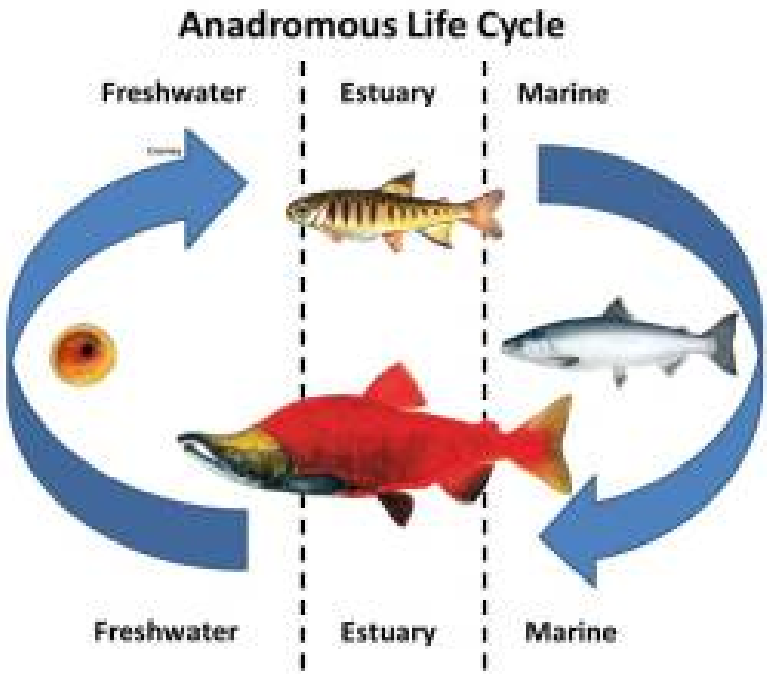
Anadromous, Catadromous, Amphidromous, Oceanodromous, or Potamodromous

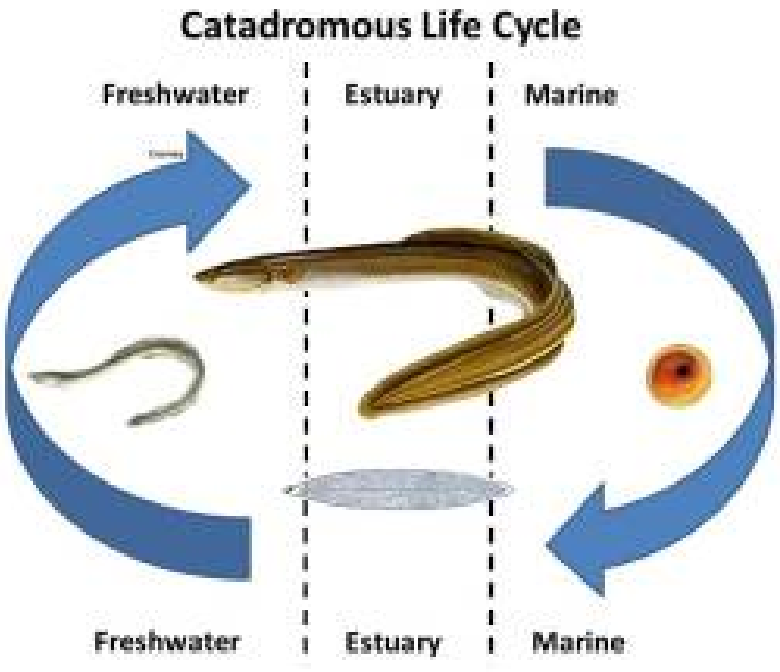
By Patrick Cooney

Many fishes migrate long distances to spawn. In order to better understand these movements, scientists have classified these migrations into several categories.



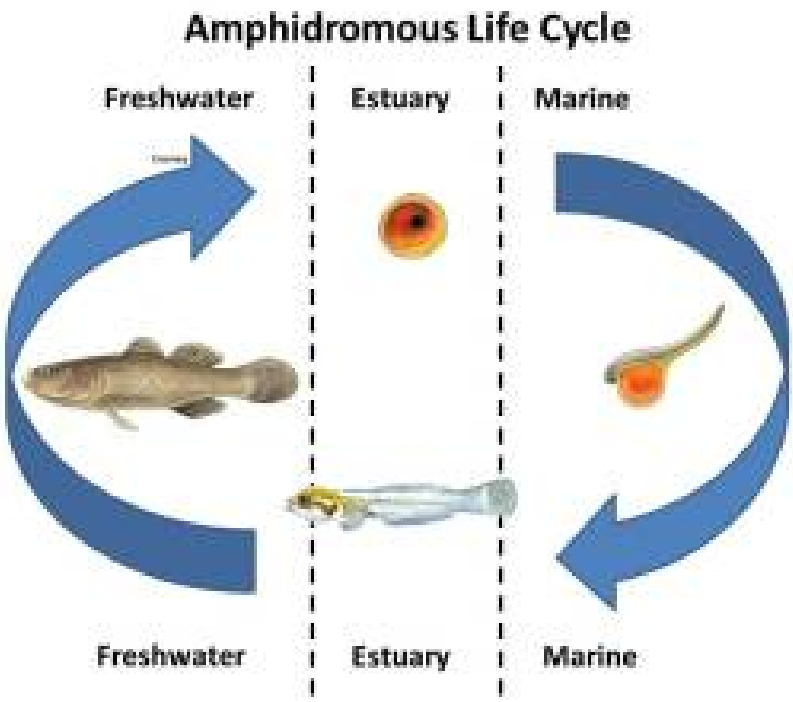
Anadromous fish are born in freshwater, then migrate to the ocean as juveniles where they grow into adults before migrating back into freshwater to spawn.

