

## Some Biological Characteristics of *Nyssia graecarius* (Lepidoptera: Geometridae) in Urmia Region

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### ABSTRACT

Some biological characteristics of *Nyssia graecarius* an occasional pest of many different deciduous plants was studied during the years 2005 and 2006 in Urmia region (Northwestern of Iran). The results of this study showed that, *N. graecarius* completes one generation in a year, overwintering as pupa in soil. Mass emerging of adults from the soil commonly peaks during mid-April. The wingless females simply climb the nearest trees and mate with the males. After mating, the females deposit an egg cluster on three trunks and branches, in bark cervices, under bark scales and cracks of breaking branches. The number of eggs laid per female ranged between 178 and 486. In nature, single egg cluster consist of >230 eggs. The incubation period was 17 days at 18±1 °C. Larval development in natural conditions averaged 35±3 days with instars 1-4. Young larvae begin feeding on the area in between small veins on the leaf. However, once larvae are mature, they consume the leaf entirely leaving only the midrib and major veins. In mid-June, late instars larvae migrate to the soil for pupation. They will stay in the soil in the pupal stage until they emerge in late March of following year as adult moth. The larvae of *N. graecarius* were parasitized by *Exorista* sp. and *Winthemia* sp. (Diptera: Tachinidae) in the study area.

*Key words:* Biological characteristics, *Nyssia graecarius*, Urmia, Iran.

### INTRODUCTION

*Nyssia graecarius* Stgr. (Lepidoptera: Geometridae) is a locally common geometrid moth, occurring in northern areas of Iran. Little is known of this moth's life history. Apart from brief description by Kazemi & Demnabi (1983) and Radjabi (1986), no detailed information on the biology of *N. graecarius* has been found in the literature. Sever outbreaks of *N. graecarius* occurred in Urmia apple orchards during the years 1995 and 1996 (personal observations).