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Revision of the thysanopterous (Terebrantia: Thripidae) in Egypt

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Abstract:

The updated checklist of order Thysanoptera, family Thripdiae are given. More than 70 species and 37 genera are recorded in Egypt belonging to four subfamilies (Panchaetothripinae, Thripinae, Dendrothripinae and Sericothripinae). Synonyms, geographical distribution and host plants are given.

Introduction

Thrips (Thysanoptera: Thripidae) is widespread around the world especially in tropical region. About 6246 species in 782 genera were identified, derived from two suborders: the Terebrantia, whereas are classified into eight families: Aeolothripidae, Adiheterothripidae, Fauriellidae, Heterothripidae, Melanthripidae, Merothripidae, Thripidae and Uzelothripidae and the tubulifera includes a single family, Phlaeothripidae. Thrips are small or minute slender-bodied insects (0.5-15mm). Antenna are short, 6-10 segments. Body color varies from pale to dark black according weather condition. Piercing mouthparts is asymmetrical (Right mandible absent) (Priesner, 1960; Richard and Davies, 1977 and Gullan and Cranston, 1994).

Most species are mycophagous (More than 50%), feed on fungi existing in leaf litter or beneath the bark of trees (Family Merothripidae and Subfamily Idolothripinae). Other species are phytophagous inhabiting flowers and leaves; they attack many parts of plant as buds, leaves, flowers, fruits and stem. They cause damage by sucking the contents of plant cell resulting leaf and flower defoliation; fruit scarring in some fruit trees and often reduce its market value, also fruits become smaller than normal ones.

Some species of Family Phlaeothripidae cause rolled leaf galls in some oriental trees. Furthermore, some species are known as tospoviruses (Family Bunyaviridae) transmitted as *Frankliniella fusca* Hinds, *F. occidentalis* (Pergande), *F. schultzei* (Trybom) *Thrips tabaci* Lindeman, *T. palmi* Karny and *Scirtothrips dorsalis* Hood. On the other hand, some species are predators that feed on other thrips species or other small arthropods as scale insects and mites (Family Aeolothripidae; *Scolothrips* Family

Thripidae and *Karnyothrips* Watson Family Phlaeothripidae) (Priesner, 1960; Lewis, 1973 and Mound and Kibby, 1998).

The aim of the present research work is to study the revision of the thysanopterous in Egypt.

Results and discussion

Figure (1) showed that more than 150 species are described whereas derived from five families in Egypt.

Key of Thysanoptera

1.Last abdominal segment usually conical; female with saw-like ovipositor; major anal setae arising from sub-apical region of last segment; forewings with longitudinal or across veins and setae. …….. **Suborder Terebrantia(Figure 2a, 2b)**

-Last abdominal segment tube-like; female without external ovipositor; major anal setae arising from platelets attached to end of tube; forewings without veins or setae . **Suborder Tubulifera (Figure 2c, 2d)**

Key to families of Egyptian Terebrantia

-Female with ovipositor weakly developed; antennal eight-segments, segments III and IV with liner, forked or simple sensoria cone…**Merothripidae(Figure 2c, 2d)**

-Female ovipositor turned downwards away from body; antennae usually seven or eight segments, rarely six or nine segment, segments III and IV developed into slender forked or simple sense cone .. **Thripidae(Figure 2f, 2g)**

-Female ovipositor turned upwards toward body; antennae nine segments, segments III and IV usually with liner sensoria **Aeolothripidae (Figure2h, 2i)**

-Female ovipositor turned upwards toward body; antennal nine segments, clearly separate and with transverse sensoria. **Melanthripidae (Figure 2j)**

The family Thripidae presently includes about more than 2100 species, this is the second largest family of Thysanoptera. Most genera of the suborder Terebrantia are in this family. In Egypt, this family includes 37genera and 77 species. It contains of four subfamilies as follow:

Key to subfamilies of Egyptian Thripidae

-Head and pronotum reticulated; antennal segments III and IV without sense cone; terminal segment long and slender **Panchaetothripinae (Figure 3a,3b)**

-Head and pronotum not reticulated; antennal segments III and IV with sense cone; terminal segment rarely finely elongate…...**Thripinae(Figure 3c,3d)**

-Metanotumfurca with lyre-shaped, extended to mesonotum; mesonotum without spinula; fore wing curved at apex join to posterior margin…… **Dendrothripinae(Figure 3e,3f)**

-Metanotum without furca; mesonotum with spinula; fore wing wide at apex and not join to posterior margi…….**Sericothripinae (Figure 3g,3h)**

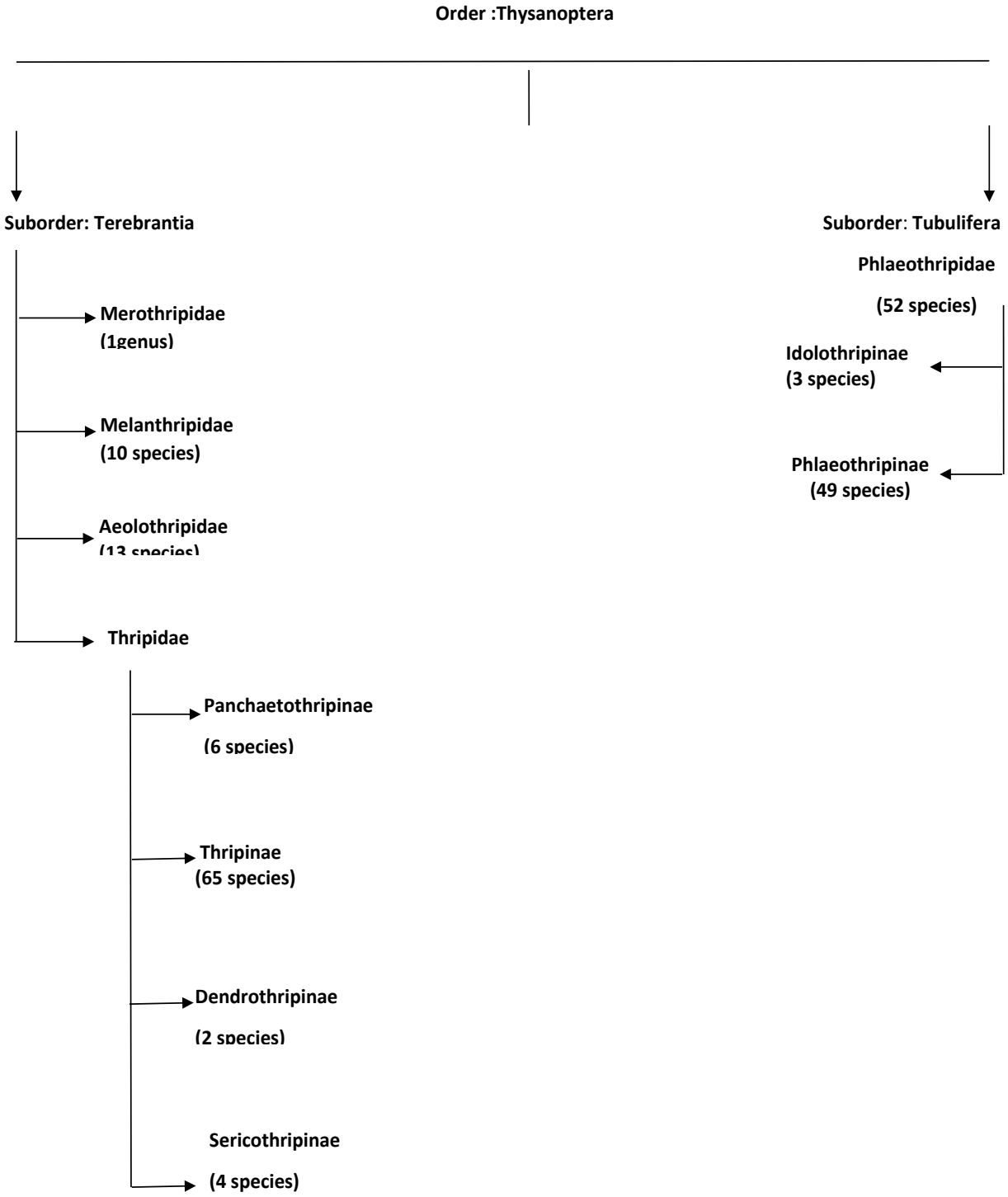

Figure (1): Families of Thysanoptera in Egypt.

