



Nocturnal Activity of *Anatololacerta pelasgiana* (Mertens, 1959) from Çıgħkara Nature Reserve, Antalya, Turkey

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Abstract

Here, we present a case of nocturnal activity of a diurnal Pelasgian Rock Lizard, *Anatololacerta pelasgiana* (Mertens, 1959) in Çıgħkara Nature Reserve. During our fieldwork in August 2016, we detected the nocturnal behavior individuals on the walls of the fire tower/cabin in the cedar forest. Besides, there is this is the first case of a nocturnal behavior without any artificial light.

Keywords: Lacertidae; *Anatololacerta pelasgiana*; lizard; nocturnal activity; Turkey.

Introduction

Temperature and humidity are the most important factors in the distribution and diversity of reptile species. Therefore, reptile diversity is high in tropic and warm areas (Vitt & Caldwell, 2013). Most of the reptiles use the sun and hot surfaces to raise their body temperature, and shade areas, under rocks, water, and cold surfaces to cool them. Although the sun is an unlimited heat source, reptiles can increase their body temperature in an indirect way. However, since the temperature in arid habitats is quite high during the day, the activity times of reptiles may shift towards cooler times of the day (Vitt & Caldwell, 2013).

It is known that lizards can be active both in the daytime (Agamidae, Anguidae, most of Lacertidae, etc.) and at night (Eublepharidae; most of Gekkonidae, etc.). Some diurnal species are known to be active at night due to the effects of human light pollution, hot climates or global warming due to the effects of global change (Perry & Fisher, 2006; Perry et al. 2008). Lacertides are generally known to be active during the day (diurnal).

The nocturnal activity was observed in some lacertid species; *Podarcis muralis* (Serbia population, Carratero et al. 2012) and *Darevskia rudis* (Blacksea region, Turkey, Afsar et al. 2018). For both lacertids, the observations were made around the walls of historical places which lighted by light reflectors-a secondary light and heat source. In this study, we report another nocturnal activity of a diurnal lacertid lizard, *Anatololacerta pelasgiana* from Çıgħkara Forests, Elmalı, Antalya.

Material and Methods

Individuals were observed during fieldworks in July and August 2016. First observation was recorded on the 13th August 2016. We observed the *Anatololacerta pelasgiana* individuals on the walls of the fire tower/cabin (35 S 755877 4047505 1943 a.s.l.) in the cedar forest (Figure 1). The air temperature was 18-20°C, recorded during the night. The air temperatures varied between 30-35°C in daytime and the water source was very poor (almost dry).

