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New Record of the Squid *Sepia pharaonis* Ehrenberg,1831 from NW Arabian Gulf

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Abstract: *For the first time, Sepia pharaonis Ehrenberg, 1831, a species belonging to the Cephalopoda, a class belonging to the Mollusca phylum, which belongs to marine invertebrates, was recorded. This is the first recording in Iraqi territorial waters and is a step towards enhancing biodiversity in Iraqi waters.*

Key words: *Cephalopoda, Invertebrates, Mollusca, Territorial waters.*

I. Introduction

Cephalopods are active, intelligent carnivores with well-developed nervous and visual systems (Riad *et. al*., 2016). They are the most complex of the invertebrate phyla and are exclusively marine, found in all oceans and seas except the Black Sea, from the continental shelf and slopes of most oceans (FAO 2005). This phylum includes squid, octopuses and nautiluses, which comprise about 100 species and constitute 2.07 % of the phylum Mollusca. They are an important economic component of seafood in the diet, accounting for 14% of global fisheries (FAO 2004). Diffusion from the total catch of world cephalopod fishery, about 71.8% were squids, 13.6% cuttlefishes and 14.6% octopuses (Jereb & Roper 2005). The Iranians studied the investment trends in the fishing of the Pharaoh squid on the Iranian side of the Arabian Gulf because it is of great economic importance to their fisheries (Hashemi and Doustdar, 2021). Among the recordings we made to confirm the biodiversity of the Iraqi coast are the special studies that included: (Al-Khafaji *et al.,* 2017; Al-Maliky *et al.,* 2017; Al-Khafaji *et al.,* 2019; Al-Maliky *et al.,* 2021; Al-Maliky *et al.,* 2023; Al-Maliky *et al.,* 2024).

This study is one of many studies we are conducting to record the species found on the Iraqi marine coast in the waters of the Arabian Gulf, which is considered one of the important studies on biodiversity in the region.

II. Materials and Methods

Squid samples were collected after being caught with fish by trawling nets in the waters of the northwestern Arabian Gulf (Fig. 1), and were stored in nylon bags with alcohol added to them at a concentration of 70-80%. In the laboratory, morphological examinations were conducted on them and the species was identified based on Jereb & Roper (2005), the following characteristics were carefully examined for the identification of the species: External morphology, tentacular club, hectocotylized arm, tentacular club sucker, arm sucker, and funnel (siphon). The specimen parts were also photographed by Canon digital Camera.

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Figure 1. Map showing *Sepia pharaonis* collection area in the Iraqi coastal waters.

III. Results and Discussion

Phylum: Mollusca
Class: Cephalopoda Cuvier, l798.
Subclass : Coleoidea Bather, l888.
Order: Sepioidea Naef, 1916.
Family(a): Sepiidae Keferstein, 1866.
Genus *Sepia* Linnaeus, 1758
Sepia pharaonis Ehrenberg, 1831.
(Plate: V; Mantle length, 14.5-38.5 cm).

Diagnosis

Cephalopods are soft-bodied, bilaterally symmetrical animals with a head-body development consisting of an undivided muscular mantle and the mantle cavity containing the internal organs and the external fins, (Fig. 2) when present, bearing a crown-shaped head growing around the mouth from the mobile appendages surrounding the mouth, which are the arms and contractile claws (Faw, 2005).

Sepia squid is a genus of squid in the family Sepiidae and includes some of the best known and most common species, the pharaoh squid *S. pharaonis* is a widespread species of important fishery, found from East Africa to southern Japan. *S. pharaonis* is a commercially harvested species (El-Naggar, *et al.,* 2024).
This species is characterized by a brown forehead balloon and tiger stripes on the dorsal side. The tentacles contain large suckers, including large suckers in the middle rows. The ventral arm has broad basal chains of suckers followed by many chains of modified suckers, (Tehranifard & Dastan, 2011) (Fig. 3).

