Aquarium Setting and Ornamental fish

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What is an aquarium???

- Colourful fish
- Water
- Plants
- Sand
IMP OF AQUARIUM??

- Historic
- Social
- Aesthetic and ornamental
- Meditating
- Commercial
- Educational, Scientific and Research
Small marble aquaria were maintain by Romans around 50 AD.
In 1369, the Chinese emperor ‘Hongwu’ invented porcelain bowl.
In 1853, the aquarium craze was launched in England by Philip Henry Gosse who created and stocked the first public aquarium in the London Zoo which came to be known as the Fish House.
Some tropical fishes being more colourful were imported from Asia in 1869 and became an popular e.g. ‘Koi’ fish.
Social importance

- Change public attitude towards the fish in favour of their conservation.
- ‘Koi’ fish is thought to be lucky in Japan and China. Koi simply means carp but its homonym is love or affection, and koi are therefore symbols of love and friendship in Japan.
- Since the fish keeping is difficult and costly affair it becomes status symbol.
Aesthetic and ornamental value

- Attraction towards the beauty and mystery of underwater world.
- Fishes with various colours, size and shapes amaze us.
- Also the behaviour and movements of fish are attractive.
- Help in decorating private and public places.
Meditational value

- There are several beliefs that the health and emotional benefits are rendered from having an aquarium.
- Watching an aquarium for a considerable time reduces stress, anxiety, blood pressure and emotional agitation.
- Use of aquarium is common in psychotherapy.
- It has been discovered that watching an aquarium can help the patient to heal faster.
Commercial value

- Good prospects for the business: production of tanks, accessories etc.
- Demanded world wide for aquarium experts, ornamental fish
- Eco-tourism….. public aquaria can fetch lucrative profits to nation.
- Also imperative for educational and research needs.
Eco-tourism
Educational, Scientific and Research values

- Study of fish behaviour.
- Types of fish species (taxonomy) and their habit and habitat.
- Biology, anatomy, fecundity, migration, breeding, histology, biometry etc.
- Bio-assay, DNA bar-coding, genetics, hydrodynamics, fishery science etc.
Types of aquaria

- Indoor aquarium
- Outdoor aquarium
- Private aquarium
- Public aquarium
- Community aquarium
- Species aquarium
- Rocky aquarium
- Breeding aquarium
- Hospital aquarium
Indoor and private aquarium

- Simple and small personal
- Larger and display
Outdoor and public aquarium

- It can be set in the lobby or underwater
Can be set out doors
Setting up of small indoor aquarium

- Space
- Tank
- Accessories
- Decorative
- Water
- Plant
- Fish
Space availability

- Prime space (public)
- Dull corner in private house
- Available substratum
Tank
Accessories

- Undergravel filter or biological filter
- Internal filter
- External filter
- Heater
- Aerator
- Pipes and connector
- Plants
- Gravels
- Feeder
Undergravel filter

- Biological filter is essential for small aquaria to maintain microecosystem.
Micro-ecosystem

Water Change:
- Nitrates (NO$_3^-$)
- Nitrospira
- Nitrites (NO$_2^-$)
- Nitrosomas
- Ammonium (NH$_4^+$)

Food:
- Biological filtration

Decomposing plant & animal matter:
- Decomposing plant & animal matter
Internal and external filters
Heater

Aquatop Submersible Heater - 50W - 9 in. - Up to 13 gal. Pictured
Aerator
Pipe, connectors and others
Gravels
Plants
Decoratives
Bog wood
Cleaning the tank and Washing the accessories

- Do not use soap...clean tank with plain water.
- Use common salt to rinse the tank and accessories to disinfect.
- Eventually use de-chlorinated water to rinse everything.
- Also wash plants with de-chlorinated water.
Biological filter and gravel
Water is kept in a bucket for 48 hrs and intermittently stirred to release chlorine.

De-chlorinator or water conditioner be used to de-chlorinate water before use.

Fill tank to \( \frac{1}{4} \)th limit.

Fix the plants, accessories and decoratives.

Fill water to \( \frac{3}{4} \) limit and leave it for a fortnight.
Introduction of fish

- Keep the fish bag in tank for ½ an hr.
- Open the bag inside water
- Mix some water from the tank into the bag and hold for few minutes
- Release the fish slowly into the tank
Importance of light
How to decide duration of light

Length of tank x 32 = Duration of time
Wattage of tungsten light

Or

Length of tank x 3.2 = Duration of time
Wattage of LED light

Or

Observe the algal growth on the glass or in the water.
Feeding

- Food dispenser preserved
- Food
Natural/ live food
Types of Tank Set-ups

- Community Tank
Bog wood tank
Coral Tank
Rock tank
Rock tank
Species tank
Quarantine or hospital tank
Treatment tank

Water return above water level

Returns

Terminator UV Sterilizer

Canister Filter
Set up as a mechanical/micron filter

Bulkhead

PVC T

Filstar XP Filter set up as a bio filter, chemical filter, etc.
Ornamental fishes

- Mollies
Platies
Guppies
Discus & angel
Tetras

- Congo
- Cardinal
- Black phantom
- False neon
- Serpae
Others
Betta fish
Marine
Thank you