

Study on fish infection in some the fresh water resources around Yavatmal, Maharashtra

Raksha Gujar,

Department of Zoology, Amolakchand Mahavidyalaya, Yavatmal-445 001,
Maharashtra, India

Abstract

The present investigation is based on fish pathology, the infected fishes mainly the major carps were brought from different water resources like Borgao dam, Waghadi river Nilona dam. The result clearly indicated that twelve infections like Oodinium(VELVET), Haemorrhagic septicaemia, Ammonia poisoning, External Bacterial infection, Bacterial infection or parasites, Fin rot, Black spot, external parasites, Fungus bacterial, Pop eye, Hole in the head and Fish fungus were identified in the fishes. It is concluded that Bacterial infection is more common in Yavatmal fresh water resources. We found that most of the carps are infected with some acute diseases which are not suitable for consumption. It is necessary to know the details about other infections in the fishes. The present status highlights about the diseases and infections in fresh water major carps of water resources near Yavatmal city only, further study will be carried out regarding other resources. The SFD (state fishery department) should take necessary action for to create awareness regarding fish pathology which will help to avoid the consumption of infected fishes.

KEYWORDS - Fresh water resources, Major carps, Infection.

INTRODUCTION

Like human and other animals, fish suffer from diseases and parasites. Fish defences against disease are specific. Non-specific defences include skin and scales as well as mucus layer secreted by the epidermis that traps microorganism and inhibits their growth. If pathogens breach these defences, fish can develop inflammatory responses that increase the flow of blood to infected areas and deliver white blood cells that attempt to destroy the pathogens. (Disease Factsheets, 2007). Specific defences are specialised responses to particular pathogens recognised by the fish's body that is adaptive immune responses (Helfman, 1997). Some commercially important fish diseases are VHS, ich and whirling disease. All fish carry pathogens and parasites. Usually this is at some cost to the fish. If the cost is sufficiently high then the impacts can be characterised as a disease in fish is not understood well. (Moyle et al, 2004) What is known about fish and more recently to farmed fish. Disease can also particularly problematic when pathogens and parasites carried by introduced species affect native species. An introduced species may find invading easier if potential predators and competitors have been decimated by disease. Pathogens which can cause fish diseases comprise. Bacterial infections, such as *Pseudomonas fluorescens* leading to fin rot and fish dropsy, fungal infection water mould infection, such as *Saprolegnia* Sp. Metazoan parasites, such as Copepods. Unicellular parasites, such as *Ichthyophthirius multifiliis*.

MATERIAL AND METHODS

The major carps were collected from different fresh water resources like Borgao dam, Nilona dam, Waghadi river. Morning hours 6 to 8am were fixed for to visit during these hours fisherman captured fishes from the dams and when they sorted the infected fishes were picking and separated. The infected fishes brought into laboratory for further analysis. After morphological observation infection should be conformed with the help of Hamilton (2013).

RESULT

The infections among the fishes are mentioned in the observation Table 1 and photo Plate 1.

DISCUSSION

In these different types of infections are found in fresh water major craps i.e. Mrigala- Oodinium(VELVET)- Body skin of fish appears dusty in yellowish patches. Rohu- Haemorrhagic septicemia -Red steaks on fins usually near body with no sign of skin damage. Mrigala -Ammonia poisoning- Red or inflamed gills fish are gasping for air at the surface. Rohu-External bacterial infection-These may be spots on the body which appears red or orange. Mrigala-Bacterial infection or parasites -Red steaks on fins.,Catla -Fin Rot-Fins eaten away with redness at base of bad area.,Rohu-Black spot-Small black specks on skin.,Catla-External parasites-Grey film on all or part of body.,Rohu-Fungus possibly bacteria-White cotton sproutina from fins or body, Catla-Pop eye-One or both eyes appear to be protruding abnormally “popping” or sticking out.,Catla-Hole in the head -HITH sometimes referred to as Head and lateral line Erosion HLL.E.,Mrigala-Fish fungus-Cotton like growth on the body that may appear white or grey in colour. The SFD (state fishery department) should take necessary action for to create awareness regarding fish pathology which will help to avoid the consumption of infected fishes (Das,1996). It is concluded that Bacterial infection is more common in Yavatmal fresh water resources. We found that most of the carps are infected with some acute diseases which are not suitable for consumption.The various fish disease was identified in the fresh water resources, further study concerted on other FWR around Yavatmal city.

ACKNOWLEDGEMENT

The author is thankful to Department of Zoology, Amolakchand Mahavidyalaya, Yavatmal, for providing the laboratory facility and also to Dr.P.P.Joshi for his valuable guidance.

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Table 1-

| Sr.no | Common name | Scientific name | Dam | Identified Disease | Symptom |
|-------|-------------|-------------------|---------------|----------------------------------|---|
| 1. | Mrigala | Cirrhinus mrigala | Nilona dam | Oodinium (VELVET) | Body skin of fish appears dusty in yellowish patches |
| 2. | Rohu | Lebeo rohita | Borgaou | Hemorrhagic septicemia | Red steaks on fins usually near body with no sign of skin damage. |
| 3. | Mrigala | Cirrhinus mrigala | Borgaou | Ammonia poisoning | Red or inflamed gills fish are gasping for air at the surface. |
| 4. | Rohu | Lebeo rohita | Nilona dam | External bacterial infection | These may be spots on the body which appears red or orange |
| 5. | Mrigala | Cirrhinus mrigala | Nilona dam | Bacterial infection or parasites | Red steaks on fins. |
| 6. | Catla | Catla Catla | Waghadi river | Fin Rot | Fins eaten away with redness at base of bad area. |
| 7. | Rohu | Lebeo rohita | Borgaou | Black spot | Small black specks on skin. |
| 8. | Catla | Catla Catla | Nilona dam | External parasites | Grey film on all or part of body |

| | | | | | |
|-----|---------|-------------------|---------------|--------------------------|--|
| 9. | Rohu | Lebeo rohita | Borgaou | Fungus possibly bacteria | White cotton sproutina from fins or body |
| 10. | Catla | Catla Catla | Waghadi river | Pop eye | One or both eyes appear to be protruding abnormally “popping” or sticking out. |
| 11. | Catla | Catla Catla | Nilona dam | Hole in the head | HITH sometimes referred to as Head and lateral line Erosion HLLE. |
| 12. | Mrigala | Cirrhinus mrigala | Borgaou | Fish fungus | Cotton like growth on the body that may appear white or grey in colour |

Photo Plate 1- The photographs of fish infection in the carps are as follows,



Fig.1

Oodinium(VELVET)



Fig.2

Haemorrhagic septicemia



Fig.3

Ammonia poisoning



Fig.4

External bacterial infection



Fig.5

Bacterial infection or parasites



Fig.6

Fin Rot



Fig.7

Black spot



Fig.8

External parasites



Fig.9

Fungus possibly bacteria



Fig.10

Pop eye



Fig.11

Hole in the head



Fig.12

Fish fungus