Study of Ectoparasites of Scomberomorus Commerson and Sphyraena Jello Cuvier

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ABSTRACT

The study investigates the presence of ectoparasites in two fish species, Scomberomorus commerson (king mackerel) and Sphyraena jello (pickhandle barracuda). After examining under a microscope, 13 distinct ectoparasite species were found and identified on the skin and gills of the fish.

Keywords: Ectoparasites, Monogeneans, Pathogens, Scomberomorus Commerson , Sphyraena Jello.

INTRODUCTION

Scomberomorus commerson commonly known as the narrow-barred Spanish mackerel. Is locally referred as surmai in Karachi, Pakistan, and is often called king fish (Jawad, *et al*., 2021). The infection of monogeneans parasite is the main cause of fish anemia leading to high mortalities (Maged, *et al*., 2024). Sixteen fish analyzed, six were found to be parasitized, yielding a prevalence of 37.50%. This marks a new record of this ectoparasite in the region. These findings enhance the broader understanding of the distribution of copepod and the parasitic fish fauna (Freire, *et al*., 2021).

Over the past two centuries, marine ecosystems have significant changes, largely due to human-mediated introductions of new species. Marine organisms frequently act as hosts for various parasites and pathogens, which can adversely impact their populations (Seif al-Nasera, *et al*., 2023).

OBJECTIVE

The objective of this study is to investigate the presence and diversity of ectoparasites on the skin and gills of two fish species, *Scomberomorus commerson* (king mackerel) and *Sphyraena jello* (pickhandle barracuda), collected from different localities in Karachi.

This study aimed to detect skin and gills parasites in *S. commerson* and .*S. jello* investigate the histopathological changes related to its natural infections and the potential of parasite-host interactions.

METHODOLOGY

Fish samples were obtained, from markets of Karachi, skin and gill tissues were carefully scratched to form smears on slides.

A total of 96 slides were prepared across five months, including 24 slides each for *Scomberomorus commerson* (king mackerel) and *Sphyraena jello* (pickhandle barracuda) of skin and 48 of gills. The prepared slides were meticulously examined under a microscope for the identification and observation of ectoparasites.

RESULT

After examining 96 slides under a microscope, 13 distinct ectoparasites species were found and identified on the skin and gills of the fish. *Ichthyophthirius multifiliis, Gyrodactylus, Dactygyrus, Ambiphrya, Apostoma, Oodinium pillularis, Trichodina pediculus, Nerocila spp, Chilodenella spp, amyloodinium ocellatum, Pseudomonas pilliolare,* and *Cryptocaryon irritants* the ectoparasites were found on fish skin and gills.

CONCLUSION

A number of parasites were observed on skin and gills of *Scomberomorus commerson* and *Sphyraena jello* species. These parasites cause injurious effects on developmental stages and health of the fish species.

Parasites found on *Scomberomorus commerson* (king mackerel).

Months	No. of Individual of Fish	No. of Parasite Found
August	6	3
September	6	4
October	6	6
November	6	2

Parasites found on *Sphyraena jello* (pickhandle barracuda).

Months	No. of Individual of Fish	No. of Parasite Found
August	6	2
September	6	1
October	6	4
November	6	3

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