

## فون‌کنه‌های گیاهی در استان‌های سیستان و بلوچستان و هرمزگان

مسعود اربابی<sup>۱</sup>، نادر گل محمد زاده خیابان<sup>۲</sup> و مجید عسکری<sup>۳</sup>

### چکیده

به منظور جمع‌آوری، شناسایی، پراکندگی و ارزیابی اهمیت کنه‌های گیاهی در جنوب شرق ایران، مناطق مختلف استانهای سیستان و بلوچستان و هرمزگان طی سال‌های ۱۳۷۴-۱۳۷۷ از طریق نمونه‌برداری، مورد بررسی قرار گرفتند. یکصد و هفت میزبان گیاهی مختلف در مناطق این دو استان نمونه‌برداری شد که ۵۱ میزبان حاوی کنه‌های گیاهی شناخته شد. از روی بادمجان و خربزه درختی و موز دو گونه (*Tenuipalpus daneshvari* Khosrowshahi and Arbabi و *Brevipalpus phoenicis* Complex group)، جدا از بررسی حاضر شناسایی گردید. گونه‌های *Aceria mangiferae* (کنه گل آذین‌انبه)، *E. cernus* (Nal.) (کنه گال چوبی شاخه‌کنار)، *Acalitus salvadorae* Keifer (کنه تاولزای گیاه مسواک)، *Brevipalpus lewisi* McGregor (کنه تارتن دروغین) به ترتیب روی خربزه درختی، شریفه، زیتون محلی برای اولین بار از ایران گزارش می‌شود. گونه‌های *Tetranychus orientalis*، *Tetranychus cinnabarinus* (Boisd)، *Eotetranychus hirsti* (Klein)، *Raoiellia indica* Hirst، *Oligonychus afrasiaticus* (McGregor)، *Eriophyes ficus* Cotte، P. and B. و *Aculops lycopersici* (Masse) به ترتیب روی هندوانه، کنار، مرکبات، خرما، انجیر و گوجه فرنگی حالت طغیانی و خسارتزا داشت. در این بررسی هشت خانواده متعلق به راسته‌ی *Anystidae*، *Bdellidae*، *Cheyletidae*، *Cunaxidae*، *Prostigmata* (Anystidae، Bdellidae،) *Mesostigmata* سه خانواده *Stigmacidae*، *Erythraeidae*، *Tydeidae*، *Trombidiidae*، و از راسته *Phytoseiidae* و *Ameroseiidae*، *Laelapidae* (Phytoseiidae و Ameroseiidae، Laelapidae) به عنوان کنه‌های شکارگر مورد شناسایی قرار

۱- بخش تحقیقات جانورشناسی کشاورزی، موسسه تحقیقات آفات و بیماریهای گیاهی، تهران

۲- بخش تحقیقات آفات و بیماریهای گیاهی مرکز تحقیقات کشاورزی ایرانشهر

۳- بخش تحقیقات آفات و بیماریهای گیاهی، مرکز تحقیقات کشاورزی هرمزگان

این مقاله در تاریخ ۱۳۸۰/۱۱/۹ دریافت و چاپ آن در تاریخ ۱۳۸۱/۴/۱۷ به تصویب نهایی رسید.

## اربابی و همکاران: فون کنه‌های گیاهی در استان‌های سیستان و بلوچستان و هرمزگان

گرفتند. با اینکه بیشترین پراکنندگی مربوط به کنه‌های شکارگر خانواده Anystidae (*Anystis sp.*) و (*Anystis baccharum* (L.)) در اکثر مناطق مورد بررسی بود ولی گونه‌های (*Amblydromella dalfardica* (Daneshvar)) و (*Amblyseius libanesi* (Dosse)) از خانواده Phytoseiidae بیشترین تراکم جمعیت را روی کنار و سیب زمینی شیرین داشتند. دو گونه‌ی (*Dinothrombium sp.*) و (*Allothrombium sp.*) از خانواده Trombidiidae که از نظر اندازه، بزرگ‌ترین کنه‌های شکارگر بودند در مناطق سرباز و حاجی آباد به ترتیب جمع‌آوری و شناسایی شد.

