

## Observations on the damage of *Poecilimon anatolicus* Ramme (Orthoptera : Tettigoniidae) in the Northwest region of Anatolia

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### Summary

The large damage of *Poecilimon anatolicus* Ramme was observed on the cultivated crops in Northwest region of Anatolia in 1980, 1981 and 1985.

The samples were collected from the different reservation areas. General coloration of the adults was green and greenish-brown. Generally, the body length of the plaine population was found much greater than the mountain population. Besides, there was a little variation at the numbers of teeth on the apical margin of male cerci.

### Introduction

Usually, the species of *Poecilimon* Fischer and *Isophya* Brun.-Watt. are known Green grasshopper by the farmers in Turkey. Some species of these genera occasionally injure cultivated crops in the western part of Anatolia.

### Results

The damage of *anatolicus* was not recorded until 1980 in Turkey. For the first time a heavy infestation was seen on some vegetables in Bozüyük, Bilecik in 1980. But the chemical control has not been used against this species. In the following year *P. anatolicus* as a new pest of chick-pea, bean, lentil, onion, garlik, pumpkin, maize sunflower and cereal were found in Safranbolu, Zonguldak (Figs, 1,2).

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Distribution area of harmful grasshopper was 175 da at the beginning of July in 1981. The infestation area was between Kırıklar and Yukarıdana villages of Safranbolu. The average population density was 36 per m<sup>2</sup>. Against the adults of *P. anatolicus* chemical control was carried out with 2,6 % gamma BHC.

The last damage was recorded on cereal and the other cultivated crops in Eflani, Zonguldak in 1985. Infestation areas were not large but the average of the population density was higher than Safranbolu with 40 per m<sup>2</sup> and the altitude of this area is 700 m.

According to Karabağ (1958) the earliest records of *P. anatolicus* are given as below : Bursa, 1 ♂, 1 ♀ (Lederer) Brunner-Wattenwyl 1878; Bursa,

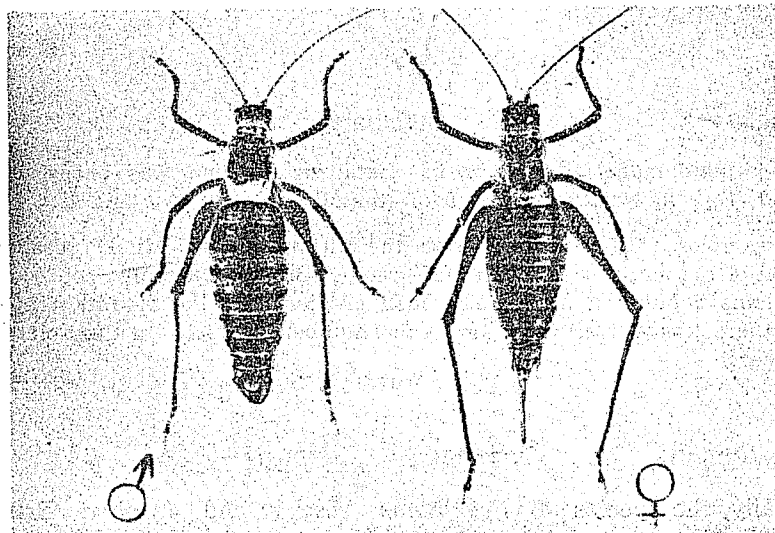


Fig. 1. General view of *Poecilimon anatolicus*

Balıklı (Werner); İstanbul (Werner) *P. flavescens* Werner 1901; Bursa, Uludağ (Bithyn. Olymp), 14.VIII.1910, 800-1200 m. (Fahringer *P. flavescens* Ebner 1919; Bursa, Karacabey, Uludağ ♂ (type of *P. anatolicus*) Ramme 1933; Bursa (Coll. Br.) *P. flavescens* Brun.-Watt. 1882, Bursa 1 ♂ (det. Miram) Be.-Bienko 1954; Uludağ 1800-1900 m 4 ♂♂ 2 ♀♀ (on *Urtica*) Ramme 1951, Uludağ, 1700-2000 m (M. Burr).

Recorded new distribution : Bursa-Karacabey highway 10. km 15.VI.1976, 9 ♂♂, 7 ♀♀ (Karabağ et al., 1981).

