



## Diversity and distribution of phytophagous and predatory mites on rosehip (*Rosa canina* L.) (Rosaceae) in Ankara, Turkey

Tuğba ERDOĞAN<sup>1,2</sup> , Sultan ÇOBANOĞLU<sup>1</sup> 

<sup>1</sup> Department of Plant Protection, Faculty of Agriculture, Ankara University, Ankara, Turkey

<sup>2</sup> Corresponding author: [tugba.erdogan@ankara.edu.tr](mailto:tugba.erdogan@ankara.edu.tr)

Received: 14 July 2020

Accepted: 26 July 2020

Available online: 29 July 2020

**ABSTRACT:** The study was carried out to detect phytophagous and predatory mites on rosehip (*Rosa canina* L.) (Rosaceae) in Ankara, Turkey. The samples were collected monthly from Ayaş, Çubuk, Gölbaşı, Haymana, Kahramankazan and Kızılcahamam districts of Ankara province from March to November between 2012 and 2014. As a result, a total of 12 mite species were identified namely; *Amphitetranychus viennensis* (Zacher), *Bryobia kissophila* Eynhoven, *Eotetranychus populi* (Koch), *Tetranychus urticae* Koch (Acari: Tetranychidae), *Cenopalpus pulcher* (Canestrini and Fanzago) (Acari: Tenuipalpidae), *Tarsonemus smithi* Ewing (Acari: Tarsonemidae) as phytophagous mites, and *Euseius finlandicus* (Oudemans), *Kampimodromus aberrans* (Oudemans), *Paraseiulus triporus* (Chant and Yoshida-Shaul), *Typhlodromus* (*Anthoseius*) *bagdasarjani* Wainstein and Arutunjan, *T. (A.) psyllakisi* (Swirski and Ragusa) (Acari: Phytoseiidae) and *Zetzellia mali* (Ewing) (Acari: Stigmaeidae) as predatory mites. *Tetranychus urticae* and *K. aberrans* are the most common phytophagous and predatory mites, respectively. *Tarsonemus smithi* is a new record for the Turkish fauna.

**Keywords:** Acari, mites, Phytoseiidae, Rosaceae, rosehip, Turkey

**Zoobank:** <http://zoobank.org/E4047CC2-63A4-47E4-B00D-33BF30CD22A9>

### INTRODUCTION

Rosehip (*Rosa canina* L.) (Rosaceae) is a perennial, bush-formed plant belonging to the family of Rosaceae. Rosehip is important for human health via regulation cholesterol and blood pressure. It has positive effect to decrease cancer disease, reduce the risk of getting diabetes. It is known it is beneficial at joint inflammation, increases blood pressure, protects skin and stomach health, and prevents kidney diseases. It is good for respiratory diseases (Anonymous, 2014). At the same time, for naturel rosehip is also grown as erosion preventive plants and as resource pollens of beekeeping. Rosehip, which is widely found in naturally in various regions of Turkey is a very rich plant group due to its minerals and vitamins.

There have been very few studies on arthropod pests of rosehip in Turkey (Karaca, 1956; Özbek et al., 1996; Bayram et al., 1998). Bayram et al. (1998) detected *Diplolepis mayri* Schlecht, *D. rosae* L. *D. eglanteriae* Htg. (Hymenoptera: Cynipidae) and *Perrisia rosarum* Hardy (Diptera: Cecidomyiidae) as pest species on the rosehip in Ankara (Center, Çamlıdere, Gölbaşı). Nine parasitoid species belonging to Braconidae, Chalcididae, Eulophidae, Eurytomidae, Pteromalidae and Torymidae families were also found in association with the above-mentioned pests in Turkey (Bayram et al., 1998). The mite species on rosehip have not been studied in Ankara province, so far. Therefore, the aim of this study was to determine diversity and distribution of phytophagous and predatory mites on rosehip (*Rosa canina* L.) (Rosaceae) in Ankara, Turkey.

