Conferência Internacional
da Amazônia em Estatística
Experimental e Análise de Risco

Manaus, AM – 12 a 15 de agosto de 2014

Anais
Proceedings

Roberval Monteiro Bezerra de Lima
Teresa Paula Costa Azinheira Oliveira
Editores Técnicos

CEAUL
Centro de Estatística e Aplicações
Universidade de Lisboa

UNIVERSIDADE ABERTA
www.uab.pt

Embrapa

Empresa Brasileira de Pesquisa Agropecuária
Embrapa Amazônia Ocidental
Ministério da Agricultura, Pecuária e Abastecimento

Conferência Internacional da Amazônia em Estatística Experimental de Risco

Anais
Proceedings

Roberval Monteiro Bezerra de Lima
Teresa Paula Costa Azinheira Oliveira
Editores Técnicos

Embrapa
Brasília, DF
2015

Behavior of Montandoniola Confusa Streito & Matocq (Hemiptera: Anthocoridae) Preying Upon Gall-Forming Thrips *Gynaikothrips Ficorum* Marchal (Thysanoptera: Phlaeothripidae)

[1]Adauto M. Tavares; [2]Jorge B. Torres; [2]Christian S.A. Silva-Torres; [3]Alessandra M. Vacari

[1]Embrapa Amazônia Ocidental, Brazil, adauto.tavares@embrapa.br; [2]Universidade Federal Rural de Pernambuco, Brazil, jtorres@depa.ufrpe.br; [2]Universidade Federal Rural de Pernambuco, Brazil, christian.torres@depa.ufrpe.br; [3]Faculdade de Ciências Agrárias e Veterinárias / Unesp Brazil, amvacari@gmail.com

Abstract

Gynaikothrips ficorum is associated its host plant, *Ficus microcarpa*. In this present study of three aspects of *M. confusa* predation upon all three stages of thrips: (i) functional response of the predator as a function of different densities of thrips eggs, immature and adults separately. Based on a logistic regression of the number of prey consumed/density, was determined through the CATMOD of SAS. These parameters were estimated with nonlinear least square regression was determined through the PROC NLIN of SAS. The functional response curve, which is based on a logistic regression of the number of prey consumed/density, was determined through the CATMOD of SAS. These were estimated with nonlinear least square regression based on the proportion of prey eaten/initial prey densities (PROC NLIN of SAS). (ii) The adult thrips interference on predation of eggs by *M. confusa* was analyzed by using PROC ANOVA of SAS to compare the treatments as function of egg densities and the interaction of egg densities/treatments. The number of preyed upon eggs/initial egg density was calculated using the regression analysis performed by PROC REG of SAS. The models of egg predation/ egg densities were compared between two treatments using PROC MIXED of SAS to test the equality of linear slopes; and (iii) adult *M. confusa* prey preferences when all thrips stages occurred. The data were tested under the

null hypothesis that no prey preference implies the expectation of an equal percentage of predation regardless of prey proportion. These analyses were performed using the PROC FREQ of SAS, and chi-square; (iii) M. confusa prey preferences when all thrips stages occurred simultaneously. For all three thrips life stages tested, the predator exhibited a type II functional response. The data were tested under the null hypothesis that no prey preference implies the expectation of an equal percentage of predation regardless of prey proportion performed using the PROC FREQ of SAS, and chi-square

Keywords: functional response, prey defense, prey preference.

Pupport: Embrapa, UFRPE, Capes

References

CHESSON, J. Estimation and analysis of preference and its relationship to foraging models. **Ecology**, Tempe, v. 64, p. 1297-1304, 1983.

DI STEFANO, J. Effect size estimates and confidence intervals, an alternative focus for the presentation and interpretation of ecological data. In: BURK, A. R. (Ed.). **New trends in ecology research**. New York: Nova Science, 2005. p. 71-102.

HOLLING, C. S. Some characteristics of simple types of predation and parasitism. **Canadian Entomologist**, Ottawa, v. 91, p. 385-398, 1959.

JULIANO, S. A. Nonlinear curve fitting, predation and functional response curves. In: SCHEINER, S. M.; GUREVITCH, J. (Ed.). **Design and analysis of ecological experiments**. New York: Chapman and Hall, 1993. p. 159-182.

SAS INSTITUTE. **SAS/STAT user's guide**: version 8.02, TS level 2 MO. Cary, NC: SAS Institute Inc., 1999.