واژگان کلیدی: فون، کنه‌های شکارگر، کنه‌های گیاه خوار، سیستان و بلوچستان، هرمزگان

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Cont. Table 1:

Name of host plants	Distributions	Mite family	Mite species
<i>Hibiscus</i>	Iranshar, Bampur	Tenuipalpidae*	
French cotton	Soran, Patan, Chahbahar	Phytoseiidae*	
		Tetranychidae,	<i>Tetranychus</i> sp.,
		Stigmaeidae,	<i>Agistemus</i> sp.,
		Tydeidae	<i>Pronematus</i> sp.
Sebesten	Bampur	Tetranychidae*,	
		Tydeidae*	
Cypress	Saravan	Tetranychidae*	
Masterd trees	Bandar Abbass	Eriophytidae	<i>Acalitus Salvadorae</i> Keifer
Parasitic mite	Dashteh-Yari	Trombididae	<i>Dinothrombium</i> sp.
Parasitic mite,	Sarvan	Erythraeidae*	
Terminala	Kahir, Iranshar, Bampur	Tarsonemidae,	<i>Tarsonemus</i> sp.,
		Tuckerellidae,	<i>Tuckerellua</i> sp.
		Laelapidae,	<i>Laiseous</i> sp.,
		Phytoseiidae,	<i>Phytoseius</i> sp.,
		Ameroseiidae,	<i>Ameroseius</i> sp.,
Poultry food stuff	BandarAbbass	Acaridae,	<i>Tyrophagous</i> sp.
		Acaridae	<i>Acarus siro</i>

\*: Awaiting for identification.



Cont. Table 1:

Name of host plants	Distributions	Mite family	Mite species
French-bean	Kalehgan	Tetranychidae,	<i>Tetranychus</i> sp.,
		Phytoseiidae	<i>Amblyseius</i> sp.
Greengram	Zabul, Zahak	Tetranychidae	<i>T. cinnabarinus</i> (Boisd.)
Watermelon	Zabul, Zahak	Tetranychidae	<i>T. cinnabarinus</i> (Boisd.)
Pumpkin	Zabul, Zahak	Tetranychidae	<i>T. cinnabarinus</i> (Boisd.)
Cucumber	Zabul, Zahak	Tetranychidae	<i>T. cinnabarinus</i> (Boisd.)
<b>Cereal</b>			
Lucerne (alfalfa)	Nahok, Kalehghan	Tetranychidae,	<i>T. urticae</i>
		Tennipalpidae	<i>Brevipalpus</i> sp.
Wheat	Zabul	Tetranychidae	<i>Petrobia latens</i> Muller
<b>Oil seeds</b>			
Castor	Banderabbas, Sarbaz, Dashepirsohrab	Tetranychidae	<i>E. orientalis</i>
Sunflower	Zabul, Zahak	Tetranychidae	<i>T. cinnabarinus</i>
<b>Miscellaneous</b>			
Sweet potato	Kahir, Kesharie	Phytoseiidae	<i>Amblyseius libanesi</i> Dosse
Tamarind	Tiess	Phytoseiidae*	
Verbena	Iranshar	Phytoseiidae*	
Oleander	Iranshar	Tetranychidae*	

\*: Awaiting for identification.

Cont. Table 1:

Name of host plants	Distributions	Mite family	Mite species
Peach	Nahokh, Bampur, Iranshar, Kahir	Tetranychidae,	<i>Eutetranychus orientalis</i> (Klein),
Pomegranate	Soran	Anystidae	<i>Anystis baccarum</i>
		Eriophyiidae,	<i>Eriophyes granati</i> (C. M.),
		Stigmaeidae,	<i>Agistemus</i> sp.
		Anystidae	<i>Anystis</i> sp.
Terminala	Chabahar	Phytoseiidae*	
Vegetables			
Egg-plant	Nahok, Kahir, Kalchghan, Zabul	Tetranychidae,	<i>T. urticae</i> , <i>T. cinnabarinus</i> ,
		Tenuipalpidae,	<i>Brevipalpus phoenicis</i> ,
		Tydeidae	<i>Pronematus</i> sp.,
Lady's finger	Zabul, Zabak	Tetranychidae	<i>Tetranychus cinnabarinus</i>
Tomato	Nahok, Bampur, Iranshar, Kahir	Tetranychidae,	<i>T. urticae</i> ,
		Eriophyiidae,	<i>Aculops lycopersici</i> (Masse),
		Stigmaeidae	<i>Agistemus</i> sp.
Pulses			
Cowpea	Soran	Tetranychidae	<i>T. urticae</i> ,
Broad-bean	Soran	Tetranychidae	<i>Tetranychus</i> sp.,