Measurements of male and female :



Fig. 2. *Poecilimon anatolicus* a new pest on the pumpkin leaves

According to Ramme (1951), measurements of *P. anatolicus* are given as below :

Length of body ♂ 15-18, ♀ 16.5-18 mm, pronotum ♂ 4.2-6, ♀ 4.3-5.4 mm, posterior femur ♂ 12-17.2, ♀ 15-16.5 mm, ovipositor 9.4-9.8 mm.

The measurements of *P. anatolicus* which were collected from different populations are shown in Table 1.

### Discussion

*P. anatolicus* samples were collected from the reservation areas during the faunistic studies and before the chemical control treatments.

General coloration of the adults was green and greenish brown, Ramme (1951) explained that all of the samples were pure green which were collected from Uludağ (Bithyn. Olymp.) and the altitude of this area is 1900

m. This difference of the body colour occurs due to ecological conditions between the mountain and plain forms of *P. anatolicus*.

Generally, the body length of the plain populations has been found much more greater than the mountain populations (Table 1). Besides, there was a little variation at the numbers of teeth on the apical margin of male cerci. These variations which were multidentated at the apex and the body length were also recorded by Ramme in 1951.

The greatest damage was seen on the various vegetables near the forests in Bilecik and Zonguldak provinces.

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### Özet

Kuzeybatı Anadolu'da *Poecilimon anatolicus* Ramme (Orthoptera : Tettigoniidae)'un zararına ait gözlemler

Türkiye'de üreticiler tarafından «Yeşil çekirge» olarak tanınan *Poecilimon* Fischer ve *Isophya* Brun.-Watt cinsine bağlı bazı zararlı türler, kültür bitkilerinde hemen her yıl mücadeleyi gerektirecek sayıda bir yoğunluğa ulaşmaktadır.

Bunlardan *P. anatolicus*'un ilk zararı Bilecik ilinin Bozüyük ilçesinde nohut, fasulye, mercimek ve kabak gibi sebzelerde 1980 yılında görülmüş, ancak mücadelesi yapılamamıştır. Aynı türün 1981 yılında Zonguldak iline bağlı Safranbolu ilçesinin Kırıklar ve Yukarıdana köyleri arasında 175 dekar arazide nohut, fasulye, mercimek, soğan, sarımsak, kabak, mısır, ayçiçeği ve hububatta zarar yaptığı saptanmıştır. Ergin yoğunluğu m<sup>2</sup> de 36 adet olduğu belirlenmiş ve zararlıya karşı mücadelede % 2.6 gamma BHC ile hazırlanmış kepekli yem kullanılmıştır. 1985 yılının Temmuz ayı başlarında *P. anatolicus*'un Zonguldak ilinin Eflani ilçesine bağlı Merkezmahalle köyünde hububat ve diğer kültür bitkilerinde zarar yaptığı görülmüştür.

Farklı popülasyondaki bireylerin vücut renginin yeşil veya yeşilimsi-kahverengi tonları arasında değiştiği ova popülasyonunun dağ formlarına oranla daha büyük olduğu ve erkekte cercuslardaki diş sayısında küçük varyasyonların bulunduğu dikkati çekmiştir. Aynı durum Ramme (1951) tarafından da ifade edilmiştir.

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Table 1. Measurements of *Poecilimon anatolicus*

Locality	Altitude	samples Number of	Length of body (mm)	Pronotum (mm)	Tegmina (mm)	Posterior femur	Ovipositor (mm)
Bursa-Karacabey		9 ♂♂	15.0 - 19.8	3.8 - 5.1	2.3 - 3.1	13.6 - 16.1	—
highway 10. km	240	7 ♀♀	16.2 - 20.0	4.7 - 5.1	—	16.2 - 17.0	8.4 - 9.8
Bilecik, Bozüyük	625	3 ♂♂	17.7 - 19.0	4.0 - 4.2	2.2 - 3.0	15.4 - 16.3	—
		3 ♀♀	17.3 - 19.2	4.9 - 5.0	—	15.1 - 17.0	8.9 - 9.7
Zonguldak, Safranbolu,	600	8 ♂♂	16.0 - 19.8	3.6 - 5.0	2.0 - 3.0	12.8 - 14.2	—
Kırıklar köyü		6 ♀♀	16.2 - 19.9	4.8 - 5.0	—	13.9 - 15.3	8.2 - 8.4
Zonguldak, Eflani	700	4 ♂♂	16.3 - 17.2	4.0 - 4.8	2.1 - 2.8	12.9 - 14.1	—
		3 ♀♀	15.8 - 18.0	4.7 - 5.0	—	14.0 - 14.7	8.4 - 8.6