

**Orijinal araştırma (Original article)**

## Coccinellidae (Coleoptera) species of vegetable plants from Kahramanmaraş, Turkey

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### Summary

Surveys were conducted to identify coccinellid species in vegetable fields in Kahramanmaraş, Turkey. Coccinellid species on vegetables were collected during 1997–1998. *Coccinella septempunctata* Linnaeus, 1758; *Exochomus nigromaculatus* (Goeze, 1777); *Hippodamia (Adonia) variegata* (Goeze, 1777); *Psyllobora vigintiduopunctata* (Linnaeus, 1758); *Scymnus apetzi* Mulsant, 1846; *Scymnus bivulnerus* Capra & Fürsch, 1967; *Scymnus flavicollis* Redtenbacher, 1843; *Scymnus levaillanti* Mulsant, 1850; *Scymnus pallipediformis* Günther, 1958; *Scymnus quadriguttatus* Capra, 1924; *Scymnus rubromaculatus* (Goeze, 1778) and *Stethorus gilvifrons* (Mulsant, 1850) were obtained from vegetables.

**Key words:** Coccinellid, survey, vegetables, Kahramanmaraş, Turkey

**Anahtar sözcükler:** Coccinellid, survey, vegetables, Kahramanmaraş, Türkiye

### Introduction

Family Coccinellidae (Coleoptera) includes one of the most important natural enemy groups of pests such as aphids and mites of vegetables. The adults and larvae of coccinellids feed with different stages of their preys. Many studies have been conducted to identify predator species of aphids and mites on different field crops in different regions of Turkey up to now (Uygun, 1981; Zeren & Düzgüneş, 1983; Zeren, 1989; Ulusoy et al. 1995; Büyük & Özpınar, 1999; Ölmez & Ulusoy 2002; Ayyıldız & Atlıhan 2006). Aslan & Uygun (2005) determined aphidophagus coccinellid species in cultivated and uncultivated fields in Kahramanmaraş Province. Işıkber & Karcı (2006) stated the predatory insect species on cotton, wheat and sugar beet fields in Kahramanmaraş. In this study, unlike other studies in this province, only the vegetable fields were sampled.

### Material and Methods

Vegetable growing areas of Kahramanmaraş (Center, Pazarcık and Türkoğlu counties) were surveyed randomly in July and August of 1997–1998.

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Alınış (Received): 20.08.2010

Kabul edilmiş (Accepted): 20.10.2010

Surveys were performed in eggplant (*Solanum melongena* Linnaeus), melon (*Cucumis melo* Linnaeus), watermelon (*Citrullus lanatus* (Thunberg)), tomato (*Lycopersicon esculentum* Linnaeus), cucumber (*Cucumis sativus* Linnaeus; *Cucumis melo* var. *flexuosus*), okra (*Hibiscus esculentus* Linnaeus), pepper (*Capsicum annuum* Linnaeus), cowpea (*Vigna unguiculata* Linnaeus), zucchini (*Cucurbita pepo* Linnaeus), and legume (*Phaseolus vulgaris* Linnaeus) plants. However, most of samples were taken from *C. annuum*, *C. sativus*, and *S. melongena* fields. In total, 25 leaves and sweeping net (size: 30x65 cm) samples were taken from each vegetable field. In 1997 and 1998, the samples were taken from 52 and 20 fields consist of various vegetable crops, respectively. The samples were placed in separate plastic bags and were brought to the laboratory. Obtained coccinellid adults were prepared to be identified.

## Results and Discussion

### Family Coccinellidae (Coleoptera)

#### ***Coccinella septempunctata* Linnaeus, 1758**

Material examined: Center 568 m: Hacımustafa, 18.VI.1998 (1 individual), on *Solanum melongena* L. leaves; Pazarcık 850 m: Seyrantepe, 22.VII.1997 (2), on *Hibiscus esculentus* L. leaves; Türkoğlu 490 m: Ceceli, 15.VII.1998 (1), on *Cucumis sativus* L. leaves.

#### ***Exochomus nigromaculatus* (Goeze, 1777)**

Material examined: Pazarcık: Seyrantepe, 15.VII.1997 (1), on *Hibiscus esculentus* L. leaves.

#### ***Hippodamia (Adonia) variegata* (Goeze, 1777)**

Material examined: Center: Hacımustafa, 18.VI.1998 (2), *Solanum melongena* L. collected with a sweeping net; Center: Hacımustafa, 29.VII.1997 (1), on *Solanum melongena* L. leaves; Pazarcık: Seyrantepe, 15.VII.1997 (7) on *Hibiscus esculentus* L. leaves; Pazarcık: Alibeyuşağı, 21.VII.1998 (10) on *Cucumis sativus* L. leaves; Türkoğlu: Akçalı, 15.VII.1998 (1), on *Cucumis sativus* leaves.

