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Research Article

Fish Species *Alburnus filippii* (Kessler, 1877) (Carpiformes: Cyprinidae) in Fresh Water Body, Hama Governorate- Syria (First Record)

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Abstract — The research was carried out from November 2022 to November 2023 to study the fish fauna in fresh water body of Al-Bireh Dam. Fish samples were collected using gill nets and hooks. The results showed the presence of the species *Alburnus filippii* (Kessler, 1877); one specimen measuring 9.7 cm long and weighing 150 g, was recorded for the first time in Syrian fresh waters. This species is characterized by eye locating on the upper side of the head, and the presence of a black line on both sides of the body extending from the edge of the eye to the front of the caudal fin. The ventral region with a black spot in the front of the abdomen, while the dorsal color is dark. The scales are firmly attached to the skin.

Keywords — Biodiversity; *Alburnus filippii*; Hama: Syrian fresh water: Cyprinidae; Pharyngial teeth.

1. Introduction

Cyprinidae is the largest family of freshwater fish families, including 3006 species and 367 genera around the world, and is distributed in most freshwater environments (rivers, lakes, swamps) [1]. The species *Alburnus filippii* was recorded in Kura river and the western Caspian Sea basin, in the Uras and Sevidrud Rivers, and Lake Anzali in Iran[(2]. The number of its species in Syria is 56 species belonging to 18 genera [3], and it is widely distributed, as 6 species belonging to genera were recorded in the Northern Kabir River [4]. Galiya (5) recorded four species belonging to the carp family in Lake 16 Tishreen.

In a study carried out by Ibrahim [6], four species from Cyprinidae family have been documented in Orontes River, while six species were identified in Afrin River, as reported by Karbaj [7]. Alkhalaf [8] recorded eight species and 8 genera belonging to Cyprinidae in Tishreen Lake on the Euphrates River. In a study carried out by Galiya [9] on the Syrian coast, three carp species were recorded.

A reference study of freshwater fish fauna in Syria revealed that the species *Alburnus Filippi* has not been recorded in Syria yet. Therefore, it is considered to be recorded for the first time in this country.

2. Related Work

Fish samples were collected from the study sites for a year (from November 2022 to November 2023) at a rate of once per month.The research was conducted in Syria, Hama Governorate, Wadi El-Oyoun region in a newly formed lake behind Al-Bireh Dam. The dam was established in 2016 with a length of 150 meters. The major depth of the lake is 17 meters with 100,000 cubic meters as a result of gathering streams, rivers, and springs in a mountainous area (Fig1). The elevation of this area is 1200 meters above sea level, and its temperature is low in the winter with (-2^{o} C), and it is moderate in the summer (28^{o} C).

3. Experimental Method/Procedure/Design

The fish were caught using local fishing methods after measuring the pH and water temperature, then pictures and morphometric measurements of all individuals were taken[10], and species were identified by using taxonomic keys such as [11; 12; 13; 14; 15; 1]. The specimens were classified and saved in formaldehyde 7% in the postgraduate studies Laboratory - Faculty of Science - Tishreen University,

4. Results and Discussion

The study showed the presence of number of many fish species such as *A. filippii* (Carpiformes; Cyprinidae) which was recorded for the first time in Syrian fresh waters in a Al-Bireh Dam (very cold mountainous area) this refers that this species tolerates low temperatures. The species *A. filippii* is characterized by a deep body and a short caudal peduncle (Fig 2). It has 7 hard, branched dorsal fin rays. The number of gill archers on the first gill arch is 14, and pharyngeal teeth are 5.2-2.5 consistent with [2] (Fig 3). The scales are strongly

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attached to the skin. The body coloured bright. The abdomen is white with a black spot in its front. The dorsal side is black, featuring a distinct dark line running along the midline of the body, it is as wide as the diameter of the eye consistent with [11,16]. The total length of the caught individual is 9.7 cm, and the number of scales on the lateral line is 46.(Table,1).

Figures and Tables

Figure 1: A general view of study area Al-Bireh Dam on 5/10/2023

Figure 2: General view of an individual of *Alburnus Filippi* caught from Al-Bireh Dam on 5/10/2023

Figure3: Pharyngeal teeth 2-6

Table 1: Morphometric measurements of *A.filippii* caught from Al-Bireh dam and comparison with reference data

	Berg,1949	Arash *et al.,2020*	Current study	*Tl%*
Dorsal fin rays	III(6)7	III 6-8(7)	III(7)	
Anal fin rays	III 10-13	III 9-13	III(9)	
L.L	(47)48	46-63	47	
Number of Gill-Rakers	13-15	12-17(14-15)	14	
Total length/T.L			9.7	100
Standard length/S.L			7.3	75.25
Head length/H.L			2.1	21.64
Body depth/B.D			2.9	29.89
Eye Diameter/E.D			0.6	6.81
Dorsal Fin Base Length			1.1	11.34
Pectoral Base Fin Length			1.5	15.46
High of Anal Fin			1.2	12.37
High of pectoral Fin			1.1	11.34
Anal Distance			4.9	50.51

6. Conclusion and Future Scope

The species *Alburnus filippii* was recorded for the first time in Syrian freshwater and was caught with beach traps in October 2023. It was not previously registered in the list of Syrian freshwater fish, so I would like to document it and publish it scientifically.