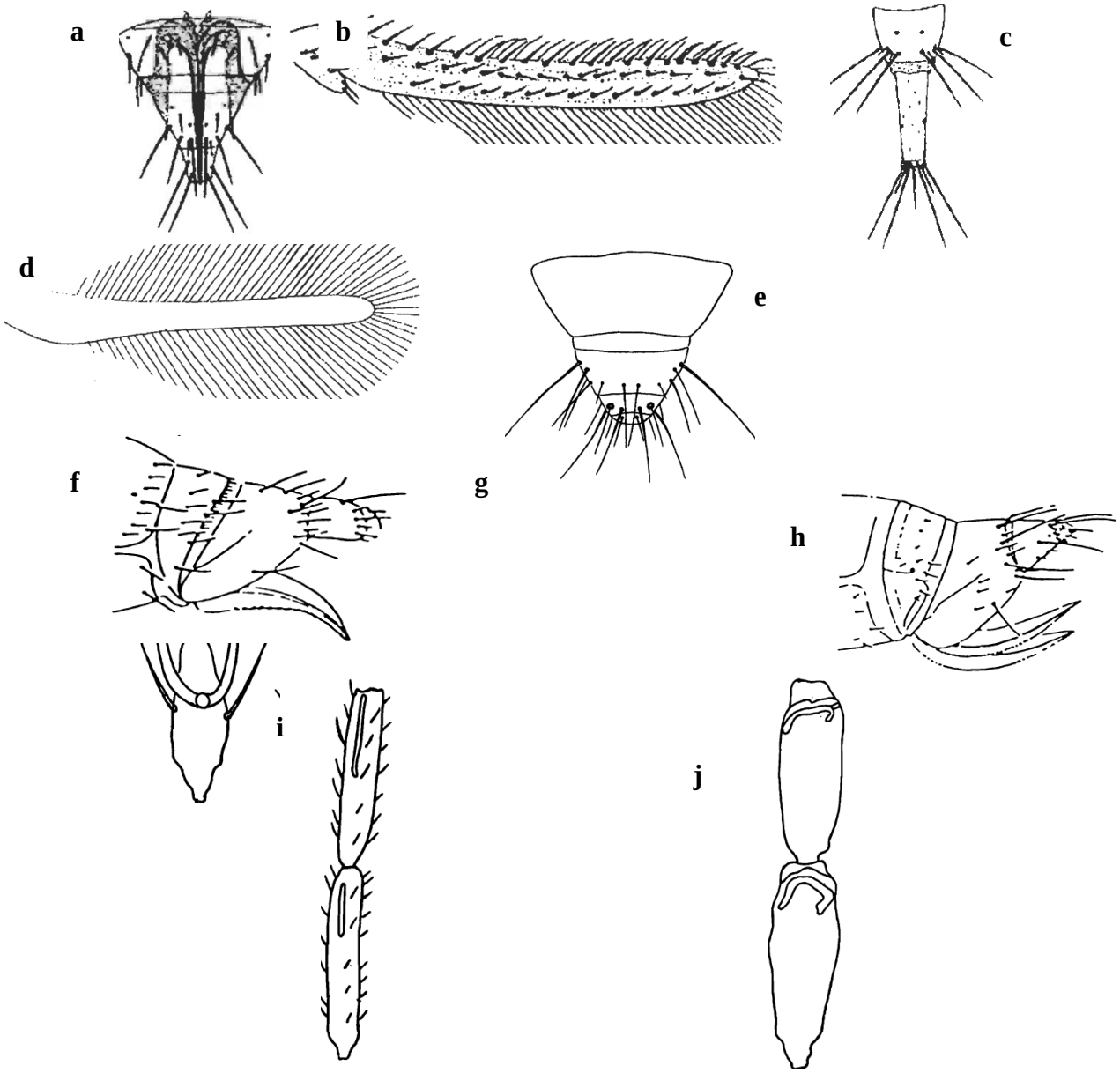

Figure (2): a, b Terebratia a (Last segmented), b (Forewing); c, d Tubulifera c (Last segmented), d (Forewing); e Merothripida (Last segmented); f, g Thripidae f (Ovipositor), g (Antennae); h, i Aeolothripidae h (Ovipositor), i (Antennae) and j Melanthripidae (Antennae).

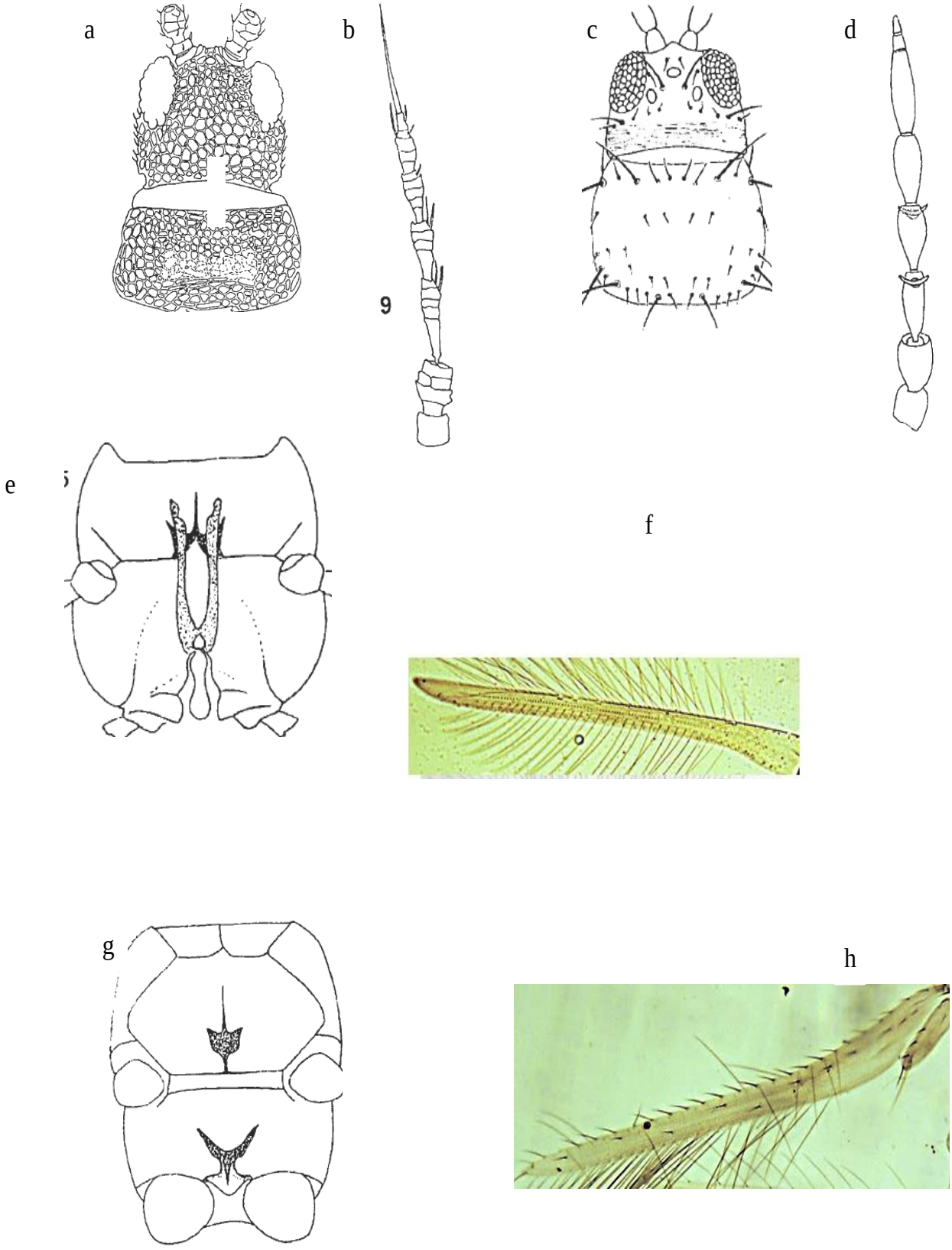

Figure (3): a, b Panchaetothripinae a (Head and pronotum), b (Antennae); c, d Thripinae c (Head and pronotum), d (Antennae); e, f Dendrothripinae e (Meso and metanotum), f (Forewing); g, h Sericothripinae g (Meso and metanotum) and h (Forewing).

