

MIGRATION IN FISHES

Q.What do you mean by migration of fish?

Migration of fish is defined as a class of movement which involves a long journey to a definite area for some purpose and impulse the migrants to return to the region from which they have migrated (Harden-Hones, 1968).

Q.What are the major types of fish migration?

According to **Mayers (1949)** migratory fish can be classified into **three** main categories.

(A)Diadromous migration, (B) Potamodromous migration and (C) Oceanodromous migration

(A) Diadromous migration –

When the migration occurs in between freshwater and marine environment. Diadromous type of migration can be divided into following three types.

a)Anadromous migration :

Migration occurs from sea to freshwater for spawning called anadromous migration. Examples- Atlantic Salmon (*Salmo salan*), Hilsa (*Tenulosa ilisha*), Sturgeon (*Acipenser*) etc.

b)Catadromous migration:

The journey of fresh water fishes to the sea for spawning called catadromous migration.

Examples- Indian long fin eel (*Anguilla bengalensis bengalensis*), Shortfin eel (*Anguilla bicolor*), Common freshwater or European eel (*Anguilla Anguilla, Anguilla vulgaris*), American eel (*Anguilla rostrata*).

c)Amphidromous migration

Migration of fishes from freshwater to sea and vice versa and is not for the purpose of breeding for the other purposes (example food). The amphidromous fishes migrate regularly at some particular stage of the life cycle. Marine amphidromy occurs in flat head mullets (*Mugil cephalus*) which spawn in the Indian Seas during autumn and early winter and whose young stage spend a short period in brackish water and freshwater. They are able to survive in ponds with salinity at 87%. After spending in fresh or brackish water they return to marine water.

(B)Potamodromous migration:

Migration of fish that occur entirely in freshwater called potamodromous.

Examples-Carps and trout. Trout and carps travel long distances in large shoals in search of suitable spawning grounds and return to feeding areas after spawning.

(C)Oceanodromous migration:

Migration which occurs entirely in Sea called, oceanodromous migration. Horizontal and vertical distribution is considered in oceanodromous migration. Many fishes undertake short distance migrations throughout their life and some fishes like herrings, cod, tuna and plaice, cover long distance migration.

Q.Classify fish migration on the basis of purpose of migration.

Again on the basis of the purpose migration fish has been classified into following types—

1.Alimental migration:

Migration occurring for the purpose of food procurement. Bombay duck (*Harpadon*).

2.Gametic or spawning migration

The purpose of reproduction which enables the species for better survival and proper development of the eggs. Traced in *Tenulosa ilisha*.

3.Climatic migration

Migration takes place for the purpose of reaching a particular region to secure better climatic conditions.

Examples—

Salmon and Sturgeon etc. Swordfish like (*Xiphias gladius*) living in tropical and temperate waters, sometimes migrate north in Spring and autumn to cold waters for the suitable climatic condition.