

# Home aquarium



By

Dr. L. Charlet Bhami

## **UNIT II**

Setting up aquarium – gravel/pebbles – Plants – Ornamental objects and fishes – Selection. of species – Introducing fishes to the aquarium. Nutritional requirements of aquarium fishes. Different kinds of feeds. Culture of food organisms. Preparation of dry feeds. Feeding methods  
(11L)

# Setting a Home aquarium

- Aquarium is a fish tank containing ornamental fishes, plants and decorations for recreation.
- **Site** selection – house, office, hostel or institution
- Install - near a window – diffuse light – clear vision of the fish and plants.
- Tank – stand – good look
- Convenient size
- Check – leakage
- Removable roof – fitting fluorescent light
- Light favours photosynthesis, trace the feed, growth of the fish. Lighting – 8 hours



- Frame of the tank - painted
- Aerator – operated by electric current – oxygenates the water
- Direct sunlight should not be allowed – favour algal growth
- Fix - thermometer – 22°C to 26°C
  - low – metabolic rate low, sluggish, susceptible to disease
  - High – OD decreases, come to the surface and gasp air

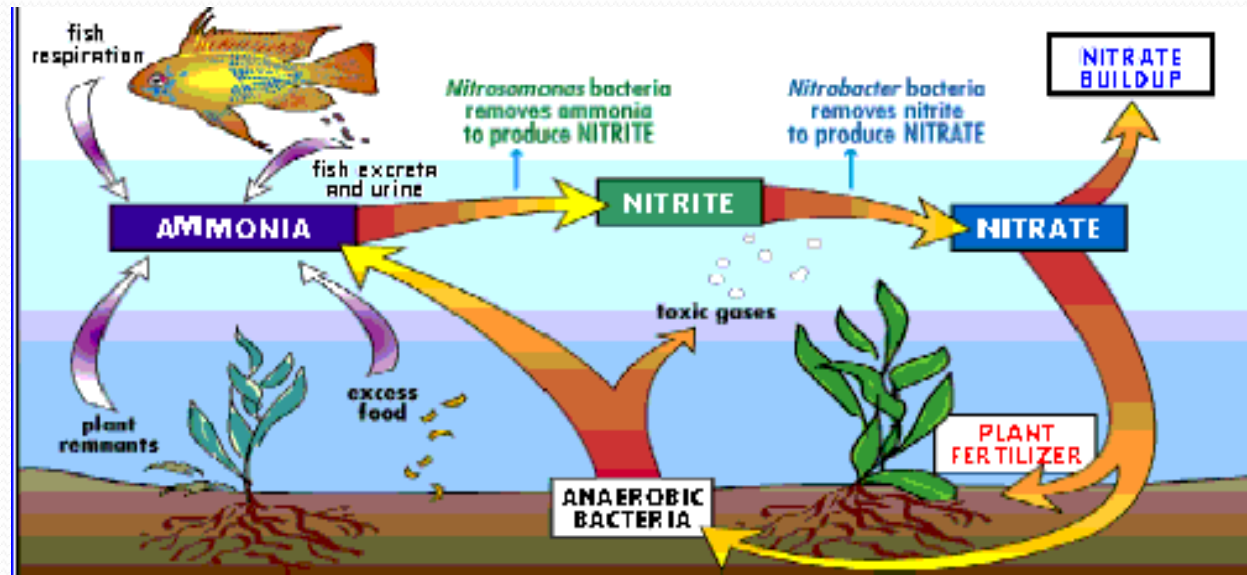




- Electric heater – to raise the temperature
- Thermostat – internal or external - connected to the electric heater
- Net – catch the fishes
- Bottom – small stones, fine gravel and sand – thickness of 3-5cm. It should have slope slightly for better vision. Bed – compost – filters debris, dead plant materials and faecal matters as the water passes through the compost.



- Compost bed – nitrifying bacteria such as *Nitrosomonas* and *Nitrobacter*
- *Nitrosomonas* convert ammonia of fish excreta into nitrite
- *Nitrobacter* converts nitrite into nitrate
- Nitrate is used by the aquarium plants as nutrient



- **Aquarium plants** provide shade and shelter for the fish, release oxygen during photosynthesis, food for herbivorous fishes, beautify the aquarium
- Eg. *Vallisneria*, *Hydrilla*, *Pistia*, *Najas*, *Sagittaria* etc.
- Before planting, wash – in water and disinfectant – Potassium aluminium sulphate (0.1% solution)
- Chlorinated tap water is avoided. During filling, the compost and plants should not be disturbed