### MATERIALS AND METHODS

Samples were collected at monthly intervals from different districts of Ankara (Ayaş (GPS: 40.063466,

32.489552), Çubuk (GPS: 40.388507, 32.946036), Gölbaşı (GPS: 39.822684, 32.827995), Haymana (GPS: 39.616573, 32.692048), Kahramankazan (GPS: 40.184415, 32.666811) and Kızılcahamam (GPS: 40.459057, 32.624257)) during the period of March to November in 2012-2014 (Fig. 1). A total of 125 samples were collected from six districts in Ankara province during two years (14 samples from Ayaş, 33 samples from Çubuk, 16 samples from Gölbaşı, 15 samples from Haymana, 17 samples from Kahramankazan and 29 samples from Kızılcahamam). The plant samples were transferred to the laboratory and they were examined under stereomicroscope. Berlese funnels are also used to extract mites. The mites were cleared in lactophenol solution and then mounted in Hoyer's medium (Düzgüneş, 1980).

Species identifications were made by Prof. Sultan Çobanoğlu according to Pritchard and Baker (1955), Tuttle and Baker (1968), Jeppson et al. (1975), Meyer (1987) and Papadoulis et al. (2009). The identified specimens are deposited in the mite collection of senior author (University of Ankara, Department of Plant Protection, Ankara, Turkey).

### RESULTS AND DISCUSSION

A total of 12 mite species belonging to five families were identified from rosehip in Ankara: *Amphitetranychus viennensis* (Zacher), *Bryobia kissophila* Eynhoven, *Eotetranychus populi* (Koch), *Tetranychus urticae* Koch (Acari: Tetranychidae), *Cenopalpus pulcher* (Canestrini and Fanzago) (Acari: Tenuipalpidae), *Tarsonemus smithi* Ewing (Acari: Tarsonemidae) as phytophagous mites, and *Euseius finlandicus* (Oudemans), *Kampimodromus aberrans* (Oudemans), *Paraseiulus triporus* (Chant and Yoshida-Shaul), *Typhlodromus* (*Anthoseius*) *bagdasarjani*

Wainstein and Arutunjan, *T. (A.) psyllakisi* (Swirski and Ragusa) (Acari: Phytoseiidae) and *Zetzellia mali* (Ewing)

(Acari: Stigmaeidae) as predatory mites (Table 1).

**Table 1.** Phytophagous and predatory mites on Rosehip in Ankara

	Family	Species
Predatory mites	Phytoseiidae	<i>Kampimodromus aberrans</i> (Oudemans, 1930)
		<i>Euseius finlandicus</i> (Oudemans, 1915)
		<i>Typhlodromus (Anthoseius) bagdasarjani</i> Wainstein and Arutunjan, 1967
		<i>Typhlodromus (Anthoseius) psyllakisi</i> (Swirski and Ragusa, 1976)
	Stigmaeidae	<i>Zetzellia mali</i> (Ewing, 1917)
	Tarsonemidae	<i>Tarsonemus smithi</i> Ewing, 1939*
Phytophagous mites	Tetranychidae	<i>Amphitetranychus viennensis</i> (Zacher, 1920)
		<i>Tetranychus urticae</i> Koch, 1836
		<i>Eotetranychus populi</i> (Koch, 1838)
		<i>Bryobia kissophila</i> Eynhoven, 1955

\*New record for the Turkish fauna

A total of 1173 specimens, of which 897 specimens belongs to phytophagous mites, were identified. The six species are predators while the other six species are phytophagous mites (Table 1).



**Figure 1.** Ankara province (\*: Sampling areas).

### Phytophagous mites

Family: Tetranychidae

#### *Amphitetranychus viennensis* (Zacher, 1920)

Material examined: Çubuk, 02. VI. 2013 (1♀); Gölbaşı, 02. XI. 2013 (1♂); Haymana, 09. IX. 2012 (2♀♀); Kızılcahamam, 15. IV. 2012 (1♀), 26. V. 2013 (2♀♀).

Distribution: It is mostly seen in Asian and European countries (Migeon et al., 2011).