\*: Awaiting for identification.

Cont. Table 1:

Name of host plants	Distributions	Mite family	Mite species
Grape	Iranshar	Phytoseiidae*	
Grapefruit	Baompur	Tetranychidae	<i>Eutetranychus orientalis</i> (Klein)
Jamunon (Black Plums)	Sarbaz	Tenuipalpidae	<i>Brevipalpus</i> sp.
Sweet Lemon	Patan	Tetranychidae	<i>Eutetranychus orientalis</i>
Lemon	Sinoghan, Nohogh, Patan, Hith	Tetranychidae,	<i>E. orientalis</i> (Klein),
		Tenuipalpidae	<i>Brevipalpus</i> sp.
Orange (jasmine)	Zalgh, Patan, Kahir, Sinoghan	Tetranychidae,	<i>E. orientalis</i> (Klein),
		Tenuipalpidae,	<i>Brevipalpus</i> sp.,
		Anystidae	<i>Anystis baccarum</i> .
Mango	Gharmbit, Hith, Kahir, Minab, Bandarabbas	Tetranychidae,	<i>Oligonychus mangiferus</i> ,
		Tenuipalpidae,	<i>Brevipalpus</i> sp.,
		Eriophyidae,	<i>Aceria mangiferae</i> ,
		Anystidae	<i>Anystis</i> sp.
Mandarin	Sinoghan	Tetranychidae	<i>Eutetranychus orientalis</i> (Klein)
Mulberry	Ziarat, Soran, Kalehghan	Tetranychidae,	<i>Tetranychus urticae</i> Koch <i>E. orientalis</i> (Klein)
		Phytoseiidae	<i>Amblyseius</i> sp.
Papaya	Kahir, Oraki, Patan, Sarbaz	Tetranychidae,	<i>E. orientalis</i> ,
		Tenuipalpidae,	<i>Brevipalpus lewisi</i> ,
		Stigmaciidae,	<i>Agistemus</i> sp.
		Phytoseiidae*	

\*: Awaiting for identification.

Table 1: Mite fauna recorded from fruit trees in different regions of Sistan &amp; Baluchestan and Hormozghan

Name of host plants	Distributions	Mite family	Mite species
Fruit trees			
Apple	Kaleghan, Sinoghan, Ziaran	Tetranychidae,	<i>Tetranychus urticae</i> ,
		Tenuipalpidae	<i>Tenuipalpus</i> sp.
Apricot	Kaleghan	Tydeidae	<i>Pronematus</i> sp.
Banana	Gharbit, Hith	Tenuipalpidae,	<i>Brevipalpus phoenisis</i> ,
		Anystidae	<i>Anystis baccharum</i>
Ber (Jujuba)	Ghonban, Bompur, Rask, Banderabbas,	Tetranychidae,	<i>Eutetranychus orientalis</i> (Klein),
	Bosher, Hith	Eriophyidae,	<i>Eriophyes cernus</i> , (Nal.),
Custard Apple	Kahir	Phytoseiidae	<i>Amblydromella daifardica</i> Daneshvar
Coconut	Chabahar, Patan	Phytoseiidae*	
		Tenuipalpidae,	<i>Raoella indica</i> Hirst
Date Palm*	Soran, Saravan, Minab, Rodan	Phytoseiidae*	
		Tetranychidae,	<i>Oligonychus afrasiaticus</i> (McGregor)
Fig.	Sinoghan, Patan	Eriophyidae*	
		Tetranychidae,	<i>Eotetranychus hirsuti</i> P. & B.
		Tenuipalpidae;	<i>Brevipalpus</i> sp.
		Rhyncaphytophthidae,	<i>Rhyncaphytophtus ficifoliae</i> Keifer,
		Tydeidae	<i>Tydeus</i> sp.
Guava	Kahir, Hith	Tenuipalpidae,	<i>Brevipalpus lewisi</i> McGregor
		Tydeidae*	