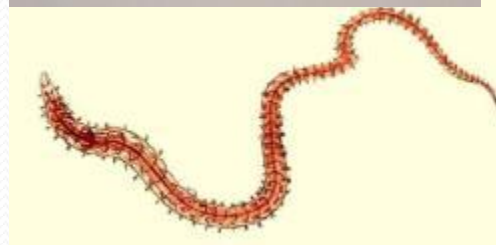
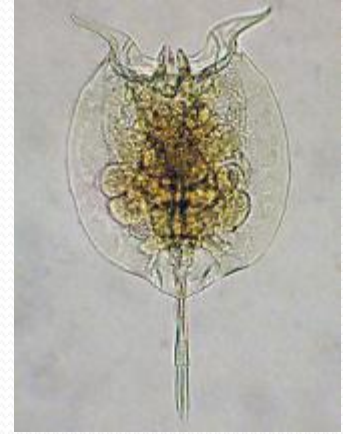


- Non - aggressive fishes are introduced
- Aggressive fishes – separate tanks – aggressive tanks.
- Fishes disinfected with 2% potassium permanganate solution
- The number of fish determined by the surface area of the tank. 1cm long fish may need 75 cm<sup>2</sup> of the surface area. Marine fish – 300 cm<sup>2</sup>
- Feed 2 times in a day – feeding ring fixed on the surface of water.





- Feed – live feed and artificial feed – alternatively
- Live feed
  - Cyclops
  - Tubifex
  - Rotifers
  - Daphnia
  - Artemia nauplii
  - Chironomid larvae
  - Mosquito larvae



- Fish are fed with boiled egg (avoid yellow – bad smelling) – groundnut cake – chopped earthworm, chopped prawns, scraped fish, pieces of liver
- Artificial feed is prepared by mixing dried and powdered prawn with egg. A paste is made. The paste is made into pellets, dried and stored.
- The debris and unconsumed feed remove by a siphon
- - glass tube and glass tube
- pH – 7- 7.2
- Infected fishes should be removed immediately
- Scavenger animals- snail- consume debris

# Aquascaping

- Craft of arranging aquatic plants, rocks, stones, cave work and driftwork in an aesthetically pleasing manner within an aquarium
  - To make the bare tank more attractive
  - Natural environment by keeping aquatic plants, rocks, gravels etc.

# Selection of ornamental fishes



- Marine aquarium
- Freshwater aquarium
  - Single pet aquarium
  - Aggressive aquarium
  - Community aquarium

**Single pet aquarium -**  
single species

Gold fish

Fighter

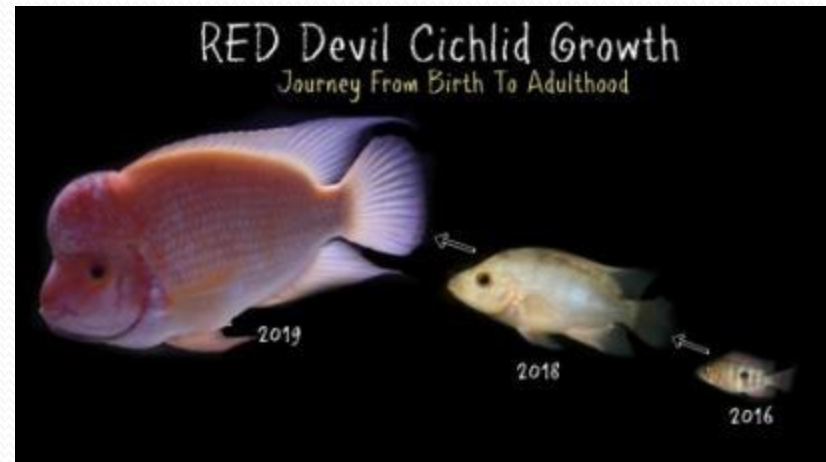
Large cat fish



- Aggressive aquarium

- Aggressive fishes

- Oscars
    - Red devil cichlids
    - Jewel cichlids
    - Carnivorous catfish
    - Green terrors
    - convicts



- Community aquarium

- Variety of fishes

- Mollies
    - Guppies
    - Sword tail
    - gouramis
    - Silver dollars
    - Tetras
    - Koi
    - Gold fish







# Characteristic features of selection of fish

- Non- aggressive
- Non- predatory
- Cooperative
- Calm and peaceful
- Healthy and sturdy
- Small size for small aquarium, big size for big aquarium
- Eating actively
- Avoid diseased fish