

**Morphological and Molecular investigations
of some freshwater fish parasites in Sheena
River near Rezan, Kurdistan Region/ Iraq.**

Supervision by:

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M.Sc. Research Proposal

College of Agri. Egn. Sci. / Salahaddin University- Erbil

2021-2022

BACKGROUND

Fishes are one of the largest and most important group of animals in the world. They dominate fresh waters with about 25000 species (Ondračková *et al.*, 2004).

The study of fish parasites is necessary and important to increase the productivity of both of natural as well as pond farms, to improve the stocks of valuable commercial fisheries in the natural waters and to the possibility of fish acclimatization in new sites or localities (Shul'man, 1961).

AIMS OF THE STUDY

The main purpose of the current study is to identify the parasites collected from fish host based on their morphological features, as well as their molecular

characterization, to note the prevalence and intensity of the parasites in freshwater fishes from Sheena River, all recorded parasites will be compared to the previously recorded parasites with the original paper and description, also description of new records even new species if present.

MATERIALS AND METHODS

1- Study area:

Sheena river long is about 7 Km, that End near Rezan District when unite with Bahdinan River (A branch of Greater Zab River). Rezan lies at 22 kilometers southeast of Barzan City and 134 kilometer from Erbil with a height of 1200 meter above sea level. This study was conducted in the river part that pass in Rezan districts.

2- Fish Sampling and processing:

- Samples of fresh water fishes collected from Sheena River in Kurdistan Region during August 2021 till the end of July 2022. Fishes were collected by fishermen by using cast nets and gill nets twice monthly.
- Fishes were kept in a cool box with river water (as a life) and transferred to the laboratory in the Department of Fish and Aquatic Res., College of Agri. Engi. Sci., University of Salahaddin-Erbil. Some physical (water temperature) and chemical (Salinity, pH, dissolved O₂) characters of water also are recorded during study period.

- Fishes will be examine for ecto- and Endo-parasites following Collected parasites will be examined directly (Protozoa and Monogenea) or fixed (for morphological studies in hot 4% formalin), preserved then (samples for morphology in 70% ethanol) and others will be deep frozen in ddH₂O for molecular studies, to detect the species taxa of them.
- Molecular identification by amplifying DNA using PCR technique then sequencing of amplified DNA and blasting them with Gene Bank sequences.

TIME SCHEDULE

August 2021- July 2022: Collecting of fish samples for the study, twice monthly and finding of the parasites and identifying them morphologically and insuring the results with molecular study.

January 2022- August 2022: Writing of the Diploma Thesis.

September 2022: sending of the thesis for scientific, language evaluation and defense.

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THANK YOU