#### ***Psyllobora vigintiduopunctata* (Linnaeus, 1758)**

Material examined: Center: Hacımustafa, 07.VII.1997 (1), *Solanum melongena* L. collected with a sweeping net; Center: Hacımustafa, 07.VII.1997 (2), on *Solanum melongena* L. leaves; Center: Hacımustafa, 09.VII.1997 (2), on *Hibiscus esculentus* L. leaves; Center: Hacımustafa, 07.VII.1997 (2), on *Cucurbita pepo* L. leaves; Center: Hacımustafa, 09.VII.1998 (14), *Hibiscus esculentus* L. collected with a sweeping net; Center: Hacımustafa, 09.VII.1998 (1), *Phaseolus vulgaris* L. collected with a sweeping net; Center: Hacımustafa, 29.VII.1997 (1), on *Capsicum annuum* L. leaves; Center: Hacımustafa, 29.VII.1997 (1), *Solanum melongena* L. collected with a sweeping net; Türkoğlu: Akçalı, 15.VII.1998 (1), *Cucumis sativus* L. collected with a sweeping net.

#### ***Scymnus apetzii* Mulsant, 1846**

Material examined: Center: Hacımustafa, 07.VII.1997 (1), *Solanum melongena* L. collected with a sweeping net; Center: Hacımustafa, 09.VII.1998 (1), on *Cucurbita pepo* L. collected with a sweeping net; Pazarcık: Seyrantepe, 08.VIII.1997 (1), on *Cucumis melo* L.; Kahramanmaraş:

#### ***Scymnus bivulnerus* Capra & Fürsch 1967**

Material examined: Pazarcık: Seyrantepe, 08.VIII.1997 (1) on *Cucumis melo* L. leaves.

#### ***Scymnus flavicollis* Redtenbacher, 1843**

Material examined: Center: Hacımustafa, 09.VII.1998 (1) on *Cucurbita pepo* L. collected with a sweeping net.

### ***Scymnus levillanti* Mulsant, 1850**

Material examined: Center: Hacimustafa, 07.VII.1997 (4), *Solanum melongena* L. with sweeping net; Center: Hacimustafa, 09.VII.1998 (5), on *Cucurbita pepo* L. collected with a sweeping net; Türkoğlu: Ceceli 15.VII.1998 (1), on *Cucumis sativus* L. leaves.

### ***Scymnus pallipediformis* Günther, 1958**

Material examined: Pazarcık: Seyrantepe, 08.VIII.1997 (1) on *Cucumis melo* L. leaves.

### ***Scymnus quadriguttatus* Capra, 1924**

Material examined: Center: Hacimustafa, 07.VII.1997 (1), *Solanum melongena* L. collected with a sweeping net; Center: Hacimustafa, 09.VII.1998 (1), on *Cucurbita pepo* L. collected with a sweeping net; Pazarcık: Seyrantepe, 08.VIII.1997 (2) on *Cucumis melo* L.

### ***Scymnus rubromaculatus* (Goeze, 1778)**

Material examined: Center: Hacimustafa, 07.VII.1997 (2), *Solanum melongena* L. collected with a sweeping net; Center: Hacimustafa, 09.VII.1998 (13), *Cucurbita pepo* L. collected with a sweeping net; Pazarcık: Narlı, 24.VII.1998 (1), on *Phaseolus vulgaris* L.; Pazarcık: Narlı, 24.VII.1998 (1), on *Cucumis sativus* L. leaves; Pazarcık: Narlı, 08.VIII.1998 (1), on *Cucumis sativus* L. flower;

### ***Stethorus gilvifrons* (Mulsant, 1850)**

Material examined: Pazarcık: Narlı, 24.VII.1998 (1), on *Phaseolus vulgaris* L. leaves.

In conclusion, 12 different predatory coccinellid beetles were obtained from vegetable fields of Centre, Pazarcık and Türkoğlu counties of Kahramanmaraş Province. Coccinellid species were not found on *C. lanatus*, *L. esculentum*, *C. melo* var. *flexuosus* and *V. unguiculata*.

## **Özet**

### **Kahramanmaraş'ta sebze bitkilerinde Coccinellidae (Coleoptera) türleri**

Kahramanmaraş'ta yetiştirilen sebze bitkilerinden Coccinellidae (Coleoptera) türlerini tanımlamak için surveyler yapılmıştır. Sebzeler üzerindeki coccinellid türleri 1997–1998 yıllarında toplanmıştır. Sebzelerden *Coccinella septempunctata* Linnaeus, 1758; *Exochomus nigromaculatus* (Goeze, 1777); *Hippodamia (Adonia) variegata* (Goeze, 1777); *Psyllobora vigintiduopunctata* (Linnaeus, 1758); *Scymnus apetzi* Mulsant, 1846; *Scymnus bivulnerus* Capra & Fürsch, 1967; *Scymnus flavicollis* Redtenbacher, 1843; *Scymnus levillanti* Mulsant, 1850; *Scymnus pallipediformis* Günther, 1958; *Scymnus quadriguttatus* Capra, 1924; *Scymnus rubromaculatus* (Goeze, 1778) ve *Stethorus gilvifrons* (Mulsant, 1850) türleri elde edilmiştir.

### **Acknowledgements**

I would like to express my sincere to Dr. Nedim Uygun (Ç.Ü. Agricultural Faculty, Plant Protection Department, Balcalı/Adana). Also I would like to thank Kahramanmaraş Sütçü İmam University for their financial support of this study.

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