\*: Awaiting for identification.

and the world as well (33, 34, 35, 36). Some of potential species from this family and other predatory families reported by Welbourn (40).

#### **Mesostigmata predatory mites**

Out of three species identified from Phytoseiidae family (*Amblyseius libanesi* Dosse, *Amblydromella dalfardica*, *Amblyseius* sp.), distribution of them recorded in a limited regions, and incidence of *Amblyseius libanesi* on infested leaves of bean plants infested by *Tetranychus urticae* in Kalehghan has been found pronounced (Table,1). The earlier report of predatory mite was reported by Arbabi and Daneshvar,(5)

#### **Astigmata mites**

Only two species belonging into two genera and families recorded so far. One species was collected from imported food staff by sea vessel for poultry food which highly infested by *Acarus siro* while second species recorded on decayed material (Table, 1).

In total, mite fauna identified in both provinces, indicating that, the tropical plant mites were more in divers in Sistan-Baluchestan in comparison to Hormozghan province (Table, 1). Three to five species were recorded as new mite fauna which one, from tenuipalpid mite was described in a monograph of Tenuipalid mites of Iran (27). Out of four order mite species collected, more than eighty percent were recorded into two Prostigmata and Mesostigmata orders. Rest of specimens are still under investigation for species determination.

this mite in Minab as well as in southern part of Baluchestan provinces for the first time. Incidence and damage by this mite alarming further development of mango in both provinces.

*Acalitus salvadorae* Keifer was collected on *Salvador persica* from Bandar Abbas region. This host plant generally growing as wind breaks around the filed crops and mite produce erinum on lower side of infested leaves. This mite is a new record for mite fauna of Iran. The further damages of mite caused leaves crinkling and deformation.

#### **Predaceous mites**

Out of eleven predatory mite families recorded for the first time from both provinces, eight mite families (Anystidae, Bdellidae, Cheyletidae, Cunaxidae, Erythraeidae, Stigmaeidae, Trombidiidae and Tydeidae) with 8 genera and 9 species were recorded for order Prostigmata, while 3 mite families (Phytoseiidae, Amérosceiidae and Laelapidae) with four genera and five species collected from order Mesostigmata.

#### **Prostigmata predatory mites**

Except Anystidae and Trombidiidae, other specimens collected from predatory mite families (Bdellidae, Cheyletidae, Cunaxidae, Erythraeidae, Stigmaeidae and Tydeidae) belonging to Prostigmata, were recorded few in number in all surveyed regions. Therefore, due to limited their distribution and population of those identified species, further discussion on them avoided in text.

*Anystis baccarum* (Anystidae) was one of the predacious mite collected from many host plants as well as from soil surface of orchards and field crops in all most surveyed area. The incidence of this mite recorded in all seasons in southern parts of Baluchestan (Table, 1). This species reported from many tropical countries (Meyer, 1987) as well as from Pakistan and India (10, 18) and from some parts of Iran by, Khanjani *et al.*, (25, 26, 32).

