



Diagnosis of parasitic diseases of fish cages (*Cyprinus carpio*) in the Al furat River Bridge of Mussayab in Babylon province

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Abstract:

77 fish from the common carp has been examined farms of fish (cages) In AL Furat River- Mussaib Babel province Period of four months from January to April. took Samples from the cages to laboratory . Investigate every of gill, skin and fins of fishes inspected by microscope and in second phase direct Samples are prepared from probable lesions. Gills were dissected and its filaments placed in Petri dishes with Glycerin. Have been found total 6 parasites, Two species from *protozoa* *Myxobolus* , *Trichodina* and four species from the monogenetic *D. extensus* , *D.achmerowi*, *D. minutes*, *Dactylogyrus vastato* The diagnosis by (1) .

Keywords: Parasite, Fishes, Fresh water, Furat River, Babylon.

تشخيص الامراض الطفيلية لاسماك الكارب الاعتيادي في الاقفاص جسر المسيب نهر الفرات محافظة بابل

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الخلاصة

77 من اسماك الكارب الاعتيادي المرباة في الاقفاص تم فحصها نهر الفرات جسر المسيب محافظة بابل لمدة اربعة اشهر من كانون الثاني الى نيسان اخذت العينات من الاقفاص وجلبت الى مختبر الاسماك وفحصت كل من الغلاصم والجلد والزعانف بواسطة المجهر الالكتروني واخذت العينات من الاسماك ووضعت على السلايد واضيف لها مادة الكلسرين لتشخيص الطفيليات وعثر على ست انواع من الطفيليات اثنان من البروتوزوا *Trichodina* , *Myxobolus* واربعه انواع من المونوجينيا *D. extensus* , *D.achmerowi*, *D. minutes*, *Dactylogyrus vastato* وتم تشخيصها اعتمادا على Bykhovskaya- Pavlovskaya .

Introduction

Parasite in fish common natural occurrence. Parasites can provide us information about hosts population ecology. In fisheries. biology, for example, parasite communities can be used to distinguish distinct populations of the same fish species co-inhabiting a region. Additionally, parasites possess a variety of specialized traits and life-

history strategies that enable them to colonize hosts. also Fish farms are vulnerable to great hazards exerted by parasites and other disease agents, especially under extensive culture and inadequate administrative and control measures (2). With such conditions of crowd and bad management, many parasite species can spread easily among fishes, especially those parasites

with direct life cycles (3). The first review on parasites of carps in Iraq (4) indicated the presence of 26 valid parasite species from the common carp, 14 from the grass carp and 10 from the silver carp. The update numbers of parasite species of these fishes (5) are 136, 38 and 30, respectively.

(6) Parasite infections can impair the courtship dance of male three spine sticklebacks. When that happens, the females reject them, suggesting a strong mechanism for the selection of parasite resistance. However, not all parasites let their hosts alive, and there are parasites with multistage life cycles that go to some trouble to kill their host. For example, some tapeworms make some fish behave in such a way so a predatory bird will catch it. The predatory bird is next host the parasite in the next stage of its life cycle. (7) Specifically, the tapeworm *Schistocephalus solidus* turns infected three spine stickleback white, and then makes them more buoyant so that they splash along at the surface of water, becoming easy to see and easy to catch by a passing bird. (8). Common carp (*Cyprinus carpio*) are an important food source for human and are also a common target species for recreational anglers across their native range (9) and The Common carp (*Cyprinus carpio*) is a widespread freshwater fish of eutrophic water in lakes and large rivers in Europe and Asia (10). Owing to its adaptation to a wide range of climatic and geographical conditions, many of parasites have been found in it. The most complete checklist of carp parasites records a total of 310 parasite species (11)

Materials and Methods:

77 of common carp fish examined. The fishes were taken randomly and periodically between the period from January to April 2016. The live fishes were collected from the fish in (45 cages those dimensions ranging between 3x3 m 2, 5x5 m 2 for both length and width. The intensity Faisal to 2m in each cage) randomly from Musayyib in the furat River in Babylon (Map 1) were examined cage brought live fish to a laboratory at the of Animal Production Department and which diagnosed by (12). These fish identified according to (13). Smears from the skin, gills and buckle cavity examined by a microscope. Upon fish dissection, muscles tissue and all internal organs were examined according to (14). Parasite identification was done according to (15). The index-catalogue of parasites and disease agents of fish in Iraq (16) followed indicate number of previous host records for each parasite in order to minimize list of references of each parasite species. The Parasites of Fish examined under the microscope (Olympus, made in-Japanese, with the power of object-oriented enlarge x4, x10, x40, x100 and zoom lens kind of x10.) The sample was taken from fish skin, gills and fins. Put on a slide and put them on and put a drop of water on it and Diagnosed cases with a group of parasites is (*Myxobolus*, *Trichodina*, *D. extensus*, *D. achmerowi*, *D. minutes*, *Dactylogyrus*) Were examined 77 fish from fish farms (cages).

The parasite distribution data in observed fishes were analyzed by working out biostatistical parameters using the following formulae:-

Prevalence of infection %, (Malhotra *et al.*, 1981)

$$I.P. = \frac{\text{hosts infected number}}{\text{hosts examined number}} \times 100$$

Mean intensity

$$M.I. = \frac{\text{parasites of Number}}{\text{hosts infected Number}}$$

Result and Discussion:

Multiple origins of the causes of fish diseases that could be a result of diseases For a bacterial viral fungal infections may be the result of parasitic infection with parasites In some cases, such as environmental changes are the cause of the fish kills pollution some cases, such as environmental changes are the cause of the fish kills pollution Considered parasites of the most prevalent in the Arab world pathogens Accounting for nearly 80% of the total fish diseases.

Note that the severity of injury in December was a Very few and it was begins to rise gradually where we note that often rises in April (Table 1) Note the higher temperature Increasing the number of parasite infection. There is an inverse relationship between the degree of movement and parasites Fish gill injury is more than skin fins and also note that the incidence of (*Trichodina* , *D. extensus*) (Table 2) oleso Through the table we see *Myxobolus* a high injury on the skin .

Table (1) shows the temperature and number of fish examined and the number of infected fish during the study period

Months	temperature	number of fish examined	Fish infection	Fish infection%
January	16±17	16	7	43.75
February	17± 18	17	10	58.82
March	18±20	19	14	73.68
April	20±23	18	14	77.77
Total	16±23	77	44	

Table (2) showing the type of parasites and the location and severity of injury.
 (- NON infection),(A,B,C infection from 1to2)(+from 3to 5)(++ more 5)

Number of fish examined	Fish infection	parasite species	Site of injury		
			Gill	Skin	Fins
77	44	<i>Myxobolus</i>	A+	B++	C+
		<i>Trichodina</i>	A++	B++	-
		<i>D. extensus</i>	A++	B+	C
		<i>D. achmerowi</i>	A++	B	C
		<i>D. minutes</i>	A	B++	C
		<i>Dactylogyrus vastator</i>	A+	B	-

in al furat river al mussaib bridge - Babylon do that study on fish in cages in al mad bat river random the fish collected from cages with different size and for month time table(1) do test on skin ,gill and fine than two type from protozoa and in January and February we note . When we comparatively that in March and April becomes temper true rising and the crease in value of fish.

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