

REPRODUCTION BIOLOGY OF THE ARABIAN YELLOW FINE SEABREAM (*ACANTHOPAGRUS ARABICUS*) IN THE IRAQI MARINE WATERS

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ABSTRACT

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The Arabian yellow fine Seabream, *Acanthopagrus arabicus*, was collected by floating gillnets from Iraqi marine waters in the northwest Persian Gulf. A total of 422 fish were collected, of which 163 were male and 259 were female. The lengths and weights of the fish, sex ratio, gonadal somatic index (G. S. I.), gonad maturity cycle development, and the first maturational length were measured. The lengths ranged between 18.5-41.5, and males recorded the lowest length in February, and the females recorded the largest length in the samples collected in January. The length group 30 cm was dominant over the other lengths in the whole sample. The G.S.I. for both sexes recorded one peak, which refers to one period of spawning during February, with a gradual increase from December to reach its highest peak, it was followed by a gradual decline during the months of March and April, and its lowest value was recorded in August for females. The sex ratio was in favor of females. Five stages of maturity were identified with the difference in the size of the eggs, their behavior in spawning in one batch, and their breeding season extending from February to April, and the peak of reproduction is in March.

INTRODUCTION

The species *Acanthopagrus arabicus* belongs to the family Sparidae [1] It was renamed from *A. latus* [2]. It is one of the important commercial species with high economic value in the region [3]. It is also considered one of the most common species of the family (Sparidae) in Iraqi marine waters, especially in the waters affected by the flows of Shatt al-Arab waters. Its juveniles and immature stages enter the waters of the Shatt al-Arab [4]. The total catch of species of the Shank family during 2019 amounted to about 1439 tons, which constituted 12.7% of the Iraqi marine catch [5]. *A. arabicus* is widespread in the Persian Gulf and along the coast of India to the Philippines, north to Japan, and south to Australia, and its diet consists mainly of echinoderms, worms, crustaceans, and molluscs. Exploiting *A. arabicus* in particular with a variety of nets including hook and thread [6]. The biology of these fish has been studied by many researchers, [7] found the spawning of *A. arabicus* in the waters of the Arabian Gulf once a year during the period from January to April. [8] also studied the biology of the Shank family fish populations in Qatari waters in the Arabian Gulf, they mentioned that the period of spawning was very short and extended from mid-April to the end of it. [9] examined some aspects of the reproductive biology of *A. arabicus* in Japan. There are preliminary reports on reproduction in *A. latus*, and *A. cuvieri* from Kuwait [10, 7]. [11] studied the reproductive biology of the *A. arabicus* in Iranian waters in the Persian Gulf, and determined the spawning period from February to June.

This study aims to determine the breeding period of the economically important *A. arabicus*, its breeding pattern, and some of its life characteristics in Iraqi