From Trombidiidae family, two species, *Allothrombium* sp. *Dinothrombium* sp. with noticeable adult population observed in site of grasshopper growing and outbreaks in Dashteh Yari (Baluchestan) and perhaps in Hajiabad (Hormozghan) respectively. The dense population of later species at nymphal stages was found as ectoparasitic of migratory grasshopper while source of feeding of former collected species remained unknown (Table, 1). In recent years an excellent efforts conducted by Saboori and his foreign counterparts which resulted identification of many new records and new specie from this family for Iran

mite species (*Tenuipalpus daneshvari* Khosrowshahi & Arbabi) (8, 27). Rest of species were also found as new records for both provinces. *Raoeilla indicae* and *Dolichotetranychus* sp. earlier were reported through a mite fauna project reports (15). Among the tenuipalpid mite, injurious species recorded for *Brevipalpus lewisi* McGregor on Guava, *Brevipalpus phoenicis* Complex on Banana and *Dolichotetranychus* sp. on coconut in Baluchestan playing an important role for production of tropical crops.

Damages caused by *Brevipalpus lewisi* McGregor recorded during month of Sept.- Nov. on leaves and fruits of guava trees in Tis locality near Chabahar port in southern parts of Baluchestan. The browning damages of mite observed under side of leaves and at heavy infestation mite injuries extended to fruit surface by causing bronzing appearance on them which fruits remained small. This mite is a new record for Iran.

Population density of *Dolichotetranychus* sp. on coconut although was found high, but peculiar damages has not been observed on coconut leaves. Incidence of this mite on this tropical host plants is also new records for Iran. This mite in India and other coconut growing countries periodically playing as major pest on this host plant.

**Eriophyidae:** Out of those eriophyid mite species identified (*Aceria cernus*, *A. mangiferae*\*, *A. granati*, *Aculops lycopersici*, *Acalitus salvadorae*\*, *Rhynscaphytoptus ficifoliae*), incidence of three species are new records for Iran (\*) whereas other three species are new records for both provinces (Table, 1). The importance of eriophyid mite species on agricultural crops of Iran earlier reported by Arbabi *et al.*, (6).

*Aceria cernus* is a new records for mite fauna of Iran which caused woody gall formation on young ber shoot trees in ber growing area which mostly observed in southern parts of Iran where climatic condition is hot and humid. Maximum number of galls per shoot was recorded 5 to 6 galls and size of gall was varied between 2 to 5 centimeters in diameters. At the beginning, color of gall was green which ultimately in late season turned into dark brownish in color. When gall is young the activities of eriophyid mite population is fairly obvious under stereo microscope. Many specimens of a single phytoseiid mite also found along with its eriophyid mite prey. The host plant scattered in a few number while in Fars provinces dense of ber trees through scattered. The mite and its injuries also collected from Boshher, Khuzestan provinces by senior author.

Damages of *Aceria mangiferae* caused inflorescence malformation on mango trees which ultimately lead to reduction of mango fruit formation. The symptoms of injuries observed by

*Eotetranychus hirsti* recorded on few fig trees scattered in the form of patches in Sinoghan, Patan localities. The earlier reports of this mite from Iran reported by Khalimanesh (24) whereas world wide distribution reported by Jeppson et al. (20). Leaf chlorotic appearance with dense of web found as a general symptoms of injuries by this mite on infested fig leaves.

Incidence of citrus brown mite (*Eutetranychus orientalis*) recorded on *Citrus* spp. ber, wild caster and other host plants with leaf brownish and slivery appearance on upper surface of infested leaves mainly ber and wild caster during summer and autumns seasons in most of regions surveyed, but climatic condition of southern part of Baluchestan and Minab and other places of Hormozghan accelerate mite activities during both seasons. The severe damages of mite leads leaves fall with inferior fruit quality of infested host plants. In Dezful outbreak of this mite on citrus or other host plants found in relation of severe drought condition (6, 7, 8, 14, 28).

Occurrence of *Oligonychus afrasiaticus* recorded during June-Aug. in Minab, Iranshar, Saravan and other date growing regions in both provinces. The feeding of this mite pest entirely happened on unripe date fruits which coincidence with dense of webs formed around the date clusters. Some of the commercial date varieties such as Mazafati, Shokeri, Mordarsangh observed more susceptible and infested date fruits remained small in size, deformed in shape, premature, falls before normal period of riping. Rate of mite damages on said varieties was varied and in some regions highly infested by this mite, damages recorded upto 100%. The role of this mite on date orchards (170000 hectares) acts as a key pest which widely distributed in more than thirteen provinces of Iran. (4, 16).

