

S. S. College, Jehanabad

Department: Zoology

Class: M.Sc. Semester IV

Subject: Zoology

Topic: Habit and habitat of fishes

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Fishes

Habit and Habitats

Habitat

Fishes live in virtually all aquatic habitats. Different species of fishes are adapted for different habitats — rocky shores, coral reef, kelp forests, rivers, streams, lakes and ponds, under ice, the deep sea, and other environments of fresh, salt and brackish water.

Some fishes are pelagic; they live in open sea, As-tunas family Scombridae flat fishes (order - pleuronectiformes) are adapted for living along the bottom. Certain fishes — as gobies (Fam. - Gobidae) even burrow into the substrate or burried in sand.

Ocean sunfishes (F - Molidae) are most often spotted at Ocean's surface.

Some lung fishes "hibernates" throughout a summer drought season, burried under the mud of a dried up pond.

Several fish species live in fresh water habitats in the darkines of caves. While each species has its own specific habits and preferred habitats.

Fish also live in cold water of the Arctic as well as in warm tropical water arround the equator - Northern Atlantic, the Caribbean sea and the western pacific Oceans.

About 40% of all fish species are in fresh water - includes Carp, Catfish, trout.

Page

A few types of fish can swim in both salt and fresh water. Example - Salmon fish prefers the low light condition. Fish like catfish and crapple would feed in whatever weather condition, although for anglers, it is better to fish after thunderstorm and during gentle rain because it tend to rise above the waters.

Generally fish can swim in more shallow water with low light during the earlier spring and summer, where they send themselves deeper to find a cooler place to stay, but not at the bottom because there's little O_2 . They can be found at high mountain streams (char, go (eg - char and gudgeon) to the byssal zone and even hadal depth of the deepest oceans (eg - eel, snailfish)

Habits — To adapt aquatic life, so many organs help fishes to live in water. followings are —

- (a) Lateral line system — This contains nerve endings along a row of pores on either side of a fish from gills to tail. The lateral line acts as radar, allowing the fish to detect the size, shape, direction and speed of objects.
- (b) Touch — Fishes can detect minute temp. differences and can discriminate between hard and soft baits. Fish are more likely to hold a soft bait longer.
- (c) Sight — Fish are able to see well in water but not in muddy water or low light. Out of water their vision is very restricted.
- (d) Hearing — Water conducts sound better than air, and fish hear directly through the bones in their head. Noise on the bank or dock may attract or spook fish.
- (e) Taste — Most fish do not rely much on taste, but catfish and bullheads have taste buds over their entire bodies and fins.
- (f) Smell — Fish have a nasal sac to help detect odor. Night feeders and muddy fishes have a highly refined sense of smell.

Other adaptive habits

(i) water temp. need — Fish are cold blooded. They do not produce body heat, so must find and remain in water.

(ii) shape — Streamlined body helps easily move in water. Many species have a amount of gases in their swim bladder for float in water.

(iii) How to swim — A fish swims by alternately contraction of muscles along each side, which causes tail to sweep and propel the fish forward. The smaller fins assist with forward and backward movement.

(iv) Colors and patterns

Fish markings usually serve as camouflage. Fish that live near rocks or weeds often have blotches or bars on their sides. Many fish are dark on dorsally & light ventrally, making more conspicuous.

(v) Scales — Most fish have scales embedded in to skin. It is thick and tough. Growth marks on scales reveal the age of fish.

(vi) Life-span — generally life-span of fishes are 4-6 years, but some live 10 years or more. Fish continue to grow in length and girth as they get older.

(vii) grouped or solitary

Many fishes swim in groups or schools.
Solitary fish may concentrate when a feeding opportunity present itself.

(viii) Feeding pattern — Some fish wander constantly in search of food while others have narrowly defined home ranges and wait for food to come close enough to ambush.

(ix) Travel pattern — Fish often make regular movements between feeding and resting places. Seasonal movements to summer and winter habitat and annual movements to traditional spawning area. Many species travel long area to spawning.

(x) Cover — Fish use cover to escape predators and as an aid in ambushing prey. Cover defined as anything that protect them — weeds, docks, brush, rocks and logs all provide cover.

Weeds grow near the bank, fallen trees lean over the water, boat docks and swimming platform rim the lake, flooded timber reaches above the water's surface cover and save from predatory birds and human.

Date _____
Page _____

Food habit - Fish can look for prey together on a school of minnows, migrating frog and hatching insect larvae. Carnivores are meat-eating depend depends on earth worm, fruit-fly, oysters, shrimps, cooked chicken and flakes food. Herbivores are plant-eating fed on cucumber, vegetables, Algae and algal flakes.

Conclusion

"Survival of the fittest"

Ape to this theory all organism adapt themselves to live in their habitats.

So some modifications occur in their feature. Aquatic organism such as fish have stream lined body, mucous coated skin with scales, gills-breathing, lateral line sense organ make them easy to live in Marine or fresh water habitats.