Examples: salmon, smelt, American shad, hickory shad, striped bass, lamprey, gulf sturgeon



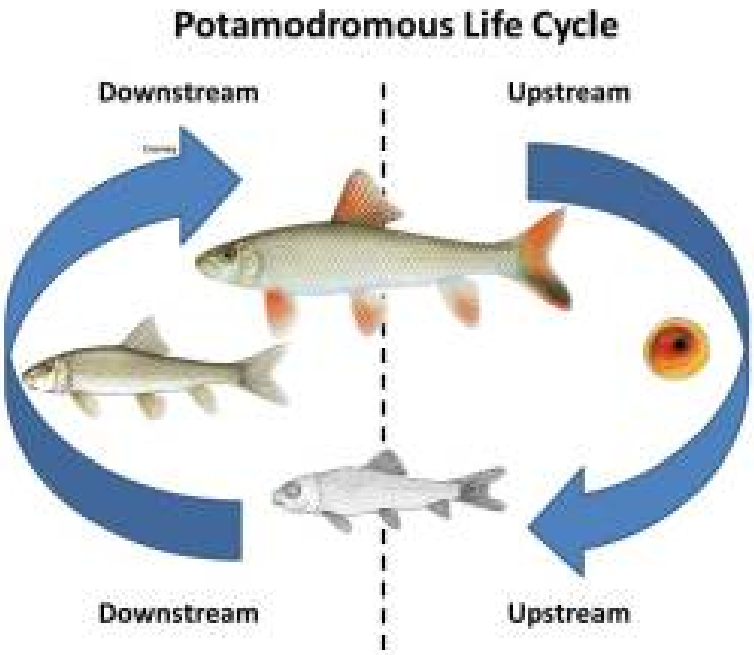
Catadromous fish are born in saltwater, then migrate into freshwater as juveniles where they grow into adults before migrating back into the ocean to spawn.

Examples: American eel, European eel, inanga, shortfin eel, longfin eel



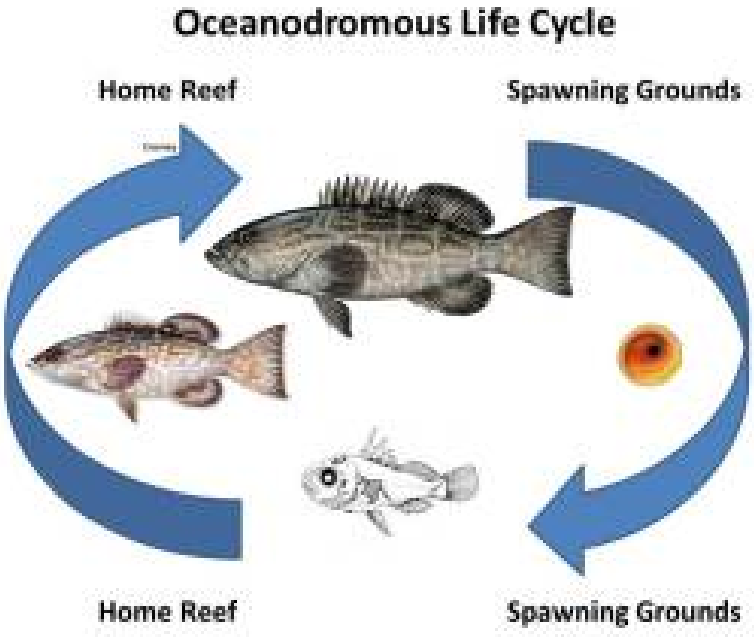
Amphidromous fish are born in freshwater/estuaries, then drift into the ocean as larvae before migrating back into freshwater to grow into adults and spawn.

Examples: bigmouth sleeper, mountain mullet, sirajo goby, river goby, torrentfish, Dolly Varden



Potamodromous fish are born in upstream freshwater habitats, then migrate downstream (still in freshwater) as juveniles to grow into adults before migrating back upstream to spawn.

Examples: sicklefin redhorse, lake sturgeon, robust redhorse, flathead catfish



Oceanodromous fish are born near spawning grounds, then drift on ocean currents as larvae before settling as juveniles to grow into adults before migrating back to spawning grounds.

Examples: black grouper, mutton snapper, goliath grouper

Although these different types of migration classifications may be difficult to pronounce, they are important to understand in order to help maintain connectivity between critical habitats.

Considering that many of these fishes use rivers as migration corridors:

1) What impacts might you expect dams to have on the ability of fish to get from one location to another?

2) Might impacts to riverine ecosystems propagate impacts on oceanic ecosystems, and vice versa?