*Oligonychus mangiferae* is collected and identified for the first time for Iran on mango in Minab. Mite mostly feeds on upper surface of mango leaves which caused chlorotic and browning appearance on infested leaves. This mite is a major pest of mango tree in India (18);

*Petrobia latens* collected on young wheat leave during late Feb. to April in Zabul region. Symptoms of injuries observed with mild effects but with increasing drought period; mite population and feeding damages increased rapidly on wheat plant at Zabul climatic condition.

#### Tenuipalpidae

Seven species belonging to four genera so far collected and identified from this mite family in both provinces which generally their feeding play as secondary mite pest on agricultural crops (Table, 1). The identification of mite species indicating that, a new recorded



## Results and Discussion

Extensive mite fauna identifications in different regions of both provinces during three years (1995-1997) resulted, recording of 51 plant species out of 107 plant types as mites harbouring. Six injurious or phytophagous mites families were recorded as Tetranychidae, Tenuipalpidae, Eriophyidae, Tarsonemidae, Tuckerellidae and Acaridae with identification of 22 species into 15 genera and this constituted 55% of total mite fauna collected in both provinces (Table, 1).

### Phytophagous mites

**Tetranychidae:** Among the injurious mites, tetranychids with seven species and five genera (*Tetranychus cinnabarinus* (Boisd.), *Tetranychus urticae*, Koch, *Eotetranychus hirsti* P. & B, *Eutetranychus orientalis* (Klein), *Oligonychus afrasiaticus* (McGregor), *Oligonychus mangiferus* Sayed, *Petrobia latens* Muller) observed the most destructive mite pests which two species (*T. cinnabarinus* and *O. afrasiaticus*) acts as primary pests of their respected host plant, whereas, others playing secondary role of pests on their host plants (Table, 1). The importance of tetranychid mites in agriculture of Iran worked out by many acarologist and reported by Arbabi *et al.*, 1997b (7).

*Tetranychus cinnabarinus* (Boisd.): This species is recorded for the first time on water melon and other vegetables crops in Zabul (Table, 1) and is a serious pest during months of May-August on cultivated crops in Zabul region. The mite feeding damages caused the yellowish, chlorotic and brownish of under side of leaves, which arrested normal melon growing and consequently reduce quantity and qualities of melon production in Zabul. This mite was earlier records from Jallabab of Afghanistan on the same host plants (39) and seems regular occurrence of 120 days winds in Zabul (May-Aug.) which directed from Afghanistan led more infestation of mite in Zabul region. Extensive damages of this mite on melon will protect further exporting melon to Persian gulf countries for foreign exchange purpose. The range host plants of this mite recorded about 120 in India (18) and 200 plants in South Africa (30) and damages on lady's finger in India reported very severe problem (2).

*Tetranychus urticae* collected in small patches with high population density on cowpea in Nahok, (Table 1) toward the border of Iran and Pakistan as well as many other host plants in both provinces (Table, 1). This mite earlier recorded with largest host plants ranges in the world (9).

**Key words:** Fauna, Predatory mites, Phytophagous mites, Sistan-Baluchestan, Hormozghan.

### **Introduction**

Agricultural acarology is the fastest growing discipline among the plant protection subjects being investigated in Iran. Study of the plant mite fauna and their agricultural importance in Iran initiated four decades back and most of the mite fauna studies have been conducted in Northwest, West, Southwest, Central and Caspian coastal regions of the country (1, 8, 13, 21, 22, 23, 24, 29, 37, 38).

The total area of Sistan-Baluchestan and Hormozghan provinces covered nearly 18% of the country area and most of tropical crops are growing in these provinces. The importance of the plant feeding mites up to before this study have never being investigated thoroughly (1), while neighboring state of Pakistan (10, 11 and 12) and Afghanistan (39), have done some studies. Most of tropical mite fauna have worked out in India (3, 17, 18, 19), Egypt and South Africa (30 and 31) and United State (20). Therefore, this study was conducted to find out mite fauna distribution in different regions of these two tropical provinces at the southeastern parts of the country.

