

numbers, and grouping of susceptibility to mite infestation of fig varieties was based on Duncan's multiple range test.

Mean predator densities were found to differ significantly among the 11 fig varieties and the different sampling intervals. Most predators were found on the imported variety 'American-3' (9.8 and 11.3 mites per leaf, in 2000 and 2001, respectively), followed by varieties 'American-1' and 'American-2'. The lowest mean mite density was recorded on var. 'Varamine black' (0.2 and 0.1 mite per leaf, in 2000 and 2001, respectively). Predatory mites were found to be present continuously on most fig varieties, but predator population levels were found to increase with decreasing mean temperature or availability of fig prey mites (*Eotetranychus hirsti*, *Eriophyes ficus*). Maximum mite population was recorded during late October, just before fig leaf shedding.

Thu 24, Auditorium, Posters-3

Injurious and predacious mites on weeds in pome fruit orchards of Tehran and West Azarbaijan provinces, Iran

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Weed plants in orchards were identified as source of feeding and shelter for injurious and predacious mites, respectively. Identification of weed mite fauna for management of mite pests in pome fruit orchards is necessary for reduction of pesticide applications. Mites harboring weeds within pome fruit orchards were surveyed in 2003 and 2004, in Tehran and West Azerbaijan provinces. Mite were found on plants of 17 dicotyledonous families (50 species) and 1 monocotyledonous family (4 species). Families with the most species with mites were Asteraceae and Papilionaceae. Among the Asteraceae the highest diversity of eriophyoid mites was found, the Pomaceae contained most phytoseiid mites. Among plant-feeding mite families (Tetranychidae, Tenuipalpidae, Tarsonemidae, Eriophyidae), extensive damage symptoms were recorded for *Tetranychus urticae*, *Bryobia rubriculatus*, *Panonychus ulmi* and *Eutetranychus*

sp. on weeds in both provinces. Results suggested that proper and continuous weed pruning in pome fruit orchards can protect fruit trees from spider mite reinfestations and by avoiding complete weed eradication a shelter remains for regenerating and keeping predatory mites in safe condition.

Wed 23, D109

Long-term changes in species richness of oribatid mites in pine forest ecosystems of the Ziemeļvidzeme Biosphere Reserve

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In 1992-1997, investigations of oribatid mites have been performed in Scots pine forests of the Ziemeļvidzeme Biosphere Reserve. Permanent plots were sampled at three sites: young (30-40 years old), middle-aged (50-70 years old), and old (150-200 years old) pine forest. Sampling took place every year at the end of August/ beginning of September. One hundred soil samples were taken (5 cm² x 10 cm deep) at each forest site. A modified high-gradient extractor was used for extraction of soil mites. Soil moisture, acidity, and other edaphic factors were measured. The meteorological data from the nearest meteorological station in Rujiena were used.

The highest average numbers of oribatid mites (3400 ind/m²) were found at the old forest site. The middle-aged and the young forests did not differ much in mite density (2220-2270 ind/m²). The highest total numbers of species (38) was recorded at the young forest site. Species richness in the young and middle-aged forest was similar, with 36 species. All the sites had the same dominant species: *Ceratozetes gracilis*, *Carabodes* spp., *Adoristes ovatus*, *Fuscoribatula furcillata*.

During the period of investigation species richness increased for the middle-aged and the old pine forest sites ($r=0.823$, $P<0.05$; $r=0.858$, $P<0.05$). The trend for the young forest was not significant ($r=0.782$, $P>0.05$). The increase in species richness of oribatid mites was due to shifts in species composition; mostly groups of recedent and subrecedent species with relative abundance less than 4% and 1% were affected. Numbers of species entering the community during the period of investigation, such as *Eremus* spp., *Phthiracarus* spp. and *Euphthiracarus* spp., were higher than the number of