1. Subfamily: Panchaetothripinae

The species belonged to Panchaetothripiae seem to be associated with leaf; some species feed on grasses and few causes damage to crop seedling. This subfamily consists of forty-two genera and one-hundred forty-five species around the world. In Egypt, it represents by four genera and seven species.

1.1. Genus: *Caliothrips* Daniel

Caliothrips Daniel, 1904, Ent. News, 296.

The species belongs to this genus are young leaf-feeder, several of them are pests of many crops, and few species attacks grasses. This genus is widespread in all countries, especially tropical ones and many different plants. It consists of twenty- three species in the world, while in Egypt it represented by three species.

1.1.1. *Caliothrips deserticola* Priesner

Caliothrips deserticola Priesner, 1960, Publ. Inst. Desert Egypte 13: 226.

Distribution: Sudan (Moritz *et al.*, 2013).

Host plants: Scrub on the rocky slopes (Priesner, 1960).

1.1.2. *Caliothrips graminicola* Bagnall and Cameron

Hercothrips graminicola Bagnall and Cameron. 1932. Ann. Mag. Nat. Hist. (10) 10: 415.

Caliothrips graminicola Priesner, 1960. Publ. Inst. Desert Egypte, 13: 227.

Distribution: Australia, Iran, India, Nepal, Sri Lanka, South Africa, Sudan, Thailand, Yemen and Zimbabwe (Kudo, 1995 and Mirab-balou, 2013).

Host plant: *Glycine max* (Abd El-Wahab, 2016).

1.1.3. *Caliothrips sudanensis* (Bagnall)

Hercothrips sudanensis Bagnall and Cameron, 1932, Ann. Mag. rlat. Hist. (10) 10: 415.

CaIiothrips sudanensis (Bagnall and Cameron; Priesner, 1949, Bull. Soc. Fouad I Ent. 33: 132.

Common name: Cotton leaf thrips

Distribution: Ethiopia, India, Kenya, Nigeria, South Africa, Sudan, and Zimbabwe (Moritz *et al.*, 2013).

Host plant: *Glycine max* (Abd El-Wahab, 2016).

1.2. *Heliothrips* Haliday

Heliothrips, Haliday, 1836, Ent. Mag., 443.

This genus attacks wide range of hosts specially, the hard leaves one. Five species belong to this genus, on the other hand, one species only valid in Egypt.

1.2.1. *Heliothrips haemorrhoidalis* Bouche, 1833

Thrips haemorrhoidalis, Bouche, 1833, Naturg. Schadl. Garten-Ins., 206.

Heliothrips haemorrhoidalis, Priesner, 1926, Thys. Eur., 126.

Heliothrips adonidum Haliday, 1836. Ent. Mag., 3:443.

Common name: Greenhouse thrips, Black greenhouse thrips and Black tea thrips.

Distribution: Widely distributed (Mirab-balou, 2013).

Host plants: *Acalypha* Sp., *Camellia* Sp., *Citrus* Sp., *Croton* Sp., *Laurus nobilis, Mangifera indica, Prunus persica, Pyrus malus* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

1.3. *Hercinothrips* Bagnall

Hercinothrips Bagnall, 1932. Ann. Mag. nat. Hist., 10 (10): 506**.**

Hercinothrips has been known as a pest of many host plant. The origin distribution is Africa. This genus consists of nine species widespread. *Hercinothrips femoralis* is the only species recorded in Egypt.

1.3.1. *Hercinothrips femoralis* Reuter

Heliothrips femoralis Reuter, 1891. Medd. Soc. Fauna F1. Fenn., 17:166.

Heliothrips cestsi Pergande, 1895, U.S.D.A., Insect Life, 7 (5):390.

Hercinothrips femoralis, Bagnall. 1932. Ann. Mag. Nat. Hist., Ser. 10, 10(59):506.

Common name: Banded greenhouse thrips and sugar-beet thrips.

Distribution: Widespread in the tropics and subtropics; common in temperate areas in greenhouses, Denmark, Finland, Florida, Georgia, Iceland, Kenya, Nigeria, Norway, Sierra Leone, Sweden, Tanzania and Uganda (Diffie *et al*., 2008**;** Kobro, 2011 and Moritz *et al* ., 2013).

Host plant: *Citrus* sp., 2007**).**

1.4. *Retithrips* Marchal

Retithrips, Marchal, 1019, Bull. Soc. R. Ent. D`Egypte, 17.

One widespread species (Included Egypt) and the second one from Indonesia and Northern Australia.

1.4.1. *Retithrips syriacus* Mayet

Heliothrips syriacus Mayet, 1890, Insectes de la vigne, 451.

Retithrips aegytiacus Marchal, 1910, Bull. Soc. R. Ent. Egypte, 17-21.

Dictyothrips aegytiaca Zanon, 1917-18, L`Agric. Colon., Firenze, XI-XII.

Dictyothrips zanoniana Del Guercio, Note Osservat., Ent. Agr. Firenze, 106-119.

Common name: Castor thrips and Black vine thrips

Distribution: America, Brazil, Congo, Europe, Ghana, India, Iran, Kenya, Lebanon, Libya, Malawi, Morocco, Mozambique, Nigeria, Palestine, Puerto Rico, Senegal, Somalia, South Africa, Sudan, Syria, Tanzania, Togo, Tunisia, Uganda and U.S.A **. (**Mirab-balou, 2013 and Moritz *et al.*, 2013).

Host plants: *Acalypha* Sp., *Gossypium* Sp., *Quercus* Sp., *Eucalyptus indica; Juglans regia, Lawsonia inermis, Mangifera indica, Myrtus communis, Psidium guajava, Pyrus cydonia, Ricinus communis, Rosa centifolia, Schinus molle, Sc. terebinthifolius, Terminalia arjuna* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

2. Subfamily: Dendrothripinae

This subfamily comprises a group of leaf- feeding thrips (Live and breed on green leaves not in flowers). This subfamily includes sixteen genera and about one-hundred described species in the world. In Egypt it represents by two genera and two species.

2.1. *Dendrothrips* Uzel

Dendrothrips, Uzel, 1895, Mon. Ord. Thys. 159.

Several species of *Dendrothrips* are particularly associated with the family Oleaceae and herbs. This genus now includes fifty-six species, and *D. eremicola* is the only species that recorded in Egypt.

2.1.1. *Dendrothrips eremicola* Priesner

Dendrothrips eremicola Priesner, 1960, Publ. Inst. Desert Egypt 13: 281.

Host plants: Wild shrubs and *Olea europapea* (Priesner, 1960 and Wafy, 2018).

Recently, in 2018 this species occurred as an outbreak on olive trees at Ismailia Governorate (Wafy, 2018).

2.2. *Pseudodendrothrips* Priesner

Pseudodendrothrips Priesner, 1960, Publ. Inst. Desert Egypt 13:283.

Pseudodendrothrips is commonly associated with Moraceae, and live on Poaceae, it lives on leaves of plants. There are now twenty-one species listed in this genus and represents in Egypt by one species.

2.2.1. *Pseudodendrothrips aegyptiacus* Priesner

Pseudodendrothrips aegyptiacus Priesner, 1960, Publ. Inst. Desert Egypte 13:284.

Distribution: Abu Dhabi, Canary Islands, Israel and Southern Africa (Moritz *et al.*, 2013).

Host plants: *Convolvulus arvensis, Euphorbia cuneata* and *Lycium arabicum* (Priesner, 1960).

3. Subfamily: Sericothripinae

Flower and leaf-feeding thrips. The subfamily Sericothripinae is a largely tropical group of about three genera and one-hundred, sixty-eight species. On the other hand, there are

two genera and five species belong to this subfamily in Egypt.

3.1. *Sericothrips* Haliday

Limothrips Haliday, 1836, Ent. Mag., 444.

The genus *Sericothrips* includes about seven species worldwide. In Egypt, this genus represents by three species.

3.1.1. *Sericothrips arenarius* Priesner

Sericothrips arenarius Priesner, 1960, Publ. Inst. Desert Egypte 13: 244.

Host plant: herbs (Priesner, 1960).

3.1.2. *Sericothrips kassimianus* Priesner

Sericothrips kassimianus Priesner, 1950, Bull. Soc. Fouad I Ent., 25.

Hydatothrips kassimanus .Bhatti, 1973. Oriental Insects. 7 (3): 403-449.

Common name: Blood flower thrips.

Distribution: India (Bhatti, 1973).

