RESEARCH REVIEW JOURNALS
Volume-03
Issue-10
October-2018

ISSN: 2455-3085 (Online)
RESEARCH REVIEW International Journal of Multidisciplinary
www.rrjournals.com [UGC Listed Journal]

Cannibalism in snail *Lymnaea acuminata*

Krushna Raju Nagare

Assistant Professor, Department of Zoology, Indraraj ACS College, Sillod. Dist. Aurangabad (India)

ARTICLE DETAILS

Article History
Published Online: 10 October 2018

Keywords
cannibalism, *Lymnaea acuminata*
Aurangabad

ABSTRACT

This study documented cannibalism in *Lymnaea acuminata* snail from Aurangabad (M.S.)India, which is located in North 19deg; 53' 47" - East 75deg; 23' 54" on the World map.It appears that when food is scarce and the alternative prey is not available, *Lymnaea acuminata* show cannibalism.

1. Introduction

Cannibalism is the act of one individual of a species consuming all or part of another individual of the same species as food. To consume the same species or show cannibalism is a common ecological interaction in the animal kingdom and has been recorded for more than 1,500 species (G. A. Polis1981) Many snails are saprophagic, i.e. feed on decaying matter and dead animals and some of them, won't hesitate to eat dead snails of their own kind.Cannibalism is not only widespread in the animal kingdom, it is actually important in the ecology of many species of aquatic and terrestrial communities (Fox, 1975; Polis, 1981). This intraspecific interaction has the potential to alter the functional relationship of predator-prey interactions (Rudolf, 2007).There is limited information available regarding the cannibalism in Lymnaeid snails.The objective of this work is to document the occurrence of intraspecific predation in specimens of the *Lymnaea acuminata*.

2. Material and Method

The snails were collected from June – September 2009 for this study from water body around Aurangabad cityand maintained in the laboratory. A plastic troughhaving 10 litre capacity filed with 7 litre de-chlorinated water at laboratory conditions. 20 snails transffered in trough. Food material consisting of aquatic algae *Spirogyra* and other aquatic weed was provided *ad labium*for first two days. Water in the trough changesevery day.

3. Observations

One or two snails from the trough behaving abnormally. It seems uncomforting for them to acclimatise with laboratory condition. Such snails stop feeding and just float on water surface. After some days such snail became pale and can identify easily by their appearance. On the next day snails mantle seems loose from its shell. Next to this condition such snail died by completely separated its body from shell.

When the snail died, other snails from the trough surround that dead body and start eating the dead snail body slowly. The shell of dead snail fallen down at the bottom of trough. Other snails attack on that dead body and some time there was competition observe among the snails for dead body. As the saprophytic process start, within 3-5 hrs, complete dead body get consumed by the surrounding snails. (Photo plate showing the gradual process of cannibalism)

4. Discussion

Most mollusc are not herbivorous, sometime as per availability of food they tend to eat phyto and zooplankton , algae. Snails are well known for their saprophytic nature they consume dead and decaying parts of plants and animals including their own species. Snail's body composed by many important components like proteins, lipids, calcium etc. Shell predation and cannibalism in land snail for calcium observed by M. Ozgo and Z. Bogucki (2006). Lucia Savenau andP.B. Martin (2014)observed the egg cannibalism in freshwater gastropod snail *Pomacea canaliculata*.The present lymnaid *L. acuminata* snail also show cannibalism behaviour during study period.

References

1. Fox L. R.(1975). Cannibalism in natural populations. Annu Rev Ecol Syst, 6:87-106.
2. G. A. Polis, (1981).The evolution and dynamics of intraspecific predation. Annual Review of Ecology and Systematics 12, 225-251.
3. Lucia Saveanu and P. B. Martin (2014). Egg cannibalism in Pomacea caniculata (Ceanogastropoda: Ampullariidae) from Southern Pampas: An alternative trophic strategy? Malacologia 57(2):341-351.
4. Malgorzata Ozgo and Z, Boguck (2006). Shell predation an cannibalism in land snails Cepacea nemoralis living in acid and calcium deficient soil. Folia Malacologia. Vol. 14 issue-4, 217-220.
5. Rudolf V.H. (2008). Impact of cannibalism on predator- prey dynamics:size- structured interactions and apparent mutualism. Ecology.(PubMed) Jun 89(6):1650-60

01

02

03

04

05

06

The photo plate 1-6 showing gradual process of cannibalism behaviour in *Lymnaea acuminata* snail.