL when hatched; absorb yolk-sac within 1 week	spend first summer in estuarine nurseries; migrate seaward in fall; average about 90 mm TL by late fall in Hudson	juveniles: copepods aquatic insects, ostracods, amphipods adults: zooplankton, small fish, fish eggs, planktonic mollusc and crustacean larvae	bluefish (Hudson River); juveniles probably susceptible to any larger predator
 Blueback Herring	1 ft(305 mm) TL 0.5 lb(227 g) weight	marine waters; pelagic	Atlantic coast, southern New Brunswick and Nova Scotia to northern Florida	northward to Troy	males at age III or IV; females at age IV or V	primarily north of Indian Point-Cornwall areas; possibly in tributaries	not reported	demersal, adhesive, 1 mm diameter; hatch in 2-3 days	elongate; 3.1-4.2 mm TL when hatched; 4 days old, 5 mm TL when yolk-sac absorbed	spend first summer in estuarine nurseries; migrate seaward in fall; average about 70 mm TL by late fall in Hudson	copepods, pelagic shrimp, larval and early juvenile fish, fish eggs	bluefish (Hudson River) probably heavily preyed upon throughout life cycle by larger predaceous fishes
 Shortnose Sturgeon	3 ft(914 mm) TL 8 lb(3.6 kg)	inshore marine waters, estuaries large tidal rivers; demersal	Atlantic coast, St. John River, New Brunswick to St. Johns River, Florida	northward to Kingston	males possibly at ages III-V; females possibly at ages V-VII	unknown	unknown, probably low	smaller than other sturgeon eggs; demersal; adhesive	unknown; probably demersal	unknown	polychaetes, chironomid larvae, small crustaceans, plant material	unknown

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