Host plant: *Cynanchum acutum* (Priesner, 1960 and Wafy, 2018)

3.1.3. *Sericothrips masrensis* Priesner

Sericothrips masrensis Priesner, 1960, Publ. Inst. Desert Egypte 13: 245.

Host plant: unknown (Priesner, 1960).

3.2. *Neohydatothrips* John

Neohydatothrips John, 1929. Zootaxa. 1575: 47–68.

This genus now includes almost one-hundred and eighteen species.

3.2.1. *Neohydatothrips samayunkur* Priesner

Hydatothrips (*Neohydatothrips*) *samayunkur* Kudo, 1995. Zootaxa. 1575: 62.

Common name: Marigold thrips

Distribution: Africa, Asia, Australia, Central and South America, China, India, Kenya, New Zealand, North America and Uganda (Mirab-balou *et al*., 2011 and Rachana and Varatharajan 2017).

Host plant: *Tagetes erecta* (Abd El-Wahab, 2015).

4. Thripinae

Thripinae represents In Egypt by twenty-nine genus and sixty-four species as follow:

4.1. *Anaphothrips* Uzel

Anaphothrips, Uzel, 1895, Mon, Ord. Thy. 142.

Many species are grass-living. Eighty-six species are belonged to *Anaphothrips*. Only seven species are recorded In Egypt. It considered as minor pests of cereals.

4.1.1. *Anaphothrips alternans* Bagnall

Anaphothrips alternans Bagnall, 1913, Ann. Mag. Nat. Hist. (8), 12: 291.

Common name: Corn thrips and sugarcane thrips.

Distribution: Central America and Cyprus (Priesner, 1960).

Host plant: *Scirpus* Sp.; *Scirpus pungens*; *Panicum turgidum*; *Hordeum vulgare*; *Saccharum officinarum*; *Sorghum halepense; Cynodon dactylon; Polypogon monspeliensis* (Priesner, 1960).

4.1.2. *Anaphothrips crocatus* Priesner

Anaphothrips crocatus Priesner, 1938, Bull. Soc. Fouad I Ent., 131.

Host plant: *Zygophyllum simplex* (Priesner, 1960).

4.1.3. *Anaphothrips hieroglyphicus* Priesner

Anaphothrips hieroglyphicus Priesner, 1939, Bull. Soc. Fouad I Ent., 352.

Common name: Western desert thrips.

Host plant: Desert shrubs (Priesner, 1960).

4.1.4. *Anaphothrips obscurus* Muller

Thrips obscurus Muller, 1776, O. F., Zool. Dan Prodrom., 96.

Anaphothrips obscurus Uzel, 1895, Mon. Ord. Thys. 279.

Anaphothrips striatus Hinds, 1902, Mon. Thys. N. Amer., 161.

Common name: American grass thrips and Grain thrips.

Distribution: Widely distributed, Algeria, Australia, Canary Islands, China, Denmark, Finland, Iceland, Iran, Hawaii, North America, Norway, Morocco, Sweden, and Turkey (Kobro, 2011; Mirab-balou *et al*., 2011**;** Tunc *et al*., 2012 and Mirab-balou, 2013).

Host plants: Gramineae**,** *Citrus* sp., *Mangifera indica, Polypogon monspeliensis, Psidium guajava, Pyrus malus* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

It feeds on the leaves of grasses and cereals rather than the inflorescences. It is common in temperate area.

4.1.5. *Anaphothrips parviceps* Priesner

Anaphothrips parviceps Priesner, 1960, Publ. Inst. Desert Egypte 13: 265.

Host plant: Composite (Priesner, 1960).

4.1.6. *Anaphothrips retamae* Priesner

Anaphothrips retamae Priesner, 1934, Bull. Soc. R. Ent. Egypte, p.275.

Host plant: *Retama raetam* (Priesner, 1960).

4.1.7. *Anaphothrips sudanensis* Trybom

*Anaphothrips sudanensis*Trybom, 1911, Bull. Bri. Mus. Ent. 9, II: 21.

Euthrips flavicinctus Karny, 1912, Bull. Bri. Mus. Ent. 9, II: 21.

Euthrips (*Anaphothrips*) *alternans* Bagnall, 1913, Bull. Bri. Mus. Ent. 9, II: 21.

Euthripscitricinctus Bagnall, 1919, Bull. Bri. Mus. Ent. 9, II: 21.

Euthrips bicolor Morgan, 1925, Bull. Bri. Mus. Ent. 9, II: 21.

Euthrips transvaalensis Faure, 1925, Bull. Bri. Mus. Ent. 9, II: 21.

Common name: Wheat thrips and Maize thrips.

Distribution: In subtropical and tropical regions around the world, China, Ethiopia, India, Kenya, Libya, Mozambique, Morocco, Nigeria, Spain, Senegal, Sri Lanka, South Africa, Sudan U. S. A. and Zimbabwe (Reitz *et al*., 2011; Tillekaratne *et al*., 2011; Goldarazena *et al*., 2012; Moritz *et al*., 2013 and Rachana and Varatharajan, 2017).

Host plant: *Glycine max* (Abd El-Wahab, 2016).

This species has been known as a pest of grasses, cereal and sugar cane and distributes in tropics regions.

4.2. *Aptinothrips* Haliday

Aptinothrips Haliday, 1836, Ent. Mag., 3: 445.

Aptinothrips represented through the world by five species while in Egypt, only one species valid. Europe being the center of distribution. They live in grasses and have some degree of host specificity.

4.2.1. *Aptinothrips rufus* (Gmelin)

Aptinothrips rufus Gmelin, 1788, Linne Syst. Nat. 2224.

Thrips rufa Gmelin, 1788. Carolia Linn; Syst. Nat., 2224.

Common name: Grass thrips.

Distribution: Algeria, China, Costa Rica, Croatia**,** Denmark, Ethiopia, Europe, Finland, Iceland, Iran, Italy, Norway, South North Africa, Sweden, Tunisia and Turkey (Raspudici *et al*., 2009; Kobro, 2011; Tunc *et al*., 2012; Mirab-balou, 2013 and Marullo and De Grazia, 2013).

Host plant: *Cynodon dactylon* (Priesner, 1960)

4.3. *Ascirtothrips* Priesner

Ascirtothrips Priesner, 1960, Publ. Inst. Desert Egypte 13: 252.

This genus comprises two species in Egypt.

4.3.1. *Ascirtothrips antilope* Priesner

Anaphothrips antilope Priesner,1923, Ent. Mitteil., XII: 63.

Scirtothrips antilope Priesner, 1932, Bull. Soc. R. Ent. Egypte, 143, 152.

Ascirtothrips antilope Priesner, 1957, Zool. Anz., 159: 7-8.

Distribution: Cyprus, India, Israel and Morocco (Moritz *et al*., 2013).

Host plants: *Aerva tomentosa, Alhagi maurorum, Iphiona mucronata, Nitraria retusa, Pulicaria crispa* and *Zilla Spinosa* (Priesner, 1960).

4.3.2. *Ascirtothrips efflatouni* Priesner

Ascirtothrips efflatouni Priesner, 1960, Publ. Inst. Desert Egypte 13: 253.

Host plant: *Halocnemon strobilaceum* (Priesner, 1960).

4.4. *Baliothrips* Uzel

Baliothrips Uzel, 1895, Mon. Ord. Thys. 204.

Three species have been recorded in this genus. On the other hand, one species only is valid in Egypt.

4.4.1. *Baliothrips vittipennis* Bagnall

Baliothrips vittipennis Bagnall, 1927, Ann. Mag. Nat. Hist. (9), 20: 574.

Common name: Mat sedge thrips.

Distribution: Australia, France and Poland (Priesner, 1960).

Host plant*: Cyperus* Sp (Priesner, 1960).

4.5. *Bolacidothrips* Priesner

Bolacidothrips Priesner, 1930, Bull. Soc. R. Ent. Egypte, 6.

Old World genus, it lives on Poaceae. The genus consists of twelve species, the only species *B. graminis* has been recorded in Egypt.

4.5.1. *Bolacidothrips graminis* Priesner

Bolacidothrips graminis Priesner, 1930, Bull. Soc. R. Ent. Egypte, 6.

Common name: beard grass thrips.

Host plants: *Scirpus* sp., *Triticum* sp., *Cynodon dactylon, Imperata cylindrical, Phragmites communis, Panicum colonum, Polypogon monspeliensis, Saccharum officinarum, Sorghum vulgare* and *Zea maiyz* (Priesner, 1960).