### **Material and Methods**

Different regions of Sistan-Baluchestan and Hormozghan provinces during period of 1995-1997 (Bampur, Banderabbas, Chahbahar, Dashetpirsohrab, Dashteh-Yari, Gharmbit, Ghoharkoh, Ghonban, Hith, Hajiabad, Iranshar, (Table 1), Galg Kahir, Kalehghan, Kesharie, Minab, Nahok, Oraki, Patan, Rodan, Sarbaz, Saravan, Soran, Sinoghan, Tiess, Zabul, Zahak, Ziarat) were surveyed to collect and identify plant mite fauna (injurious and predacious mites). The leaves and other plant parts were suspected of mite harboring separated and collected in polythene bags and examined under stereoscopic binocular microscope in laboratory. With the help of fine camel hair brush (000) or needle, mite species picked up from the leaves or plant parts and transferred into 10 ml glass tube contained 70% ethyl alcohol along with few drops of glycerin to protect further toughness of mite body chetataxi. Nesbits media was also used to clear mite species to see taxonomic characteristics required for species level identifications. Permanent microscopic slides were prepared in Hoyer's medium. Mite species were determined with the help of phase contrast microscope and related known keys used up to species level. Mite injury symptoms and period of their incidence in different regions were also studied at 30 days interval period in both provinces.

**Plant Mite Fauna of Sistan-Baluchestan and Hormozgan Provinces**M. Arbabi<sup>1</sup>, N. Golmohammad zādeh Khiaban<sup>2</sup> & M. Askari<sup>3</sup>**Abstract**

An investigation on collection, identification, distributions and evaluating their economic importance of plant feeding mites done with regular sampling in different regions of Sistan-Baluchestan (southeastern) and Hormozgan (southern) provinces of Iran in 1994-1997. Out of 107 plant species were examined for mite harboring, 51 different types of plants were recorded as mite hosts in both provinces. Two species of *Tenuipalpus daneshvari* Khosrowshahi and Arbabi on egg - plant, *Brevipalpus phoenicis* 'Complex' identified on Papaya and Banana. *Aceria mangiferae* (Sayed) on Mango, *Eriopheys cernus* (Nal.) on Jujuba, *Acalitus salvadorae* Keifer on Mustard trees, *Brevipalpus lewisi* McGregor on Papaya, Custard apple and Guava, recorded as mite pests for the first time from Iran. Two species also recorded from Astigmata mites in present survey.

Outbreaks and damages caused by *Tetranychus cinnabarinus* (Boisd.) on watermelon, *Eutetranychus orientalis* (Klein) on jujuba, *Raoiella indica* Hirst and *Oligonychus afrasiaticus* (McGregor) on date palm, *Eotetranychus hiristi* P. & B. and *Eriophyes ficus* Cotte on fig, *Aculops lycopersici* (Masse) on tomato were observed as a primary pests on their respective host plants. Eight predatory mite families (Anystidae, Bdellidae, Chyletidae, Cunaxidae, Stigmaeidae, Erythraeidae, Trombidiidae and Tydeidae) collected from Prostigmata order, where as from Mesostigmata order, only three predatory families (Ameroseiidae, Lealapidac and Phytoseiidae) were identified so far. Abundance of *Amblydromella dalfardica* Daneshvar on Jujuba, *Amblyseius libanesi* (Dosse) on Sweet potato were found more pronounced than the other species while extensive distribution of two Anystidac mite species (*Anystis bacillum* (L.) *Anystis* sp.) were recorded in most of surveyed regions. Two species (*Allotrombium* sp. *Dinothrombium* sp.) of Trombidiidae observed largest in size in comparison to the others in Sarbaz and Hajiabad region respectively.

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1- Department of Agricultural Research Zoology, Plant Pests and Diseases Res. Inst., P. O. Box 1454, Tehran-19395.

2- Plant Pests and Diseases Res. Laboratory in Sistan-Baluchestan Province, Iran.

3- Plant Pests and Diseases Res. Laboratory in Hormozgan Province, Iran.