#### *Tetranychus urticae* Koch, 1836

Material examined: Ayaş, 29. X. 2012 (4♀♀, 1♂), 02. XII. 2012 (1♂), 24. VIII. 2013 (5♀♀, 5♂♂), 27. X. 2013 (1♂); Çubuk, 22. IX. 2012 (19♀♀, 2♂♂), 21. X. 2012 (7♀♀, 3♂♂), 25. XI. 2012 (7♀♀, 8♂♂), 29. VI. 2013 (9♀♀, 1♂), 25. VII. 2013 (2♀♀, 2♂♂), 21. VIII. 2013 (10♀♀, 4♂♂), 16. IX. 2013 (1♀, 7♂♂), 13. X. 2013 (1♂); Gölbaşı, 04. XI. 2012 (5♀♀, 1♂), 15. VI. 2013 (1♀), 07. IX. 2013 (2♂♂), 28. IX. 2013 (1♀); Haymana, 06. I. 2012 (1♂), 13. VI. 2013 (2♀♀); Kahramankazan, 18. XI. 2012 (2♂♂), 14. IX. 2013 (2♂♂); Kızılcahamam, 06. IX. 2012 (6♀♀, 6♂♂), 14. X. 2012 (7♀♀, 3♂♂), 18. XI. 2012 (1♀), 23. VI. 2013 (1♀), 17. VIII. 2013 (6♀♀, 3♂♂), 10. XI. 2013 (1♂).

Distribution: *T. urticae* is widespread throughout the world except for some African and European countries and Asia (Migeon et al., 2011).

Remarks: *T. urticae* is more common in Çubuk, Kızılcahamam and Ayaş districts (Fig. 1).

#### *Eotetranychus populi* (Koch, 1838)

Material examined: Gölbaşı, 06 January 2012 (1♂).

Distribution: Armenia, Azerbaijan, China, France, Germany, Greece, Gruzija (Georgia), Hungary, India, Iran, Italy, Kazakhstan, Korea, the Netherlands, Poland, Russia (Eastern), Tajikistan, Turkey, Ukraine, UK, USA, Uzbekistan, Yugoslavia (Migeon et al., 2011).

#### *Bryobia kissophila* Eynhoven, 1955

Material examined: Çubuk, 01. V. 2012 (1♀).

Distribution: Belgium, Bulgaria, Chile, Denmark, France, Germany, Greece, Gruzija (Georgia), Hungary, Italy, the

Netherlands, Poland, Portugal, Serbia-Montenegro, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Tasmania (Australia), Turkey, Ukraine, UK, USA (Düzgüneş, 1963; Migeon et al., 2011).

Family: Tenuipalpidae

*Cenopalpus pulcher* (Canestrini and Fanzago, 1876)

Material examined: Ayaş, 06. VIII. 2012 (1♀), 21. IX. 2013 (1♀); Çubuk, 26. VIII. 2012 (1♀), 22. IX. 2012 (1♀), 25. XI. 2012 (1♀), 28. IV. 2013 (1♀), 29. VI. 2013 (1♀); Gölbaşı, 06. I. 2012 (3♀♀, 1♂), 06. X. 2012 (4♀♀), 04. XI. 2012 (1♀); Haymana, 17. VI. 2012 (1♀), 26. IX. 2013 (3♀♀); Kahramankazan, 16. XII. 2011(2♀♀); Kızılcahamam, 16. XII. 2011(2♀♀).

Distribution: Afghanistan, Algeria, Austria, Britain, Bulgaria, Crimea, Cyprus, Denmark, Egypt, Georgia, Germany, Greece, Iranian, Iraq, Israel, Italy, Lebanon, Libya, the Netherlands, Portugal, Russia, Sicily, Syria, Turkey, Ukraine (Pritchard and Baker, 1958; Düzgüneş, 1965; Jeppson et al., 1975; Anonymous, 2007; Çobanoğlu et al., 2016).

Remarks: *C. pulcher* is frequently found in Gölbaşı, Çubuk and Haymana districts (Fig. 1).

Family: Tarsonemidae

*Tarsonemus smithi* Ewing, 1939

Material examined: Gölbaşı, 06. I. 2012 (1♀).

Distribution: The species is widespread and known in North America, Japan, Germany, Israel, Poland, Crimea, Taiwan, Italy, Libya, China (Anonymous, 2016).

Remarks: *Tarsonemus smithi* is a new record for Turkish mite fauna.