4.6. *Chirothrips* Haliday

Chirothrips, Haliday, 1836, Ent. Mag., 444.

Widespread genus across old world, it lives in f lowers of Poaceae. Forty-two species spread around the world. Four species recorded from Egypt. It is common in the Holarctic, Neotropical, and Ethiopian regions.

4.6.1. *Chirothrips africanus* Priesner

Chirothrips africanus Priesner, 1932, Bull. Soc. R. Ent. Egypte, 46.

Common name: African thrips.

Distribution: Algeria, China, Cyprus, Ethiopia, Iran, India, Italy, Sudan, Yemen, and Uzbekistan (Mirab-balou, 2013).

Host plant: Gramineae*;* Cyperaceae*; Citrus* Sp.*; Cyperus* Sp.; *Cynodon dactylon; Cladium mariscus; Imperata cylindrical; Eragrostis bipinnata; Panicum turgidum; Mangifera indica; Psidium guajava; Pyrus malus* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

4.6.2. *Chirothrips meridionalis* Bagnall

Chirothrips meridionalis Bagnall, 1927, Ann. Mag. Nat. Hist. (9), XIX: 566.

Common name: Broomcorn thrips.

Distribution: Algeria,Cyprus, France, India, Iran, Italy, North and South Africa Palestine, Morocco Nigeria and Yemen (Minaei, 2013 and Moritz *et al* ., 2013).

Host plants: *Andropogon halepensis, Polypogon monspeliensis* and *Zea maiyz* (Priesner, 1960).

4.6.3. *Chirothrips mexicanus* Crawford

Chirothrips mexicanus Crawford, 1909, Pomona College Jour Ent., I, 114.

Chirothrips floridensis Watson, 1920, Fla. Ent., IV (2) :21.

Distribution: Hawaii, India, Mexico, Philippines and South America (Moritz *et al*., 2013)

Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.6.4. *Chirothrips taxanus* Andre

Chirothrips taxanus Andre, 1939, Proc. Ent. Soc. Wash., XLI (6): 200-202.

Distribution: Brazil, Georgia, Mexico and Texas (Diffie *et al*., 2008 and Monteiro, 2001).

Host plant: *Cucumis sativus* (Abd El-Wahab, 2012).

4.7. *Dorcadothrips* Priesner

Dorcadothrips Priesner, 1932, Bull. Soc. R. Ent. Egypte, 49.

4.7.1. *Dorcadothrips caespitis* Priesner

Dorcadothrips caespitis Priesner, 1932, Bull. Soc. R. Ent. Egypte, 50.

Common name: Cat`s tail thrips.
Host plants: *Cyperus* sp., *Typha* sp. and *Panicum colonum* (Priesner, 1960).
Distribution: Sudan (Priesner, 1960).

4.8. *Eremiothrips* Priesner

Eremiothrips Priesner, 1950, Bull. Soc. Fouad I Ent., 29.

This genus contains of twenty-one species and represents in Egypt by one species.

4.8.1. *Eremiothrips imitator* Priesner

Eremiothrips imitator Priesner, 1950, Bull. Soc. Fouad I Ent., 29.
Host plant: *Haloxylon schweinfurthii* (Priesner, 1960).

4.9. *Euphysothrips* Bagnall

Euphysothrips Bagnall, 1926. Ann. Mag. Nat. Hist. (9), 18: 646.

Two species only have been known in this genus.

4.9.1. *Euphysothrips minozzii* Bagnall

Euphysothrips minozzii Bagnall, 1926. Ann. Mag. Nat. Hist. (9), 18: 646.
Common name: Sea rush thrips.
Distribution: Austria, Canary Islands, India, Iran, Iseral, Mozambique, Southern Africa, Southern France, Turkey, and Yemen (Zur Strassen and Kuslitzky, 2012).
Host plants: Gramineae and *Juncus acutus* (Priesner, 1960).

4.10 . *Frankliniella* Karny

Frankliniella Karny, 1910, Mitt. Nat. Ver. Univ. Wien, 46.

Most species live in neotropics area. Some species as *F. fusca*, *F. occidentalis* and *F. schultzei* have been known as virus transmitted. The members of this genus are flower feeding. Two-hundred and thirty-four species are listed from this genus. On the other hand, only five species represent in Egypt.

4.10.1. *Frankliniella dampfi* Priesner

Frankliniella pallid Karny (nec Uzel), 1922, Denkschr. Akad. Wiss. Wien, 98: 114.
Frankliniella dampfi Priesner, 1923, Ent. Mitteil., 12: 64.
Frankliniella sulphurea Karny, 1926, Mem, Dept. Agric. Ind., Ent. Ser., 9: 195.
Common name: African borage thrips and Lantana thrips.
Distribution: India, Italy, Palestine and Sudan (Priesner, 1960).
Host plants: *Alhagi maurorum, Arnebia hispidissima, Inula crithmoides, Iphiona mucronata, Pulicaria crispa, Trichodesma africanum, Triumfetta flavescens* and *Withania somnifera* (Priesner, 1960).

4.10.2. *Frankliniella fusca* Karny

Euthrips fuscus Hinds 1902. Zool. Stud. 49 (6): 826
Frankliniella fusca Karny 1912. Zool. Stud. 49 (6): 826
Common name: Tobacco thrips.
Distribution: Brazil, China, Florida, Georgia, Guadeloupe, Martinique, Spain and U. S. A **(**Diffie *et al*., 2008**;** Monteiro, 2001; Goldarazena *et al*., 2012; Reitz *et al*., 2011 and Etienne *et al*., 2015).
Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.10.3. *Frankliniella occidentalis* Pergande

Euthrips occidentalis Pergande. 1895. U.S.D.A., Div. Ent. Insect Life, 7 (5):392.
Euthrips tritici califomicus Moulton, 1911. U.S.D.A., Bur. Ent., Tech. Ser., 21: 28.
Frankliniella occidentalis (Pergaade), Kamy, 1912. Zool. Ann., 4:335.
Fmnkliniella tritici Moultoni, Hood. 1914. Proc. Ent. SOC. Wash., 16:38.
Frankliniella californica Moulton, 1948. Rev. de Ent., 19(1-2):98.
Common name: Western flower thrips, Alfalfa thrips.
Distribution: Widespread around the world (Mirab-balou, 2013).
Host plants: *Citrus* sp., *Antirhinum majus, Begonia tuberhybrida, Capsicum annuum, Celosia argentea,*

Chenopodium amaranticolor, Chrysanthemum morifolium, Coleus hybridus, Convolvulus arvensis, Crinum moorei, Cucumis sativus, Euphorbia seguieriana, Gazania rigens, Gladiolus grandiflora, Glycine max, Gomphrena globosa, Hippeastrum hybrid, H. vittatum, Ipomoea tricolor, Kalanchoe blossfeldiana, Lantana camara , Malus pumila, Mangifera indica, Olea europeana, Pelargonium hortorum, Petunia hybrid, Psidium guajava, Ranunculus ficaria, Rosa hybrid, Solanum nigrum, Tropaeolum majus, Vinca minor and *Vitis vinifera* (El-Wakkad, 2007; Abd El-Wahab *et al*., 2011; Shalaby, 2015; Abd El-Wahab, 2016 and Wafy, 2018).

4.10.4. *Frankliniella schultzei* (Trybom)

Frankliniella schultzei (Trybom, 1910), Raff. Bull. Zool. 42(2):220.

Physopus schultzei Trybom, 1910, Raff. Bull. Zool. 42(2):220.

Frankliniella insularis Moulton, 1936, Raff. Bull. Zool. 42(2):220.

Common name: Common blossom thrips, cotton bud thrips, Tomato thrips and Yellow flower thrips.

Distribution: Tropical to subtropical and southern Mediterranean, America, Angola, Asia, Cape Verde, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Ethiopia, Gabon, Gambia, Ghana, Kenya, Libya, Madagascar, Maurititius, Morocco, Namibia, New Zealand, Niger, Nigeria, Senegal, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe (Moritz *et al* ., 2013).

Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.10.5. *Frankliniella tritici* (Fitch)

Frankliniella varicorne Bagnall, 1919. Bull. Bri. Mus. Ent. 9, II: 39

Thrips tritici Fitch 1948. Bull. Bri. Mus. Ent. 9, II: 39.

Common name: Eastern flower thrips.

Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.11. *Isoneurothrips* Bagnall

Isoneurothrips Bagnall 1915, Ann. Mag. Nat. Hist. (8), 15: 592.