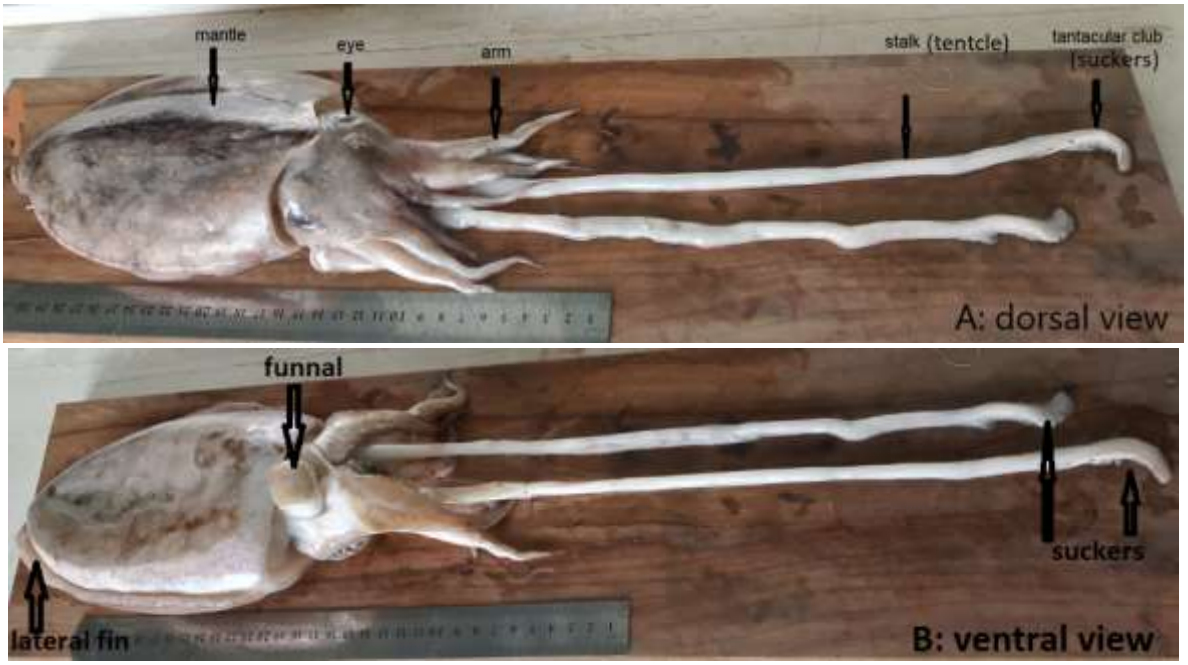

Figure 2. A. Dorsal view, B. Ventral view of a *Sepia pharaonis*

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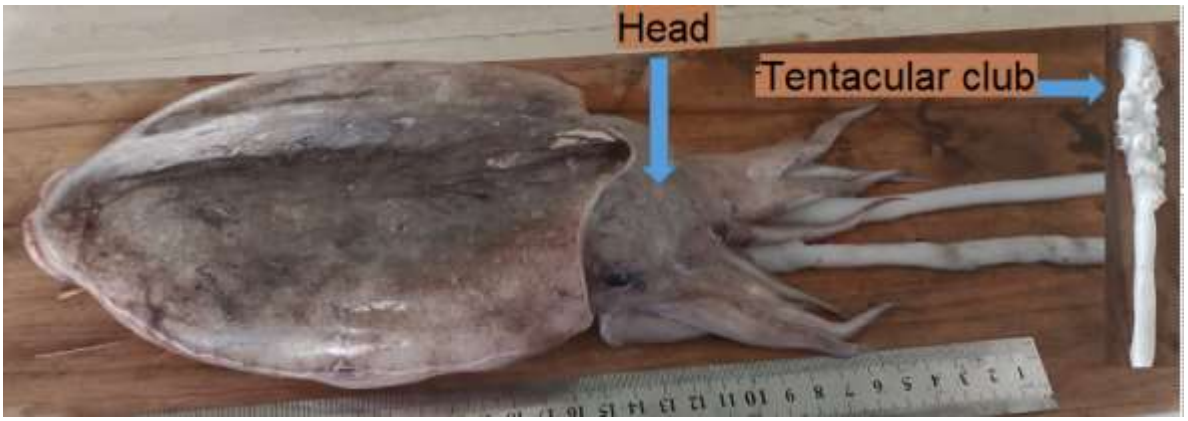

Figure 3. Shawing tentacular club of a *Sepia pharaonis.*

The pharaoh squid is commonly found in shallow waters between 10 and 40 metres deep, although it has been seen as deep as 130 metres. The squid moves to shallow areas at night to feed on small fish, crabs, and occasionally other squids. It shoots a cloud of ink from its funnel to confuse**.**

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