Predatory mites

Family: Phytoseiidae

*Kampimodromus aberrans* (Oudemans, 1930)

Material examined: Ayaş, 13. V. 2012 (1♀), 08. VII. 2012 (2♂♂), 19. V. 2013 (1♀), 27. VII. 2013 (3♀♀), 21. IX. 2013 (1♀), 27. X. 2013 (3♀♀); Çubuk, 03. VI. 2012 (2♀♀), 01. VII. 2012 (1♀, 1♂), 26. VIII. 2012 (5♀♀), 22. IX. 2012 (6♀♀, 1♂), 21. X. 2012 (3♀♀), 25. XI. 2012 (2♀♀), 25. VII. 2013 (1♀, 3♂♂), 21.VIII. 2013 (2♀♀); Gölbaşı, 20. V. 2012 (9♀♀), 06. X. 2012 (1♀), 04. XI. 2012 (1♀); Haymana, 20. V. 2012 (1♀), 01. V. 2013 (1♀), 13. VI. 2013 (1♀), 26. IX. 2013 (3♀♀); Kahramankazan, 27. V. 2012 (5♀♀), 23. VI. 2012 (8♀♀, 2♂♂), 13. VIII. 2012 (1♀), 06. IX. 2012 (3♀♀, 2♂♂), 14. X. 2012 (3♀♀), 14. IV. 2013 (3♀♀), 26. V. 2013 (1♀), 21. VII. 2013 (6♀♀); Kızılcahamam, 27. V. 2012 (1♀), 06. IX. 2012 (1♀), 14. X. 2012 (2♀♀), 21. VII. 2013 (2♀♀).

Distribution: Albania, Algeria, Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Canada-British Columbia, Ontario, Caucasus Region, Croatia, Czech Republic, England, France, Georgia, Germany, Greece, Hungary, Iran, Israel, Italy, Moldova, Montenegro, Morocco, the Netherlands, Norway, Poland, Portugal, Russia-Krasnodar Region, Moscow, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey, Ukraine, USA (Faraji et al., 2011; Demite, 2014).

*Euseius finlandicus* (Oudemans, 1915)

Material examined: Ayaş, 02. XII. 2012 (1♀), 21. IX. 2013 (1♀); Çubuk, 28. IV. 2013 (1♀), 02. VI. 2013 (1♀), 21. VIII. 2013 (1♀), 16. IX. 2013 (3♀♀), 13. X. 2013 (2♀♀); Gölbaşı, 14. VIII. 2013 (6♀♀); Haymana, 10. VIII. 2012 (2♀♀), 13. VI. 2013 (1♀); Kahramankazan, 14. X. 2012 (1♀), 18. XI. 2012 (2♀♀); Kızılcahamam, 13.VIII. 2012 (1♀), 14. X. 2012 (16♀♀), 17. VIII. 2013 (1♀), 05. X. 2013 (1♀), 10. XI. 2013 (2♀♀).

Distribution: Albania, Algeria, Angola, Argentina, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, British Columbia, New Brunswick, Nova Scotia, Ontario, Caucasus Region, China, Croatia, Cyprus, Czech Republic, Denmark, England, Finland, France, Georgia, Germany, Greece, Hungary, India, Indonesia, Iran, Italy, Japan, Kazakhstan, Latvia, Lithuania, Mexico, Moldova, Montenegro, the Netherlands, Nicaragua, North Macedonia, Norway, Poland, Portugal, Russia, Scandinavia, Serbia, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, USA (Faraji et al., 2011; Demite, 2014).

*Typhlodromus (Anthoseius) bagdasarjani* Wainstein and Arutunjan, 1967

Material examined: Gölbaşı, 10. VIII. 2012 (2♀♀).

Distribution: Armenia, Azerbaijan, Iran, Turkey, Turkmenistan (Faraji et al., 2011; Demite, 2014).

*Typhlodromus (Anthoseius) psyllakisi* (Swirski and Ragusa, 1976)

Material examined: Ayaş, 06. VIII. 2012 (2♀♀); Haymana, 10. VIII. 2012 (1♀); Kahramankazan, 13. VIII. 2012 (1♀).

Distribution: Greece, Turkey (Demite, 2014; Ersin and Madanlar, 2016; Gökçe et al., 2020).

*Paraseiulus triporus* (Chant and Yoshida-Shaul, 1982)

Material examined: Çubuk, 01. V. 2012 (1♀).

