

History of Aquaculture

History of Aquaculture – Study Notes

1. Introduction

- **Aquaculture** = the cultivation of aquatic organisms (fish, crustaceans, mollusks, algae) under controlled conditions.
 - Often called “fish farming” but includes a wide range of species and production systems.
 - Serves three main purposes: **food production**, **restoration of wild stocks**, and **commercial non-food products** (ornamentals, pharmaceuticals, bio-fuels).
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2. Early Beginnings (Pre-Historical to Classical Antiquity)

Period	Region	Key Developments
Neolithic (~ 8,000–~5,000 BCE)	China (Yellow River)	Domestication of carp in ponds; earliest written records of fish breeding.
Ancient Egypt (~ 3,500 BCE)	Nile Valley	Use of artificial ponds and water channels to raise tilapia and catfish for temple offerings.
Mesopotamia (~ 3,000 BCE)	Sumerian cities	Construction of irrigated basins for carp and eel ; fish were a staple in the diet.
Classical Greece & Rome (~ 500 BCE–~500 CE)	Mediterranean	Pond culture of sea bass , sea bream , and eel ; Aristotle wrote about fish breeding techniques.
India (~ 1st–~5th century CE)	Ganges basin	Development of rice-fish integrated systems (e.g., carp with paddy fields).

Takeaway: Early aquaculture was driven by food security, religious rites, and the need to supplement wild catches.

3. Medieval to Early Modern Expansion (500–~1800 CE)

Era	Region	Innovations & Species
Islamic Golden Age (8th–13th c.)	Persia, Iraq, North Africa	Silk-worm-style ponds for carp ; treatises by Al-Mawardi on water management.

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Song & Ming Dynasties (960-1644)	China	Refinement of polyculture (carp, crucian, loach) in lentic ponds ; introduction of artificial breeding (hormone-induced spawning).
Mongol-influenced Russia (13th-17th c.)	Siberia	Development of ice fishing hatcheries for sturgeon and salmon .
European Renaissance (15th-17th c.)	Italy, France, England	Ornamental fish (koi, goldfish) cultured in garden ponds; early salmon hatcheries in Scotland.
Colonial America (1600-1800)	North America	Eel traps and river fish farms along the Atlantic seaboard; "fish ponds" on plantations.

Key Themes:

- Integration of **agriculture** (rice-fish, duck-fish) for mutual benefits.
- Spread of **knowledge** via trade routes (Silk Road, Islamic scholars).
- Emergence of **ornamental** and **recreational** aquaculture.

4. The Scientific Era (1800-1950)

| Date | Milestone | Significance | |-----|-----|