## Accepted Manuscript

Cannibalism in juvenile black rockfish, Sebastes schlegelii (Hilgendorf, 1880), reared under controlled conditions

Dan Xi, Xiumei Zhang, Hongjian Lü, Zhixin Zhang

PII: S0044-8486(16)30536-1

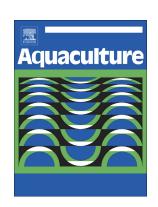
DOI: doi: 10.1016/j.aquaculture.2017.07.007

Reference: AQUA 632728

To appear in: aquaculture

Received date: 22 September 2016

Revised date: 3 July 2017 Accepted date: 6 July 2017



Please cite this article as: Dan Xi, Xiumei Zhang, Hongjian Lü, Zhixin Zhang, Cannibalism in juvenile black rockfish, Sebastes schlegelii (Hilgendorf, 1880), reared under controlled conditions, *aquaculture* (2017), doi: 10.1016/j.aquaculture.2017.07.007

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## ACCEPTED MANUSCRIPT

Cannibalism in juvenile black rockfish, Sebastes schlegelii

(Hilgendorf, 1880), reared under controlled conditions

Dan Xi<sup>a</sup>, Xiumei Zhang<sup>a,b,\*</sup>, Hongjian Lü<sup>c</sup>, Zhixin Zhang<sup>d</sup>

<sup>a</sup> Key Laboratory of Mariculture, Ministry of Education, Ocean University of China, 5

Yushan Road, Qingdao, 266003, China

<sup>b</sup> Laboratory for Marine Fisheries Science and Food Production Processes, Qingdao

National Laboratory for Marine Science and Technology, Qingdao 266072, China

<sup>c</sup> Key Laboratory of Freshwater Fish Reproduction and Development, Ministry of

Education, College of Animal Science and Technology, Southwest University,

Chongqing, 400715, China

<sup>d</sup> Graduate School of Marine Science and Technology, Tokyo University of Marine

Science and Technology, Tokyo, 1088477, Japan

\*Corresponding author.

*Tel.*: +86-0532-82032076.

E-mail address: xiumei1227@163.com (X. Zhang).

**Abstract** 

Laboratory experiments were conducted to determine the influences of size difference,

fish density, shelter density, starvation time and light intensity on cannibalism among

the fry of black rockfish, Sebastes schlegelii. Cannibalism of black rockfish did not

occur at any level of other factors without sufficient size difference. Cannibalism rate

did not exceed 0.45 when size difference was less than 25 mm. Starvation seemed to be

a primary stimulus for cannibals to practice cannibalism. Cannibalism rate increased

significantly after cannibals were starved for 12 h. Also, shelter density and light

intensity significantly influenced cannibalism. A higher shelter density of (8 per tank)

or a suitable light intensity (0.2 Klux) reduced the occurrence of this behavior

significantly. In addition, interactive effects between size difference and shelter density,

size difference and starvation time, starvation time and shelter density, starvation time

and light intensity were confirmed on cannibalism rate. However, fish density (of prey)

-1-

## Download English Version:

## https://daneshyari.com/en/article/5539293

Download Persian Version:

https://daneshyari.com/article/5539293

<u>Daneshyari.com</u>