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The most important external parasites that infect grass carp fish in the province of Babylon/Al taleea City (fingerlings - Mothers) and methods of treatment

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ABSTRACT

The study was conducted these are for the purpose of identifying the types of external parasites that infect fish in the city of Hilla (vanguard city lakes) with determining damages resulting and determine the most appropriate ways to get rid of them. The reason for this study to increase the number of dead fish in this city the study examined 500 fish live in the stage (fingerlings, Mothers) carp that have been collected from various lakes in the city ahead of the curve. Most important symptoms of infected fish: general weakness, slow motion, the fall of cobalt, change the color of the body, an increase in mucus secretions on the body surface. Been identified parasites that infect fish tissue to eliminate these parasites have been successfully used Formalin bath concentration 15-25 ppm for 24 hours on farms in small ponds and tanks may be used formalin concentration from 100 to 150 ppm for 3 hours - can be used Brine saline (NaCl) concentration of 1% bath for 10).

Keywords: External, parasites, grass carp, fish, fingerlings, Mothers, infected.

1. Introduction

A parasite is an organism that lives in or on another larger organism of a different species (the host), upon which it depends for food. Although the parasite benefits from the association, the host is harmed. Depending on the species, the host/parasite relationship may be temporary or permanent. Bacteria and viruses are classified as parasites in some branches of biology. Become fish diseases more prevalent fish breeding and increase the type fish jam in the same place and the lack of space used and the lack of attention Drug Control causing Ecological balance and health of fish [1] often occur injury sick with parasites Foreign between fish farms that are exposed to a sudden change in the environmental conditions such as: temperature [2], pH [3] and the lack of oxygen [4] of the things that lead to vulnerability and make way for Ail parasitic infect these fish, causing a marked decline in growth rates or an increase in the mortality rate, especially if the number of fish more than rates allowed [5] types of external parasites that infect fish and influences pathogenesis caused by and were classified globally by Kennedy [6] Lom and Molnar [7] Hoffman [8] Molnar [9] to combat parasites Foreign between infected fish were used formalin by A large number of scientists with different concentrations (ranging from 166 to 250) ppm hot water for a short period[10, 11]. This is the parasites from one of the causes of mortality in farmed fish as a result because they have a life cycle of direct and simple where it multiplies these animals quickly and prepare abundant enabling it to spread rapidly among fish and attacking members sensitive, such as the skin and gills and especially if there suitable conditions for that [12]. The purpose of this study is to find out what types external parasites that infect the fishes in the city of Hilla, and determine the incidence of each type and know the reasons that led to the emergence of these injuries, study pathological changes caused by some of these parasites in the infected fish and finally get rid of these parasites using material formalin.

2. Materials and Methods

This study was conducted on 500 fish Karp herbal stage (fingerlings, mothers) and collected from [6] Farms carp who lives in fresh water for the city of Babylon (hand vanguard) periodically while scanning the health status of these farms and during emergency situations, which often be accompanied of death of some fish during the period March to July 2012 are grouped samples of fish which live by ponds and then transported to a

laboratory examination of the fish in Qadisiyah in the laboratory examining fish a day to observe symptoms virtual according to the method which has been described by Amlacher take swabs on glass slides from the outer surface each of the skin and fins and gills of fish living then cover lid then scan slices well under a microscope to look for external parasites different. Severity of the infection is identified under the microscope as follows: There are (-) when they do not show any parasites under the microscope, slight injury (*) when there is a parasite and one in the single-field (**) when the number of parasites in a single-field under the microscope of 3 parasite, severe injury (***) when there are parasites per field more than 5 parasite. After examining the parasites which live are installed various parasites on glass slides according to the method described by Lucky[14] a sample of skin and gills of fish infected clinically be installed formalin concentration of 5% to work microscope slides private examination histological patients. Samples are working slides and stained dye Hematoxilline and Eocene according to the method described by Hibiya [15] and on the basis of the examination are diagnosed type parasite found.

