

ORNAMENTAL  
**FISH**  
*Culture*

UNIVERSITI MALAYSIA TERENGGANU



# INTRODUCTION TO THE ORNAMENTAL FISH INDUSTRY

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# What is ornamental fish?

Fish cultured and reared for reasons other than food!



# Why we choose the species as ornamental fish?

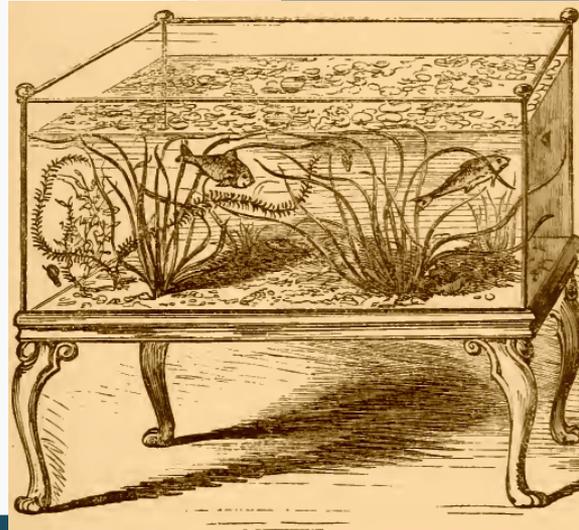
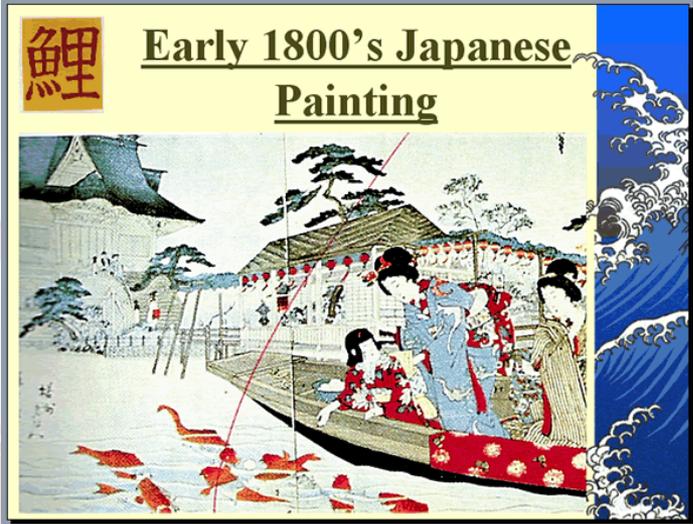


- 1) Attractive colour
- 2) Unique body shape
- 3) Rarities
- 4) Unique movement or behaviour



# History

- Believed to be started China during the Sung Dynasty where colourful carps were reared in garden ponds.
- Spread to Japan in the 15<sup>th</sup> century and to Europe in the 17<sup>th</sup> century.
- Started to developed in the 19<sup>th</sup> century with the rapid development of aquarium technology especially the water temperature control system.



# History of the ornamental fish industry in Malaysia

1950an

- Started in Johor
- Wild captured

1980's

- Started to develop in Johor
- 18 farms

1988

- Increased to 135 farms
- 174 farmers in Johor, Perak, Selangor, Penang



# History of the ornamental fish industry in Malaysia

1993

- Increased to 336 farms
- Aquatic plant farm in Johor

1997

- 400 farms
- 90% ornamental fish
- 10% Aquatic plant and life feed

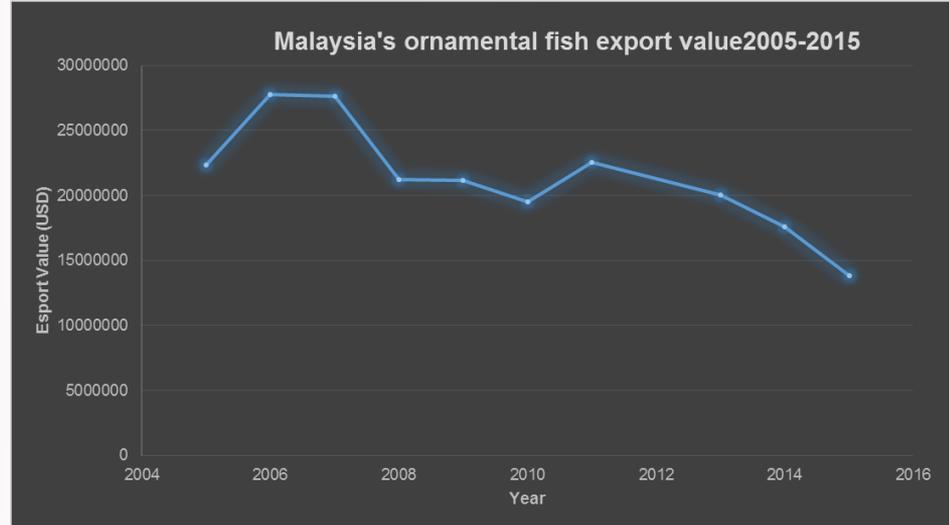
2016

- 597 farmers (ornamental fish) ; 11 farmers (aquatic plants)
- 27331 ponds (ornamental fish) ; 1262 (aquatic ponds)



# Ornamental Fish Industry in Malaysia

- In 2015, Malaysia is the 7<sup>th</sup> largest world producer for ornamental fish
- USD 13,848,961 worth of export value (UN Data)
- Top exporting countries: US, Europe, China, Australia



# Factors contributing the development of the industry



- **Tropical climate** – Suitable for year round breeding of tropical fish both native and exotic
- **Rich Biodiversity** – Array of colorful attractive native fish species
- **Excellent infrastructure** – Road, rail, telecommunication and electricity network even to rural area
- **Government's support** – Incentive, research scheme, development program
- **Excellent workforce** – Brilliant, hard working and low labor cost
- **Geographical location** - Malaysia is located in the middle of Asia

# Popular Ornamental Fish Species



#	Group	Species		
1	CYPRINIDS	Barb Koi	Danio Sharks	Goldfish Rasbora
2	COBITIDS	Loaches	Botia	Ghost Fish
3	CYPINODONTIDSS	Kili Fishes Betta	Asst. Fish Flying Fox	Pleacotomus Blood Parrot
4	ANABANTIDS	Pelaga	Gouramy	Corydoras
5	POECILIDS	Molly Swordtail	Guppy Mino	Planty
6	CHARACINS	Tetra	Silverdollar	Putter Fish
7	CICHLIDS	Angel Chichlid	Oscar Ramaresi	Discus
8	OSTEOGLOSSIDS	Pearl Arowana Silver Arowana	Black Arowana Rainbow Fish	
9	CALLCHTHYIDS	Catfish	Suler Mouth	

# Popular Ornamental Fish Species Based on Main Producer States in Malaysia



#	State	Fish
1	JOHOR	Angelfish, barb, koi, guppies, mollies, tetras, barbs, danios, cichilds, gouramis, catfish, goldfish, carps, rasboras, swordtails, discus and arowana
2	PERAK	goldfish, koi, arowana
3	PENANG	Discus



# Secondary Supporting Industry



- Aquarium – Tanks (plastic, acrylic etc.)
- Aquarium accessory - Pebbles, ornaments, fake aquatic plants
- Fish food
- Fish health products
- Water quality management products
- Services – Aquascaping, consultant
- Fish transportation

# Problems Faced by the Industry



- Fish diseases
- Export facilities
- Uncontrolled production
- Invasive species problems

