

# A New Record and Developmental Stages of *Paropeas achatinacium* (L.P Feiffer, 1846), (Gastropoda; Subulinidea) in Iraq

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**Abstract:** This study found a new record species *Paropeas achatinacium* (L.P Feiffer, 1846) in Iraq, which is a terrestrial Molluscan., we studied it for three months (Jun, July, August) in some orchards in Baghdad, A special area has been selected in its environment to identify the stages of growth from egg to adulthood, These stages were documented by taking photographs of each of them, we found that it need (2 – 3) months to be adult and it may live for a year, and lay (20 – 40) eggs in gelatinous sac.

**Keywords:**

## 1. Introduction

The gastropods (snails and slugs) are distributed among freshwater, marine water and terrestrial environment, these animals are growing on decadent plants and feeding on many species, but some of them used to be carnivorous [1]. There is a gap information about the basic biology of the land snail. These animals are not distributed and not restricted in Iraq environment, especially in Baghdad, the studies used to be only classified their animals with limited scope such as [2]. This species belong to the Phylum: Mollusca, Class: Gastropoda, Order: Stylommatophora, Family: Subulinidea.

## 2. Materials and methods

Samples of animal is collected from some orchards in Baghdad –al-karkh that for three months (Jun, July, August) a normal area was then identified in the same its location (1x1) m<sup>2</sup> by placing a closed metal net at depth of 30 cm<sup>2</sup> and height of 30 cm<sup>2</sup> to protect it from external influence such as predators. The purpose of this study determine the developmental stages starting from laying eggs to adult stage. In their natural environment, we measured the shell length (w.m), number and direction of its lap, and then measured the length, width and shape of its aperture by using the ruler. To classify the species, we used the manual magnifying glass. The growth stages were photographed by using mobile camera. The classification of these animals was depending on [3, 4]. The soil temperature recorded by using a mercurial thermometer on 10 cm deep and pH soil measured by using pH-meter [5].

## 3. Result and Discussion

*Paropeas achatinacium* (L.P Feiffer, 1846) is the first record species in Iraq. This species is cryptogenic in Iraq because some of snails are non-endogenous [6]. They may be transport by horticultural industry to another countries [7]. Then the climate significant effect on the spread and distribution of these snails [8]. The family of this species was sacrificed by Czech republics green house [9] this species was discrete for the first time from Tan [10]. In Iraq

we found this species which have characters include shell small elongate (11 mm), clear yellow (Fig.1: a,b), but Bash [11] record that the shell have pale yellow. *P. achatinacium* has eight right convex whorls with semi deep structures; the top of the shell was not sharp. The aperture has oval shape, oblique and small. The aperture has rounded shape in the base and pointed shape in the top (4.4x2.3) mm, which has a thin lip (Fig. 2). This finding is agreement with [12]. The eyes of *P. achatinacium* are located at the tip of long stalk. The head hold a pair of tentacle (Fig.3). When studying the developmental stage, we found that the adult after (4-7) days from the meeting between two animals they lay (20-40) eggs in jelly sac (translucent), then the eggs hatched after (25) days from the fertilization, the first part of the shell appeared after (13) days (Fig. 4). All eight shell whorls are completed after (2-3) months (Fig. 5). Land snail is successful growth and reproductive population [13]. The vital activity depends on the temperature and pH then it varies from place to another, In Iraq the reproductive period is on June, July, and August where the temperature was 30°C and the PH was 7.4 but in another country may different like Egypt and European countries [14]. This result found that the *P. achatinacium* lives in a small groups and this supported by [15].

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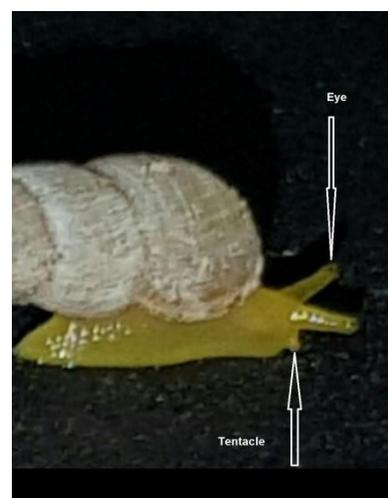
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**Figure 2:** The aperture size of *P. achatinaceum*. A/meaning width and B/meaning length



**Figure 3:** The eye and sensory tentacles



**Figure 1:** (a) A frontal side and (b) A dorsal side of *P. achatinaceum*. A/ meaning the length.



**Figure 4** The first part of the shell.



**Figure 5:** Developmental stages of *P. achatinaceum*