3. Results and Discussion

Been identified three types of parasites and on the type of flatworms and single-parent., (Trichodina. Costia Necatrix. Chilodonella) (chilodonella) and parasite elliptical-like heart and a length of about 60 microns and width 54 microns and contains a set of goals accumulate in lines (5 to 15 lines) on the lower surface of the body, with some cilia large gathering in front of the gastrointestinal tract and the rear part of the body puffy and has a large nucleus and sexual reproduction here parasite could not live without the host. (Trichodina) and this parasite animal initial small size ranges between 25-50 microns, and appears in the form of a circular when viewed from the bottom ventral or in the form of the hat when viewed from the side, and is surrounded by this parasite fold from overseas and Department of hooks or teeth Small hooks or oral dentils distributed regularly saw similar age and parasite contains two nuclei, one large and the other small and many of the food gaps (*Costia necatrix*) is of primary parasites flagella. The worms Vtm identify the type of one *Gyrodactylus* spp of flatworms and single-parent. Parasite (*Gyrodactylus* spp) circular featuring cilia that surround adheres to the outside of the parasite and make it similar to the sun disk and has its bottom a large number of hooks, which come out of thorns. symptoms virtual fish infected with parasites foreign depend on the place of the parasite and its impact by who fall ill If the effect is skin we saw a change skin colored between baht or black dark, loss veneers, eat layer surface of the skin, and there red spots and infiltrates bloody with an increase in secretions mucus and portability fish Knit the same pelvic wall where you live, and chronic injuries as possible to show symptoms of general weakness and thin and the slow movement of diseased fish. If the injury gills Symptoms bad breath and lack of oxygen, i.e. opening infected fish to her mouth in an attempt to get oxygen from air with the speed in opening and closing operculum, collected at the entrance to the water basin or at the source of oxygen and in some cases possible that the fish jumping out basins. As you can see the accumulation of material mucous on operculum and the gills and in some cases can be seen necrosis in some parts of the gills all these symptoms were recorded by many scientists [20, 21]. Exposed fish to many diseases as do Like any living organisms. Recently these diseases began to draw the attention of many researchers, especially after intensified and fish farming in private farms. External parasites is a pathogen that represents a big problem in the process of fish farming because of economic losses large, either through direct or indirect [15] primitives a cause of mortality in fish, especially in the declined fingerlings because their reproduction be quickly and in large numbers, especially if there are environmental factors appropriate, flatworms and single-parent life cycle simple so they multiply rapidly and also in abundant numbers. Effect of primitives, worms and single-parent is not necessarily satisfactory but their presence affect the work of the various Member fish such as bad breath or change the osmotic, or may lead to the entry of many other pathogens, or may lead to a decrease in growth rates between fish [16] Proven results of this study that the fingerlings have the ability to injury more mothers) [17, 18] where we note through Table (1) percentage of parasites that infect fish, especially fingerling proven results of this study that the pathological changes of fish infected with parasites cause loss the skin layer of the skin and analyze these cells cavity. This means that the infected fish susceptible to the invasion of any kind of other pathogens Table (2). As noted defensive cells gathered fish (white blood cells and melanocytes big black) in the dermis of the skin or dermis of the skin and subcutaneous. It is known that the formalin used to get rid of external parasites [22] in this study, it was concluded that possible to get rid of external parasites in general by improving water quality and remove stress factors different and then use formalin concentration 250 ppm as water bath for an hour. You might notice that the fish processing back to its natural form within 24 hours and stop with mortality cases if found in some of the lakes.

4. Tables

Table 1: The overall proportion of external parasites

Month	march	April	may	June	July	total
Number of fish examined	110	81	95	95	119	5oo
Number of infected fish	38	40	38	30	42	188
Incidence (%)	34.5	49.3	40	13.5	35.2	37.6

Table 2: The ratio of external parasitic infection in different sizes

Type	Mothers	Fingerlings	Total
Number of fish examined	300	200	500
Number of infected fish	105	83	188
Incidence (%)	35	41.5	37.6

Table 3: Incidence of different types of external parasites (fingerlings)

Parasite	Number of fish examined	Number of infected fish fingerlings	Incidence of fingerlings (%)
Costia necatrix	200	22	11
Chilodonella		20	01
Trichodina		23	11.5
***Gyrodactylus* spp**		18	9

Table 4: Incidence of different types of external parasites (mothers)

Parasite	Number of fish examined	Number of infected fish mothers	Incidence of mothers (%)
Costia necatrix	300	28	9.33
Chilodonella		26	8.6
Trichodina		27	9
***Gyrodactylus* ssp**		24	8

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