Distribution: Czech Republic, Denmark, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Moldova, Morocco, the Netherlands, Poland, Portugal, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Syria, Turkey, Ukraine, USA (Demite, 2014).

Family: Stigmaeidae

*Zetzellia mali* (Ewing, 1917)

Material examined: Çubuk, 21. X. 2012 (1♀); Kızılcahamam, 14. X. 2012 (1♀).

Distribution: Argentina, Austria, Bulgaria, Canada, China, Czech, France, Germany, Hungary, India; Iran, Italy, Lebanon, Lithuanian, Moldavia, Netherlands, Poland, Serbia, Slovenia, Spain, Switzerland, Tunisia, Turkey, UK, USA, former USSR, former Yugoslavia (Dönel and Doğan, 2013; Fan et al., 2016).

## CONCLUSION

In this study, the diversity and distribution of phytophagous and predatory mites on rosehip plants in Ankara were determined. A total of 125 samples were collected from six districts during two years. A total of 1173 specimens of which 897 specimens belongs to plant feeding mites and the rest was predatory mites. A total of 12 mite species were determined in this study. The six phytophagous mite species were determined to be members of Tetranychidae (*A. viennensis*, *T. urticae*, *B. kissophila* and *E. populi*), Tenuipalpidae (*C. pulcher*) and Tarsonemidae (*T. smithi*) families. *T. urticae* is the most common and important phytophagous mite species in Ankara. *T. smithi* is the first record for the Turkish fauna. Six predatory mite species were identified from 276 predatory mite samples examined. Among them five species (*K. aberrans*, *E. finlandicus*, *T. (A.) bagdasarjani*, *T. (A.) psyllakisi* and *P. triporus*) were belonging to family Phytoseiidae and one species (*Z. mali*) belonging to family Stigmaeidae.

Although chemical control is the most widely used method in Çubuk among the districts sampled in this study, the highest number of phytophagous mites was determined in this district. However, the number of predatory mites was relatively low when compared to phytophagous mites in Çubuk. The fauna of Gölbaşı is different from other districts, probably due to high humidity. Therefore, it harbors various species such as *Eotetranychus populi* and *Tarsonemus smithi*. As a result, predatory mites (especially phytoseiid species) were intensively observed in this study. For this reason, they can be used in the pest management programs that are targeting at control of phytophagous mites. Thus, it would also help to reduce total pesticide applications.

## Funding

This study was supported by University of Ankara, the Coordination of Scientific Research Projects (BAP-12B4347011).

## Conflict of interest

I declare that there are no conflicts of interest among the authors.

## Acknowledgements

This manuscript is a part of the PhD thesis of T. Erdoğan. We would like to express our sincere gratitude to Ankara University for their financial support to this work.

## REFERENCES

- Anonymous, 2007. Available <http://www.faunaeur.org> (Last accessed: 1 July 2020)
- Anonymous, 2014. Available <http://www.faydalarizararlari.com/kusburnunun-fayda-lari/> (Last accessed: 1 July 2020)
- Anonymous, 2016. Available <http://eunis.eea.europa.eu/species/251989> (Last accessed: 1 July 2020)
- Bayram, Ş., Ülgentürk, S. and Toros, S. 1998. Researches on the insects causing galls on dog rose (*Rosa* spp.) and their parasitoids in Ankara province. Turkish Journal of Entomology, 22: 259-268. [In Turkish]
- Çobanoğlu, S., Ueckermann E.A. and Sağlam, H.D. 2016. The Tenuipalpidae of Turkey, with a key to species (Acari: Trombidiformes), Zootaxa, 4097: 151-186. doi: 10.11646/zootaxa.4097.2.1
- Demite, P.R., McMurtry, J.A. and Moraes, G.J. de. 2014. Phytoseiidae Database: a website for taxonomic and distributional information on phytoseiid mites (Acari). Zootaxa, 3795: 571-577. doi: 10.11646/zootaxa.3795.5.6
- Dönel, G. and Doğan, S. 2013. The first record of a predator mite in Kelkit Valley: *Zetzellia mali* (Ewing) (Acari: Stigmaeidae). Erzincan University Journal of Science and Technology, 6: 157-163. [In Turkish]
- Düzgüneş, Z. 1963. Türkiye’de yeni bulunan akarlar. Türkiye Bitki Koruma Bülteni, 3: 237-246. [In Turkish]
- Düzgüneş, Z. 1965. Türkiye’de bitkilerde zarar veren Tenuipalpidae Sayed familyası türleri üzerine incelemeler. Ankara Üniversitesi Ziraat Fakültesi Yıllığı, 3, 120-148. [In Turkish]
- Ersin, F. and Madanlar, N. 2016. A new record for the Turkish fauna; *Typhlodromus (Anthoseius) psyllakisi* Swirski & Ragusa (Acari: Phytoseiidae). Turkish Journal of Biological Control, 7: 7-12.
- Fan, Q.-H., Flechtmann, C.H.W. and Moraes, G.J. de (2016) Annotated catalogue of Stigmaeidae (Acari: Prostigmata) with a pictorial key to genera. Zootaxa, 4176 (1): 1-199. doi: 10.11646/zootaxa.4176.1.1
- Faraji, F., Çobanoğlu S. and Çakmak, I. 2011. A checklist and a key for the Phytoseiidae species of Turkey (Acari: Mesostigmata), International Journal of Acarology 37 (sup1): 221-243. doi: 10.1080/01647954.2011.558851