4.11.1. *Isoneurothrips australis* Bagnall

Isoneurothrips australis Bagnall 1915, Ann. Mag. Nat. Hist. (8), 15: 592.

Thrips mediolinus Girault 1926, Ins. Insc. Menstr., 18.

Anomalothrips amygdali Morgan, 1929, Proc. Ent. Soc. Wash, 31: 5.

Common name: Oat thrips.

Distribution: Cyprus, Europe and Turkey (Tunc *et al*., 2012; Marullo and De Grazia, 2013 and Mirab-balou, 2013).

Host plant: *Avena sativa* (Priesner, 1960).

4.12. *Limothrips* Haliday

Limothrips Haliday, 1836, Ent. Mag., 445.

These species all bread in grass and can cause reduction of cereal yield. *Limothrips* recently includes eight species spread around the world. Of these, two species recorded in Egypt.

4.12.1. *Limothrips angulicornis* Jablonowski

Limothrips angulicornis Jablonowski, 1894, Term. Fuzetek, XVII: 45.

Distribution: Europe, Iran, Italy, North America, Sardinia, Turkey and Western Asia (Moritz *et al*., 2013).

Host plants: *Hordeum* Sp. and Wild grasses (Priesner, 1960).

4.12.2. *Limothrips cerealium* Haliday

Limothrips cerealium Haliday, 1836, Ent. Mag., 445.

Limotbrips auenae Hinds, 1902. Proc. U.S. Nat. Mus., 26(1310):139-141.

Common name: Barley thrips, Cereal thrips, Grain thrips and thunder thrips.

Distribution: Worldwide (Moritz *et al*., 2013).

Host plants: *Citrus* sp., *Agrostis verticillata, Alopecurus agrestis, Avena fatua, Cynodon dactylon, Imperata cylindrical, Hordeum vulgare, H. maritimum, Mangifera indica, Panicum turgidum, Phalaris paradoxa; Phragmites communis, Polypogon monspeliensis, Psidium guajava, Pyrus malus, Saccharum officinarum, Sorghum halepense, Triticum vulgare* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

4.13. *Megalurothrips* Bagnall

Megalurothrips Bagnall, 1915. Ann. Mag. nat. Hist., (8) 15: 589.

All species seem to associate with *Legumin*. Fourteen species are listed in this genus have been recoded.

4.13.1. *Megalurothrips sjostedti* (Trybom)

Physopus sjostedti Trybom. 1908, Wisr. Ergeb. Schwed. Zool. Exped. KiIimandjaro. Meru 1905-06, 3 (16): 4-6.

Physopus variabilis Bagnall, 1913, Ann. Mag. nat. Hist., (8) 12: 294.

Taeniothrips variabilis Steinweden, 1933, Trans. Amer. Ent. Soc., 59: 273-274.

Taeniothrips sjöstedti Steinweden, 1933, Trans. Amer. Ent. Soc., 59: 275.

Common name: Bean flower thrips and African bean thrips.

Distribution: Afrotropical Region, Angola, Burundi, Cameroon, Central African Republic, Cape Verde Islands, Chad, Congo, Gabon, Ghana, Gambia, Ivory Coast, Kenya, Mozambique, Niger, Nigeria, Senegal, Seychelles, South Africa, Tanzania, Togo, Uganda, Yemen and Zimbabwe (Moritz *et al* ., 2013).

Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.14. *Microcephalothrips* Bagnall

Microcephalothrips Bagnall 1926, Ann. Mag. Nat. Hist. (9), 18: 113.

It lives in flowers of Asteraceae. This genus presents by only one species widespread.

4.14.1. *Microcephalothrips abdominalis* (D. L. Crawford)

Thrips abdominalis D. L. Crawford, 1910, Pomona, Coll. Journ., 157.

Thrips microcephalus Priesner, 1923, Ent. Mitteil., 12:160.

Microcephalothrips abdominalis Priesner, 1937, Bull. Soc. R. Ent. Egypte, 209.

Common name: Composite thrips and Sunflower thrips.

Distribution: Widespread (Moritz *et al*., 2013).

Host plants: Compositae, *Chenopodium* sp, *Chrysanthemum* sp, *Tagetes* sp, *Ageratum conyzoides, Erigeron crispus, Mangifera indica, Pulicaria crispa* and *Vitis vinifera* (Priesner, 1960 and El-Wakkad, 2007).

4.15. *Mycterothrips* Karny

Mycterothrips Karny, 1926, Mem. Dept. Agric. Ind., Ent., IX, 199.

Widely spread in Asia, Europe and America in flowers and leaf litter. All species concentrate in old world. Thirty-sex species have been identifying in this genus.

4.15.1. *Mycterothrips acacia* Priesner

Mycterothrips acacia Priesner, 1932, Bull. Soc. R. Ent. Egypte, 5, 142.

Common name: Acacia flower thrips.

Distribution: India (Rachana and Varatharajan, 2017).

Host plant: *Acacia nilotica* (Priesner, 1960)**.**

4.15.2. *Mycterothrips echii* Priesner

Mycterothrips echii Priesner , 1931, Bull. Soc. R. Ent. Egypte, 129.

Host plant: *Echium sericeum* (Priesner, 1960).

4.16. *Odontothrips* Serville

Odontothrips Serville, 1843, Ins. Hemipt., 643.

This genus is flower-feeding thrips, especially Legume plant. It consists of thirty-five species spread around the world.

4.16.1. *Odontothrips elbaensis* Priesner

Odontothrips elbaensis Priesner, 1933, Bull. Soc. R. Ent. Egypte, 6.
Common name: Gebel elba thrips.
Host plant: Weeds (Priesner, 1960).

16.2- *Odontothrips karnyi* Priesner

Odontothrips karnyi Priesner, 1924, Konowia, 3: 1.
Common name: Broad bean thrips.
Distribution: Canary Islands, Cyprus, Italy, Palestine and Sudan (Moritz *et al*., 2013).
Host plants: *Leguminosae, Lypinus* sp., *Lathyrus odoratus, Medicago hispsida, Melilotus messanensis,Retama raetam* and *Vicia faba* (Priesner, 1960).

4.17. *Oxythrips* Uzel

Oxythrips Uzel, 1895, Mon. Ord. Thys. 133.

Oxythrips includes thirty-five species.

4.17.1. *Oxythrips tamaricis* (Bagnall)

Anaphothrips tamaricis Bagnall, 1926, Ann. Mag. Nat. Hist. (9), 18: 645.
Oxythrips narasi Bagnall, 1926 Ann. Mag. Nat. Hist. (9), 18: 648.
Oxythrips tamaricis Priesner, 1938, Bull. Soc. Fouad I Ent., 123.
Common name: Tamarisk thrips.
Host plants: *Juncus* sp., *Suaeda* sp. and *Tamarix nilotica* (Priesner, 1960).

4.18. *Parexothrips* Priesner

Parexothrips Priesner 1960, Publ. Inst. Desert Egypte 13:285.

Old World genus, from Poaceae. Nineteen species have been recoded of this genus.

4.18.1. *Parexothrips tenellus* Priesner

Exothrips tenellus Priesner, 1950, Bull. Soc. Fouad I Ent., 30.
Parexothrips tenellus, Pricsner, 1960, Publ. Inst. Desert Egypte, 13: 286.
Distribution: China and India (Moritz *et al*., 2013).
Host plant: *Imperata cylindrical* (Priesner, 1960).

4.19. *Phlebothrips* Priesner

Phlehothrips aegyptiacus Priesner, 1960, Publ. Inst. Desert Egypte 13: 283.

4.19.1. *Phlebothrips aegyptiacus* Priesner

Phlehothrips aegyptiacus Priesner, 1960, Publ. Inst. Desert Egypte 13: 284.
Common name: Egyptian thrips.
Distribution: South Africa (Moritz *et al*., 2013)
Host plants: *Convolvulus arvensis, Euphorbia cuneata, Lycium arabicum* (Priesner, 1960).

4.20. *Psilothrips* Hood

Psilothrips, Hood 1927, Proc. Biol. Soc. Washington, 40: 198.
Thamnothrips Priesner, 1932, Bull. Soc. R. Ent. Egypte, 2.

This genus represents by five species through the world.

4.20.1. *Psilothrips bimaculatus* Priesner

Thamnothrips bimaculatus Priesner,1932, Bull. Soc. R. Ent. Egypte, 3.
Common name: Bimaculated thrips.
Distribution: Iran (Mirab-balou, 2013).
Host plant: *Lycium arabicum* (Priesner, 1960).