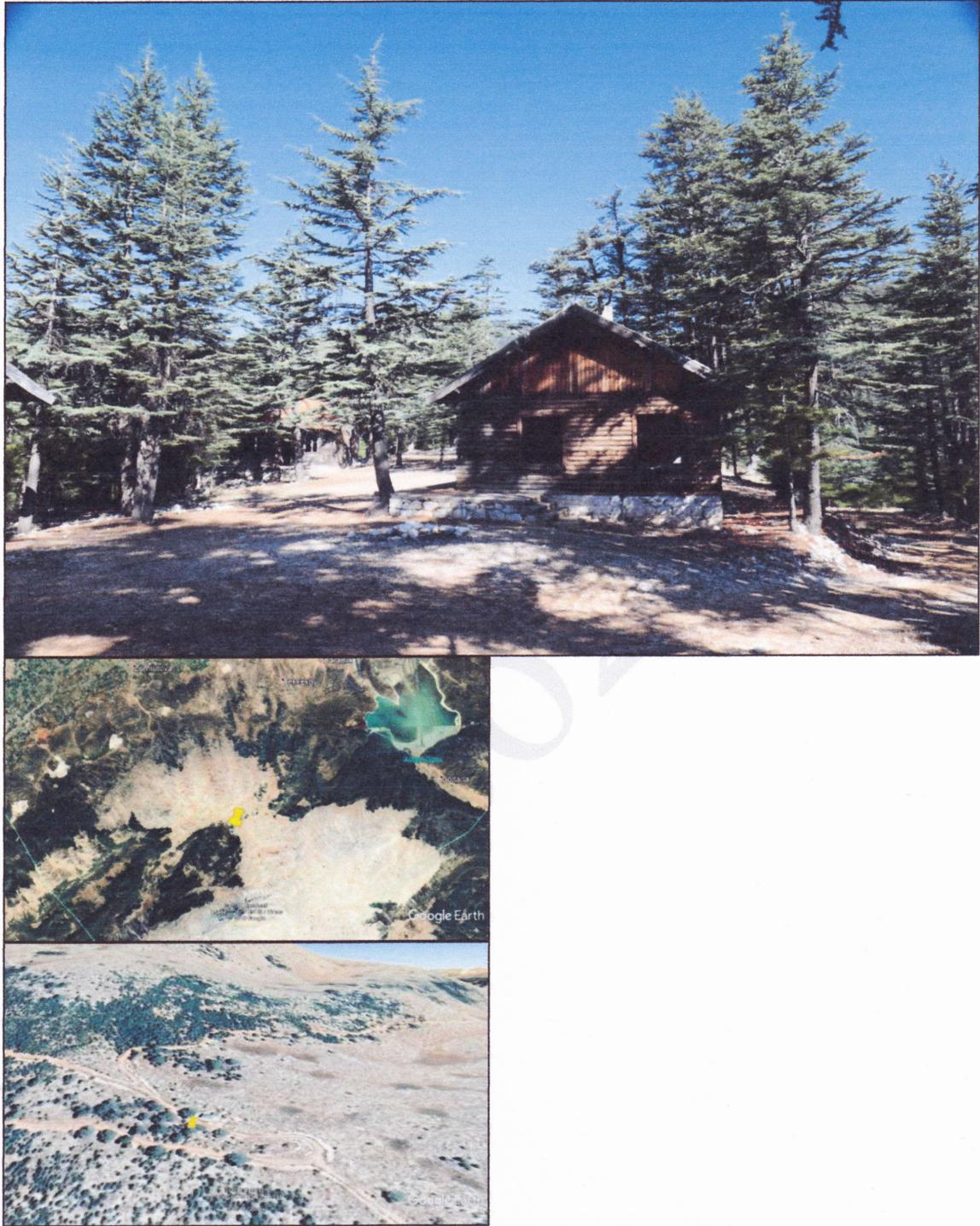


Figure 1. Map of the study area in Çığlıkara Nature Reserve, Antalya, Turkey.

Results

In August 2016, during the fieldwork in Çığlıkara Forests, Elmalı/Antalya, *A. pelasgiana* individuals were found on the walls of a cabin/fire tower belong to the Ministry of Forestry and Water Affairs. Later, during the night studies, it was found that *A. pelasgiana* individuals actively circulated at night between 21.00-23.00 (Figure 2). There is no artificial light source in the area where these Lacertids have night activity. However, there were four days left for the moon to become a full moon. In the region where the samples observed, weather varies between 30-35°C in



the daytime, the temperature decreased to 19-20°C at night. In addition, during night field studies, *Bufo variabilis* individuals, an individual belong to the genus *Ablepharus* and *Telescopus fallax* were also observed to be active at night in the same environment.



Figure 2. The nocturnal activity of a male Pelasgian Rock Lizard in Çiğlıkara Nature Reserve.

Discussion

In nocturnal ectotherms, body temperature changes are considerably higher than in diurnal species. Furthermore, when nocturnal geckos are considered, they prefer suboptimal conditions and nightlife, although their physiological activities are better at maximum conditions of a normal diurnal lizard. In this evolutionary process, it increases the likelihood of surviving by selecting nocturnality and consuming less energy by displacing less than a diurnal lizard (Vitt & Caldwell, 2013). Therefore, it is thought that the *A. pelasgiana* individuals are also active at night in addition to daytime activity. In addition, it is thought that the species is involved in night activities due to factors such as direct sunlight during the day and a high amount of radiation and lack of water sources. Also, there is no artificial light around the place that observation made and it is thought that the specimens could use the moonlight as a light source

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