Gökçe, M.P., Karagöz, M., Faraji, F. and Cakmak, I. 2020. Mite species composition and their population densities on chestnut trees in Turkey. *International Journal of Acarology*, 46: 247-253.  
[doi: 10.1080/01647954.2020.1752796](https://doi.org/10.1080/01647954.2020.1752796)

Jeppson, L.R., Keifer, H.H. and Baker, E.W. 1975. *Mites injurious to economic plants*. University of California Press, 253-283.

Karaca, İ. 1956. Orta Anadolu ve meyve ağaçlarında görülen menşei nebatî ve hayvanî önemli urların amili ve morfolojileri hakkında araştırmalar. *Ankara Üniversitesi Ziraat Fakültesi Yayınları*, 84, Ankara Üniversitesi Basımevi, Ankara, Turkey, 134 pp. [In Turkish]

Meyer, M.K.P. 1987. *African Tetranychidae (Acari: Prostigmata)*. Entomology Memoir Department of Agriculture Technical Service, Republic of South Africa, 69, 175 pp.

Migeon, A., Nouguier, E. and Dorkeld, F. 2011. Spider mites web: a comprehensive database for the Tetranychidae. *Trends in Acarology*: 557-560.  
[doi: 10.1007/978-90-481-9837-5\\_96](https://doi.org/10.1007/978-90-481-9837-5_96)

Özbek, H., Güçlü, Ş. and Tozlu, G. 1996. The harmful arthropod species of *Rosa canina* in Erzurum, Erzincan,

Bayburt and Artvin provinces. *Rosehip Symposium*, 5-6 September, Gümüşhane, Turkey, 219-230.

Papadoulis, G.Th., Emmanouel, N.G. and Kapaxidi, E.V. 2009. *Phytoseiidae of Greece and Cyprus (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, Michigan, USA, 200 pp.

Pritchard, A.E. and Baker, E.W. 1955. A revision of the spider mite family Tetranychidae. *Memoirs Series*, San Francisco, Pacific Coast Entomological Society, 2: 472 pp.  
[doi: 10.5962/bhl.title.150852](https://doi.org/10.5962/bhl.title.150852)

Pritchard, A.E. and Baker, E.W. 1958. The false spider mites (Acarina: Tenuipalpidae). *University of California Publications in Entomology*, 14: 175-274.

Tuttle, D.M. and Baker, E.W. 1968. *Spider mites of Southwestern United States and a revision of the Family Tetranychidae*. The University of Arizona Press, Tuscon-Arizona, USA, 143 pp.

Edited by: İbrahim Çakmak

Reviewed by: Two anonymous referees

**Citation:** Erdoğan, T. and Çobanoğlu, S. 2020. Diversity and distribution of phytophagous and predatory mites on rosehip (*Rosa canina* L.) (Rosaceae) in Ankara, Turkey. *Acarological Studies*, 2 (2): 83-87.