4.21. *Prosopothrips* Uzel

Prosopothrips Uzel, 1895, Mon. Odr. Thy. 165.

Widespread genus associated with Poaceae. Nine species have been recorded around the world.

4.21.1. *Prosopothrips matrouhenisis* Priesner

Prosopothrips matrouhenisis Priesner, 1960, Publ. Inst. Desert Egypte 13: 277.
Common name: Matrouh thrips.
Host plant: Low vegetation (Priesner, 1960).

4.21.2. *Prosopothrips nigriceps* Bagnall

Prosopothrips nigriceps Bagnall, 1927, Bull. Bri. Mus. Ent. 9, II: 49.
Distribution: Southern France and Turkey (Priesner, 1937 and Tunc *et al*., 2012).
Host plant: Grasses (Priesner, 1937).

4.21.3. *Prosopothrips salloumensis* Priesner

Prosopothrips nigriceps Priesner, 1938, Bull. Soc. R. Ent. Egypte, 210.

Prosopothrips salloumensis Priesner, 1960, Publ. Inst. Desert Egypte 13:277.
Common name: Salloum thrips.
Host plant: Grasses (Priesner, 1960).

4.22. *Scirtothrips* Shull

Scirtothrips, Shull, 1909, Ent. News, XX: 222.

Species of the genus *Scirtothrips* are small, active thrips. They breed on the young leaves and flowers of plants. Several species are recognized as pests on citrus trees, coffee, and tea. The total number of described *Scirtothrips* is about one hundred and five species. In Egypt, the genus consists of three species.

4.22.1. *Scirtothrips aurantii* Faure

Scirtothrips aurantii Faure , 1929, Transv. Univ. Coll., Bull. 18: 3.
Common name: South African citrus thrips.
Distribution: Subtropics and tropics of Africa, introduced to Queensland (Australia), Angola, China, Ethiopia, Ghana, Ivory Coast, Kenya, Malawi, Nigeria, South Africa, Sudan, Tanzania, Uganda, U. S. A. and Zimbabwe (Reitz *et al*., 2011 and Moritz *et al* ., 2013).
Host plants: *Cassia* sp., *Citrus* sp., *Cynodon* sp., *Panicum* sp., *Salix* sp., *Acacia nilotica*, *Convolvulus arvensis*, *Mangifera indica*, *Malus pumila*, *Olea europeana*, *Psidium guajava* and *Vitis vinifera* (Priesner, 1960; El- Wakkad, 2007 and Wafy , 2018)

4.22.2. *Scirtothrips citri* Moulton

Eutbrips Citri Moulton, 1909. U.S.D.A., Bur. Ent., Tech. Ser. 12, pt. VII: 121-122.
Physothrips citri, Karny, 1912. 2001. Ann., 4:339.
Scirtothrips citri, Hood, 1914. Proc. Ent. Soc. Wash., 16(1):40.
Common name: Citrus thrips.
Distribution: China, Florida, Georgia, Iran and U. S. A. (Diffie *et al*., 2008 and Reitz *et al*., 2011)
Host plant: *Citrus* sp. (Salem *et al*., 2017)

4.22.3. *Scirtothrips dorsallis* Hood

Scirtothrips dorsallis Hood, 1919, Bull. Bri. Mus. Ent. 9, II: 51.
Heliothrips minutissimus Bagnall, 1919, Bull. Bri. Mus. Ent. 9, II: 51.
Common names: Castor thrips, Chilli thrips, Strawberry thrips and Yellow tea thrips.
Distribution: Oriental and Pacific Region, China, Israel, Ivory Coast, Sri Lanka, South Africa and U. S. A. (Tillekaratne *et al*., 2011; Reitz *et al*., 2011; Zur Strassen and Kuslitzky**,** 2012 and Moritz *et al*., 2013).
Host plant: *Glycine max* (Abd El-Wahab, 2016).

4.22.4. *Scirtothrips mangiferae* Priesner

Scirtothrips mangiferae Priesner, 1932, Bull. Soc. R. Ent. Egypte, 141-155.
Common name: Mango thrips.
Distribution: Afrotropical and Eastern Mediterranean, Gabon, India, Iran, Libya, Sudan and Yemen (Priesner, 1960; Mirab-balou, 2013 and Moritz *et al*., 2013)**.**
Host plants: *Citrus* sp., *Ficus carica, Mangifera indica, Parkinsonia aculeate, Pyrus malus* and *Vitis vinifera* (Priesner, 1932 and El-Wakkad, 2007).

4.22.5. *Scirtothrips nubicus* Priesner

Scirtothrips nubicus Priesner, 1936, Bull. Soc. R. Ent. Egypte, 84.
Common name: common fig thrips.
Distribution: Israel and Sudan (Zur Strassen and Kuslitzky**,** 2012).
Host plants: *Citrus* sp., *Ficus carica, Mangifera indica* and *Parkinsonia aculeate* (Priesner, 1960).

4.23. *Scolothrips* Hinds

Scolothrips Hinds 1902, Mon. Thys. N. Amer. 157.

Worldwide thrips. Originally, it appears in old world country. It is predator of Tetranychid mites. Sixteen species have been described through the world.

4.23.1. *Scolothrips latipennis* Priesner

Scolothrips sexmaculatus uzeli Priesner, 1923, Entom. Mitteil., 12: 66, 115.

Scolothrips uzeli Priesner, 1926, Thys. Eur., 241.

Scolothrips latipennis Priesner, 1950, Bull. Soc. Fouad I Ent., 54.

Distribution: Canary Isalnds Crimea, Europe, Iran, Morocco and Spain (Mirab-balou, 2013).

Host plant: Predator of Tetranychidae (Priesner, 1960).

4.23.2. *Scolothrips longicornis* Priesner

Scolothrips longicornis Priesner , 1926, Thys. Eur., 239.

Common name: Tetranychid Predator thrips.

Distribution: Austria, China, Denmark, Finland, Iran, Iceland, Norway, Sweden, Russia and Turkey (Kobro, 2011; Mirab-balou *et al*., 2011; Tunc *et al*., 2012 and Mirab-balou, 2013).

Host plant: Predator of Tetranychidae (Priesner, 1960).

4.23.3. *Scolothrips rhagebianus* Priesner

Scolothrips rhagebianus Priesner , 1950, Bull. Soc. Fouad I Ent., 46.

Common name: Okra thrips.

Distribution: China, India, Iran, South Africa and Sudan (Mirab-balou *et al*., 2011 and Mirab-balou, 2013).

Host plant: Predator of Tetranychidae (Priesner, 1960).

4.24. *Sitothrips* Priesner

Sitothrips Priesner 1931, Bull. Soc. R. Ent. Egypte, 127.

Five species belonged to this genus spread from Europe, Mediterranean region and Africa.

4.24.1. *Sitothrips arabicus* Priesner

Sitothrips arabicus Priesner 1931, Bull. Soc. R. Ent. Egypte, 127.

Distribution: Cyprus, Iran and Georgia (Priesner, 1960 and Mirab-balou, 2013)**.**

Host plants: Grasses and *Hordeum vulgare* (Priesner, 1960).

4.25. *Stenothrips* Uzel

Stenothrips Uzel, 1895, Mon. Ord. Thys. 209.

One species have been identifying, it breads on Poaceae.

4.25.1. *Stenothrips graminum* Uzel

Stenothrips graminum Uzel, 1895, Mon. Ord. Thys. 210.

Common name: Oats thrips.

Distribution: Austria, Croatia, Denmark, Hungary, Finland, Iceland, Iran, Norway, Poland, Sweden and Turkey (Raspudici *et al*., 2009; Kobro, 2011; Tunc *et al*., 2012 and Mirab-balou, 2013).

Host plant: Gramineae (Priesner, 1937).

4.26. *Taeniothrips* Amyot and Serville

Taeniothrips Amyot and Serville, 1843, Ins. Hemipt., 644.

They live in flowers and young leaves. It includes thirty-one species. Six species only are valid in Egypt.

4.26.1. *Taeniothrips dianthi* Priesner

Taeniothrips dianthi Priesner, 1921, Wiener Ent. Zeitg., 38: 116, 117.

Common name: Clover pink thrips and carnation thrips.

Distribution: Europe, Morocco, North and South America (Priesner, 1960).