In future The recording of this species is evidence of the conservation of the sustainability of freshwater ecosystems.

Data Availability

The data underlining the finding of this study was created by making a resounding dance to the corresponding effect.

Conflict of Interest

Authors are required to disclose any real or potential conflicts of interest transparently. This includes any financial, personal, or professional associations with individuals or organizations that may inappropriately affect or appear to affect their work. If no such conflicts exist, authors must explicitly state they have no conflicts to declare.

Authors' Contributions

Pro. Mohammad Youns; Galyia chief supervisor of scientific and scientific auditor

Dr.Ali Abdllatif Mansour participant in supervising the scientific research and linguistic reviewer

Ph.D student Razan Hasan Balloul carried out the research wrote the article and documented the result. All authors reviewed and edited the manuscript and edited the manuscript and approved the final of the manuscript.

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References

[1] Joseph. C. Terry C and M. Wilson"Fishes of the world," *Polished sinultan,cously* , Canada,pp.**751-755, 2016.**

[2] P.A. Jad, S. Eame, K.Yazdan , "Body shape Comparison of Kura Bleak (*Alburnus filippii*) in Aras and Ahar–Chai Rivers Using Geometric Morphometric Approach",*Research in Zoology*, Vol.**5**, Issue.**1**,pp.**20-24, 2015.**

[3] National Study Biodiversity in the Syrian Arab Republic , "*Publications of the Ministry of State for Environmental Affairs*," Biodiversity Unit, pp.107, **2016.**

[4] B.A. Issa, S. Adeeb, A. Abd Allatif, Sh. Tahar , "Specific Composition of Fauna Fishes in the Lower part of Alkabir Alshemali River (Latakia). Syrian", *Journal of Agricultural Research*, Vol.**7**, Issue.**1**, pp.**351-366, 2020.**

[5] G.A. Mohammad, H. Mohammad, H. Battoul A ,"A Contribution To The Study Of The Qualitative and Quantitative Composition of Fish Fauna in The 16 Tishreen Dam Lake (Al-Kabir Al-Shamali River - Syria)", *Tishreen University Journal for Studies and Scientific Research Basic Sciences Series*, Vol.**36**, Issue.**2**, pp.**276-261, 2015.**

[6] I.B. Amer, G. Mohammad, S.Myad," Recording New Fish Species in the Orontes River basin within Agricultural Lands (Their Habitat and Distribution".,*Tishreen University Journal for Studies and Scientific Research*, Vol.**28**, Issue.**3**, pp.**43-23, 2006.**

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[7] K. Khalil ," Study of the Qualitative and Quantitative Composition of Fish in the African river and the nutritional spectrum of some economic species",*Ph.D thesis,* Aleppo University, pp.**55-70, 2012.**
[8] Alkhalaf Ahmad,,H. Karbaj, k. Mohammad," A study of qualitative Composition Relative Storage assessment food spectrum of Fish in Tishreen Lake.Aleppo" Ph.D thesis, Dept. Science, Aleppo Univ, Syria, **2015.**
[9] G.A. Mohammad, F.l Iqbal," A Contribution to the Study of the Biodiversity of Young Freshwater Fish in Some Aquatic Environments of the Syrian Coast", *Tishreen University Journal Basic Sciences Series,* Vol.**26**, No.**1**, pp.**224-205, 2004.**
[10] Pravdin Gvared ," Methods in Ichthyology", *In the Proceedings of the 1966,Moscow High School,* pp.**265-268, 1966.**
[11] L. Berg ," Freshwater Fishes of USSR and inside countries", *Academy of Science,* Moscow, Vol.**2**, pp.**470-925,1949.**
[12] W. Beckman," The freshwater fishes of Syria and their generabiolgic and management" *FAO Fishery Biology,* Roma, pp.**297, 1962.**
[13] J. Vesilave ," Guide to taxonomy of freshwater fish in fauna USSR", Prosveni, Moscow, pp.**238, 1977.**
[14] V. Sokolov ," Dictionary of animal names in five languages Fishes". *Russ Kyazyk Publishers*. Moscow, pp.**733-736,1989.**
[15] E. Mark," Britain's Freshwater Fishes", *Princeton University,* USA, pp.**144, 2016.**
[16] A. Jouladeh, H. Ghanavi, I. Doadrio," Ichthyofauna From Iranian Freshwater: Annotated Checklist, Diagnosis, Taxonomy, Distribution and Conservation Assessment", Zoological Studies, Vol.**59**, Issus.**21**, pp303, **2020**

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