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Abstract

Disembowelment induction and gut regeneration of Holothuria polii (Delle Chiaje, 1824)

Hassan Abdel-Aziz ABDEL-LATIF
Alexandria University, Egypt

Abstract:

Holothurian Disembowelment or evisceration is a unique defense mechanism that involves internal organ expulsion followed by a regeneration period. The present study describes for the firdt time the evisceration process and the subsequent gut regeneration of Holothuria poliii. Evisceration was chemically induced through injection of 0.5 ml of 0.45M KCl into the perivisceral coelomic cavity. The internal organs were expelled posteriorly through anus within 7-15 minutes depending on holothurian size. Thereinafter, survival, growth and gut regeneration rates were weekly monitored over three months rearing period. Post evisceration, it was noticed that H. poliii has the ability to regenerate its gut by the 6th week; gaining little weight between 9th and 12th week. Gut was observed to be formed from two portions. Further histological study of gut formation defined five stages of regeneration.

Biography:

Hassan Abdel-Aziz ABDEL-LATIF is the professor of oceanography department and faculty of science from Alexandria University in Egypt.

Recent Publications:

1. Natural coinfection of cultured Nile tilapia Oreochromis niloticus with Aeromonas hydrophila and Gyrodactylus cichlidarum experiencing high mortality during summer

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