Host plant: *Syzygium aromaticum* (Priesner, 1960).

4.26.2.*Taeniothrips discolor* Karny

Euthrips discolor Karny, 1907, Berliner Ent. Zeitschr., 52:46.

Taeniothrips discolor Priesner, 1926, Thys. Eur., 292.

Common name: Artemisia thrips**.**

Distribution: Cyprus, Sibiria, South Europe, and Turkey (Priesner, 1960 and Tunc *et al*., 2012).

Host plants: *Artemisia* sp., *Iphiona mucronata, Linaria aegyptiaca* and *Odontospermum graveolens* (Priesner, 1960).

4.26.3. *Taeniothrips niloticus* Priesner

Taeniothrips niloticus Priesner 1930, Bull. Soc. R. Ent. Egypte, 11.

Host plants: *Acacia nilotica, Caesalpinia sepiaria* and *Punica granatum* (Priesner, 1960).

4.26.4. *Taeniothrips Sinaiticus* Priesner

Taeniothrips Sinaiticus Priesner 1935, Bull. Soc. R. Ent. Egypte, 318.

Host plants: *Alcanna orientalis* (Priesner, 1960).

4.26.5. *Taeniothrips traegardhi* (Trybom)

Physopus traegardhi Trybom, 1911, Res. Swed. Zool. Exped. Egypt and c., 4, Uppsala, 4.

Taeniothrips niloticus Priesner, 1930, Bull. Soc. R. Ent. Egypte, 11.

Taeniothrips traegardhi Priesner , 1938, Bull. Soc. R. Ent. Egypte, 210.

Distribution: India and Sudan (Priesner, 1960).

Host plants: *Grasses, Caesalpinia sepiaria, Lycium arabicum, Polypogon monspeliensis, Pulica crispa, Punica granatum, Scirpus badius Sorghum vulgare; Triticum vulgare* and *Zea mays* (Priesner, 1960).

4.26.6. *Taeniothrips zillarum* Priesner

Taeniothrips zillarum Priesner, 1950, Bull. Soc. Fouad I Ent., 32.

Common name: Zilla thrips.

Host plant: *Zilla spionsa* (Priesner, 1960).

4.27. *Thamnothrips* Priesner

Thamnothrips Priesner, 1932. Bull. Soc. Fouad I Ent., 2.

4.27.1. *Thamnothrips bimaculatus* Priesner

Thamnothrips bimaculatus Priesner, 1932. Bull. Soc. Fouad I Ent., 3.

Host plant: Desert bushes (Priesner, 1932).

4.28. *Thrips* Linne

Thrips Linne, 1776, Fauna Suecica, Ed. I, 220.

It is considered as the largest genus of Thysanoptera, it widespread of the world. Species are leaf and flower feeding, most of them are pest of many plants. Two-hundred and ninety sex species have been described.

4.28.1. *Thrips angusticeps* Uzel

Thrips angusticeps Uzel, 1895, Mon. Ord. Thys. 191.

Achaetothrips loboptera Karny and Bagnallia, Amer. Publ. Co., New Delhi, Indica. 240.

Distribution: Asia, Austria, Canary Islands, Czech Republic, Denmark, England, Europe, Iceland, Iran, Italy, Finland, Morocco, Norway, Palestine, Sibiria, Sweden and Turkey (Kobro, 2011; Mirab-balou, 2013 and Moritz *et al* ., 2013).

Host plants: *Triticum* Sp., *Cistanche lutea, Chrysanthemum coronarium, Convolvulus arvensis, Hordeum vulgare* and *Reichardia tingitana* (Priesner, 1960).

4.28.2 . *Thrips mareoticus* Priesner

Stenothrips mareoticus Priesner, 1932, Bull. Soc. R. Ent. Egypte, 10.

Thrips quadrisetosus Hood, 1932, Bull. Soc. R. Ent. Egypte, 124.

Thrips tenuisetosus Ruxgs, 1935, (nec Knechtel), Bull. Soc. Sci. Nat. Maroc, 15: 4.

Thrips mareoticus Priesner, 1937, Bull. Soc. R. Ent. Egypte, 210.

Common name: Lavender cotton thrips.

Distribution: Asia, Cyprus, Iran, Germany, Morocco, Palestine and Turkey (Mirab-balou, 2013 and Moritz *et al*., 2013).

Host plants: Compositae, *Achillea santolina*, *Chrysanthemum coronarium* and *Reichardia tingitana* (Priesner, 1960).

4.28.3. *Thrips mediterraneus* Priesner

Thrips mediterraneus Priesner, 1934, Bull. Soc. R. Ent. Egypte, 276.

Distribution: Armenia, Cyprus, Europe, Iran, Iraq, Israel, Georgia, Northern India, Lebanon, South Ukraine and Turkey (Mirab-balou, 2013 and Moritz *et al*., 2013).

Host plant: *Phlomis floccose* (Priesner, 1960).

4.28.4 . *Thrips microchaetus* Karny

Thrips flavus var. *microchatus* Karny, 1920. Akad. Anzeig, 2.

Thrips microchatus Hood, 1923, Ent, Mitteil., 13: 116.

Common name: Grapevine leaf thrips.
Distribution: Sudan (Priesner, 1960)**.**
Host plants: *Aerva tomentosa*, *Olea europeana, Pulicaria crispa, Triumfetta flavescens,* and *Vitis vinifera* (Priesner, 1960 and Wafy, 2018).

4.28.5. *Thrips nigropilosus* Uzel

Thrips nigropilosa Uzel, 1895. Mon. Ord. Thys., 198.
Thrips nigmpilosus, Priesner. 1927. Thys. Eur., 409-414.
Common name: Chrysanthemum thrips.
Distribution: Australia, Canada, China, Croatia, Denmark, Ethiopia, Europe, Fiji, Finland, Hawaii, Iceland, Iran, Japan, Kenya, New Zealand, Norway, Russia, Sweden, Tanzania, Turkey and U.S.A. (Raspudici *et al*., 2009; Kobro, 2011; Mirab-balou, 2013 and Moritz *et al*., 2013).
Host plants: *Althaea* Sp. and *Pyrethrum cinerariaefolium* (Priesner, 1937).

4.28.6. *Thrips palmi* Karny

Thrips palmi Karny, 1925**,** Raff. Bull. Zool. 42(2): 285.
Distribution: Brazil, China, Denmark, Finland, Guadeloupe, Iceland, India, Martinique, Norway, Sweden, Sri Lanka, Spain and U. S. A. (Monteiro, 2001; Kobro, 2011; Reitz *et al*., 2011; Tillekaratne *et al*., 2011**;** Etienne *et al*., 2015 and Rachana and Varatharajan, 2017).
Host plants: *Cucumis sativus* and *Glycine max* (Abd EL-Wahab *et al*., 2012 and Abd El-Wahab, 2016).

4.28.7. *Thrips simplex* Morison

Physothrips simplex Morison, 1930**,** Raff. Bull. Zool. 42(2):288**.**
Thrips simplex Bhatti, 1969**,** Raff. Bull. Zool. 42(2):288**.**
Common name: Gladiolus thrips.
Distribution: Australia, Canada, Europe, Hawaii, India, Spain, South Africa, Turkey and U. S. A. (Tillekaratne *et al*., 2011; Tunc *et al*., 2012 and Rachana and Varatharajan, 2017)
Host plant: *Gladiolus antakiensis* (Priesner, 1960).

4.28.8. *Thrips tabaci* Lindeman

Thrips tabaci Lindeman, 1888. Schadl. Ins. d. Tabaks. i. Bessarabien, 15: 61-65.
T. communis Uzel, 1895. Mon. Ord. Thys., 176.
T. bremnenii Moulton, 1907. U.S.D. A., Bull. Ent., Tech.Ser. 12: 59-60.
Common name: Onion thrips, cotton thrips.
Distribution: Widespread (across all the countries).
Host plant: Different kind of plants.

4.29. *Trichromothrips* Priesner

Trichromothrips Priesner, 1930, Bull. Soc. R. Ent. Egypte, 9.

Thirty-eight species have been recorded.

4.29.1. *Trichromothrips bellus* Priesner

Trichromothrips bellus Priesner,1930, Bull. Soc. R. Ent. Egypte, 9.
Common name: Papyrus thrips and seedling barely thrips, wheat thrips.
Distribution: India (Rachana and Varatharajan, 2017).
Host plant: Cyperaceae (Priesner, 1960).

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